

# YELLOWSTONE ASSOCIATION

#### SUMMER 2016





Spring and summer are exciting seasons to experience what Yellowstone National Park has to offer. Bears are emerging from their dens, wildflowers are in full bloom, and bison and elk calves dot the landscape. Next year, these seasons promise to be even more exciting as we celebrate the 100th anniversary of the National Park Service on August 25, 2016—making it the perfect time to come learn about Yellowstone and discover all that the park has to offer.

Since 1933 the nonprofit Yellowstone Association has been the official education partner of Yellowstone National Park. Through the Yellowstone Association Institute, they have helped connect thousands of people to Yellowstone with their in-depth educational programs. Together, we work to provide a range of opportunities to learn about and enjoy all that Yellowstone has to offer.

The Yellowstone Association Institute offers a variety of courses to help you experience Yellowstone this season. We look forward to welcoming you this summer as we kick off a second century of stewardship and engagement in both Yellowstone and throughout all of our national parks.



Superintendent Dan Wenk YELLOWSTONE NATIONAL PARK

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PHOTOS COVER PAGE (LEFT TO RIGHT) JIM FUTTERER: HOPE SMITH; TED GATLIN MARIA BISSO; MARIA BISSO; MARIA BISSO; MARIA BISSO; JIM FUTTERER MARIA BISSO; RIGHT/LEFT MARIA BISSO; BACK COVER: MARIA BISSO

# SUMMER 2016 INSTITUTE PROGRAMS

There's never been a better time to experience a Yellowstone Association Institute program. In partnership with the National Park Service, the Institute provides educational programming that helps connect people to Yellowstone National Park and our natural world. To celebrate the centennial of the National Park Service on August 25, 2016, we have placed special emphasis on programs that reflect the unique American legacy that Yellowstone and all of our national parks represent.

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#### **ACTIVITY LEVEL SCALE**

- Leisurely hikes up to 1 mile per day through relatively flat terrain on maintained trails.
- Hikes up to 3 miles per day with elevation gains up to 600 feet. Some off-trail hiking possible.
- Rrisk hikes up to 5 miles per day with occasional elevation gains up to 1000 feet in undulating terrain.
- Brisk aerobic hikes up to 8 miles per day with climbs up to 1500 feet on dirt trails. Loose rocks, uneven footing, and off-trail hiking are possible. Good coordination is recommended.
- Brisk aerobic, destination-oriented hikes up to 12 miles per day with elevation changes up to 2000 feet on dirt trails or off-trail. Loose rocks, uneven footing, steep hillside traverses, and stream crossings are possible. Good coordination is required.

#### **HOW DOES ALL THIS WORK?**

- Preview our summer offerings on the following pages.
- Visit our website for detailed program information, including lodging options, schedules, required clothing and equipment, and our payment, refund, and cancellation policies.
- Soon after you register, you'll receive detailed confirmation information from us. Please be sure to read it thoroughly and return any requested information as soon as possible. We want you to be prepared so you can have the time of your life.
- Yellowstone Association members receive discounts on Institute programs.
- If you are not yet a member, you will receive an introductory subscription to our magazine, *Yellowstone Quarterly*. To become a member, please visit us online or call today!

#### HOW FIT DO YOU NEED TO BE?

Institute courses are based in the field, and most require you to be an active participant. If you take part in a field outing, you will need to carry a daypack—with food, clothing, water, and other essentials—that generally weighs up to 15 pounds. You will be exercising at elevations of 5000 to 12,000 feet. Activities at these altitudes are more strenuous than the same activities at lower altitudes, and some people can experience associated health complications.

To help you decide which course is best for you, we use an Activity Level Scale (left) that takes into account a hike's distance, pace, elevation gain, and terrain. Please note that these ratings are only guidelines. What is labeled "strenuous" might be routine for a very fit visitor, while a "moderate" course might be quite difficult to a non-hiker who lives at sea level. For the most precise information about each activity or the effects of Yellowstone's altitude or environment, please refer to the program details on our website or call us at 406.848.2400.

For more information or to register, please visit YellowstoneAssociation.org or call us at 406,848.2400



#### SPRING WOLF AND BEAR DISCOVERY 👯

**4-DAY PROGRAMS START ON:** MAY 1, 2, 3, 8, 9, 10, 15, 17, 22, 24

4 nights at Mammoth Hot Springs • \$839/\$1,159

This is your opportunity to delve into the world of Yellowstone's wolves and bears. On sunrise trips you'll search for these charismatic animals on the northern range, and learn about their behavior, ecology, and conservation on leisurely hikes. Throughout, you'll be immersed in the beauty and wonder of Yellowstone in the spring.

#### **ESSENTIAL YELLOWSTONE**

4-DAY PROGRAMS START ON: MAY 30 JUN 6, 13, 20, 27 JUL 4, 11, 18, 25 AUG 1, 8, 15, 22, 29

#### 4 nights at Lake Yellowstone • \$879/\$1,195

Join us for an exploration of the quintessential secrets and sights of the park. Enjoy wildlife watching, walking the rim of the Grand Canyon of the Yellowstone, and learning about the park's geology while you tour the heart of the Yellowstone volcano. Each evening, return to the serenity of Yellowstone Lake.

#### OLD TIMES ON THE GRAND TOUR \*\*

5-DAY PROGRAMS START ON: MAY 16, 23, 30 JUN 6, 13, 20, 27 JUL 4, 11, 18, 25 AUG 1, 8, 15, 29 SEP 5, 12, 19

3 nights at Mammoth Hot Springs, 1 night at Old Faithful, 1 night at Lake Yellowstone • \$1,739/\$2,185

Relive the golden age of Yellowstone's Grand Tours and travel in a similar style as visitors of a bygone era. Tour the park in a classic Yellowstone bus with a retractable top for wildlife viewing. By day, explore the park's colorful history and dynamic geology on walking tours of historic sites and thermal

# LODGING & LEARNING....

**programs** combine just the right amount of education and recreation. You'll be based at park hotels and taught by Institute instructors, who are intimately familiar with Yellowstone. Packages are offered in partnership with Yellowstone National Park Lodges and include daily field trips, lodging, most meals, in-park transportation, and optional evening programs. This is our vacation package that covers almost everything and provides fun and discovery, too. Minimum age is 12 unless noted. *Rates are double/single occupancy and don't include taxes or utility fees.* 

areas. Exclusive to this program, you'll enjoy a guided tour of Yellowstone's Heritage & Research Center. Relax each evening in the best park hotels.

#### TRAILS THROUGH YELLOWSTONE 然然然

5-DAY PROGRAMS START ON: MAY 29 JUN 5, 12, 19, 26 JUL 3, 10, 17, 24, 31 AUG 7, 14, 21, 28 SEP 4, 11, 18, 25

2 nights at Mammoth Hot Springs, 2 nights at Grant Village • \$1,055/\$1,429 Pack your boots and backpack for four days of hiking, wildlife watching, and discovery in Yellowstone. Hike with naturalist guides to explore the park's diverse landscapes including geyser basins, the Grand Canyon of the Yellowstone, and valleys rich with wildlife. Search for elk, bison, grizzly bears, wolves, and other animals on a sunrise wildlife watching expedition.

#### **YELLOWSTONE FOR FAMILIES**

5-DAY PROGRAMS START ON: MAY 30 JUN 5, 12, 13, 19, 26, 27 JUL 3, 10, 11, 17, 24, 25, 31 AUG 7, 8

2 nights each at Mammoth Hot Springs and Old Faithful • \$999/\$1,415/\$579 per child

5-DAY PROGRAMS START ON: MAY 31 JUN 6, 7, 14, 20, 21, 28 JUL 4, 5, 12, 18, 19, 26 AUG 1, 2, 9

2 nights each at Mammoth Hot Springs and Grant Village • \$999/\$1,369/\$579 per child

(dates and pricing depend on where you choose to stay) Experience the magic of Yellowstone on this learning adventure for families with children ages 8–12 years old. Your family will explore canyons, waterfalls, and geyser basins, as well as enjoy activities together including animal tracking, wildlife watching, photography, painting, and hiking. During the program, your children can become Yellowstone National Park Junior Rangers.

#### NEW! YELLOWSTONE SUMMER EXPEDITION 然然 4-DAY PROGRAMS START ON:

AUG 14, 15, 21, 22, 28

4 nights at Canyon Lodge • \$1,259/\$1,815 Travel over land and water to experience the highlights of summer in Yellowstone in new and exciting ways. From a comfortable base camp at Canyon Lodge, you'll venture off the beaten path to explore geyser basins, enjoy backcountry hikes, and search for wildlife. You'll also take a private boat tour on Yellowstone Lake.

#### FALL WOLF AND ELK DISCOVERY 秋秋

4-DAY PROGRAMS START ON: AUG 23, 29, 30 SEP 5, 6, 12, 13, 19, 20, 26, 27

4 nights at Mammoth HotSprings • \$839/\$1,159

Immerse yourself in the world of Yellowstone's wolves and elk as you study the dance between predator and prey. Rise early to search for wolves, and observe the elk mating season, including the dramatic displays of mating bulls. Learn about wolf and elk behavior, ecology, and conservation on leisurely hikes in their habitat.

#### ROOSEVELT RENDEZVOUS १- १११११ 5-DAY PROGRAMS START ON: SEP 9, 13

4 nights at Roosevelt Lodge • \$949/\$1,119 Enjoy the arresting bugle of bull elk among the fall colors of aspen, willow, and cottonwood from your base at the historic Roosevelt Lodge. Choose from several classic fall adventures each day, such as naturalist-led wildlife watching trips, hiking Yellowstone's scenic trails, or learning how to interpret animal tracks. In the evenings, enjoy buffet dinners and programs in the main lodge.

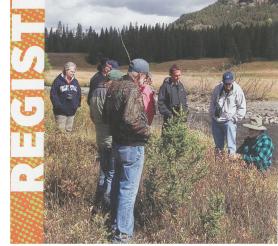


### PRIVATE & GROUP TOURS....

offer four daily options that can be tailored to the interests of your group. Combine days for a more in-depth experience. We'll make sure everything, including optional hiking trips, matches your activity level. Your Institute instructor will provide an incredible experience designed to help you see the park in a whole new way. Tuition includes instruction, transportation for the day, and use of high-power spotting scopes and binoculars. Early start times are strongly recommended to avoid crowds and have the best chance of seeing wildlife. We'll also help your children work on their Yellowstone National Park Junior Ranger patch. Meals and lodging are not included.

"A private tour is the best way to see and learn about Yellowstone, and it can be customized to any interest you have. Instructors always seem to be very accommodating and knowledgeable of every aspect of the park."—Linda F, Michigan

PHOTOS LEFT: DEBBIE LAUGHLIN RIGHT: L ECKIE; MARIA BISSO; BILL MAHONEY



#### WILDLIFE WATCHING ON THE NORTHERN RANGE

#### PICKUP LOCATIONS GARDINER, MAMMOTH, ROOSEVELT, OR LAMAR.

Discover the diverse and abundant wildlife of Yellowstone's northern range. Learn how to search for wildlife and interpret their behavior. You'll also explore the vital role each species plays in the Yellowstone ecosystem.

#### NATURAL HISTORY AND GEOLOGY: YELLOWSTONE LAKE AND GRAND CANYON OF THE YELLOWSTONE

#### PICKUP LOCATIONS GARDINER, MAMMOTH, CANYON, NORRIS, OR LAKE.

Explore the natural and geologic history of the Grand Canyon and Yellowstone Lake areas. You'll look for evidence of glaciers, lakes, and thermal features that sculpted the landscape while learning about the underlying volcano. You'll also search for wildlife and learn about their role in the Yellowstone ecosystem.

#### **GEYSERS, MUDPOTS, AND HOT SPRINGS: OLD FAITHFUL AREA**

#### PICKUP LOCATIONS GARDINER, MAMMOTH, NORRIS, MADISON, OR OLD FAITHFUL.

Hot springs, geysers, mudpots, and fumaroles: Yellowstone is home to the world's greatest concentration of hydrothermal features—more than 10,000! With an Institute naturalist guide, you'll explore geyser basins and the Yellowstone volcano to view these dynamic features, and learn about the fascinating geologic processes that make them work.

#### **DAY HIKING IN YELLOWSTONE**

PICKUP LOCATIONS GARDINER, MAMMOTH, CANYON, NORRIS, ROOSEVELT, LAKE, MADISON, OR OLD FAITHFUL.

Venture into the wilderness of Yellowstone on carefully chosen hikes that show you the park's diverse landscapes. Enjoy the quieter rhythms of travel away from the roadside, and learn how to interpret animal signs. Along the way, you'll gain insights into Yellowstone's geology, history, and wildlife.

#### Tour Length for Private & Group Tours

Approximately 8 hours per day. *Call for start times.* 

#### DAILY TUITION RATES

1-5 participants: \$590 6-14 participants: \$800 15-28 participants: \$1,590

Rates effective through October 31, 2016, and do not include taxes.

# YOUTH & COLLEGE....

**programs** inspire students to become active stewards of all wild places. Student lodging is available at the Yellowstone Overlook Field Campus. Transportation to and from Bozeman, Montana, may also be available for your program. Our partners at the National Park Service also offer a wide variety of educational resources and programs for youth and teachers. To learn more, visit nps.gov/yell/forteachers/index.htm.

#### MY YELLOWSTONE ADVENTURE

#### For middle- and high-school-age groups MONDAY-FRIDAY

Bring your group to Yellowstone to experience an introduction to nature, national parks, and conservation. Students will explore extraordinary landscapes, observe wildlife, take photos, and paint.

#### NEW! HIGH SCHOOL FIELD EXPERIENCE

#### For high-school-age groups 3 TO 5 DAYS RECOMMENDED

Let Yellowstone be your high-school classroom. Watch science come alive as your students use the scientific method and critical thinking skills to investigate Yellowstone in-depth. In addition, pre-program curriculum planning with our staff will connect your Yellowstone experience to national education standards. Early college credit is available through the University of Montana Western.

#### STEWARDSHIP OF PUBLIC LANDS

For college-age groups 3 TO 5 DAYS RECOMMENDED

Introduce your students to the stewardship of public lands through the science, history, and politics of Yellowstone National Park. Students will examine resource issues such as wolf reintroduction, bison management, climate change, and recreation use, and the roles citizens, organizations, and agencies play in the stewardship of public lands.

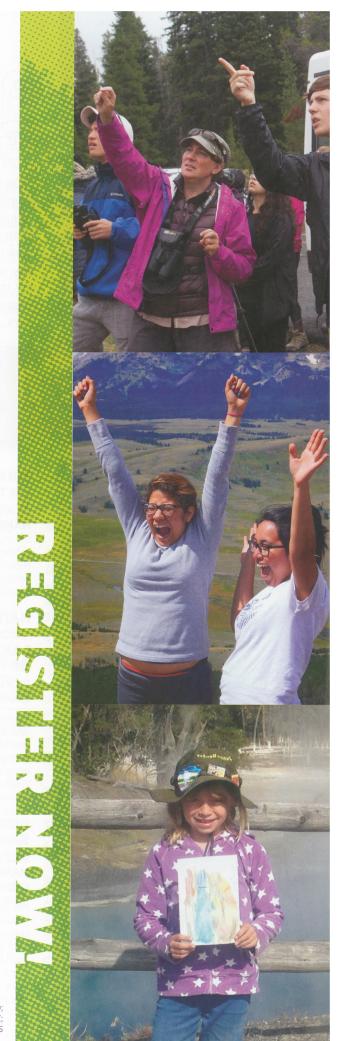
#### BUILD YOUR OWN EDUCATIONAL EXCURSION

Not seeing a program that fits your group? Contact us to tailor a Yellowstone experience to meet your educational goals.

#### Financial aid is available for youth programs!

HOTOS CLOCKWISE: JULIANNE BAKER: MARIA BISSO; MARIA BISSO; MARIA BISSO; AMY RENFRANZ; CODY SIEGLE; AMY RENFRANZ; JESS HAAS





'I really appreciated the genuine approach taken to addressing Yellowstone issues. The students were given both sides to all stories and were able to formulate their own opinions on ecological issues." – Jenna S., Manitoba, Canada

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# TEACHERS

#### **Get Inspired in Yellowstone!**

Educators play a critical role in connecting young people to parks and wild places. To honor this, the Yellowstone Association is offering a selection of teacher-specific initiatives during the 2016 summer season: financial aid, continuing education credits (), and teacher workshops. Whether you're a classroom teacher or an informal educator, join us in Yellowstone and let nature take its course.

"If it weren't for this program I wouldn't be thinking about ways to bring up environmental issues in my classrooms. These few days opened my eyes to the importance of preservation and conservation." – Joanna C., Washington





#### TEACHER WORKSHOP: YELLOWSTONE STEAM! १११ € JUN 27 AT 6 PM-JUL 1 AT 12 PM

Yellowstone Overlook Field Campus Jessica Haas, Trudy Patton Limit: 12 • \$100 • Lodging and meals included. With Yellowstone National Park as the venue, learn how to use both traditional and innovative methods to incorporate Art into STEM lessons (STEAM)! Explore new ideas and strategies while networking with other educators on best practices for cross-curricular design. Applications are available at YellowstoneAssociation.org and are due January 15, 2016.

#### NEW! TEACHER WORKSHOP: FIND YOUR PARK ११ र्

OCT 20 AT 6 PM-OCT 23 AT 12 PM Yellowstone Overlook Field Campus Institute Staff

Limit: 24 • \$150 • Lodging and meals included. Discover ways to encourage your students to "find their park" in their own community. Explore hands-on activities that bring the importance of our public lands to your classroom; spend evenings discussing the impacts of nature in education. Member registration begins January 13, 2016, at 8 a.m. Mountain Standard Time. General registration begins one week later.

PHOTOS CLOCKWISE; JESS HAAS; JESS HAAS; JESS HAAS; HOPE SMITH: RIGHT: MARIA BISSO

#### **Financial Aid**

The members of the Yellowstone Association are proud to provide financial aid for teachers taking one of our field seminars and also for educators bringing youth to Yellowstone to participate in one of our programs. In addition, the Institute is able to offer teacher workshops at a reduced rate. To find out more about financial aid, or to become a Yellowstone Association member and help support these education initiatives, contact us.



### FIELD SEMINARS....

**examine** specific aspects of the park ecosystem through just the right combination of fun field excursions and classroom presentations. Our seminar leaders are experts in their fields and include professors, naturalists, scientists, and acclaimed photographers, writers, historians, and artists. Most courses are based at the Lamar Buffalo Ranch Field Campus in the park's northeast corner or at our Gardiner, Montana, headquarters. See page 22 for rates and more information about lodging options while learning with us. Please visit our website for minimum participant ages and other details about each course. Rates do not include taxes.

#### Continuing Education

Look for the "• denoting field seminars that are pre-approved for semester credits or renewal units from the University of Montana Western. We are also happy to provide a letter of completion and supporting documentation that you can submit to the institution of your choice to request approval for university credit or CEUs.

#### NATURALIST GUIDE CERTIFICATE PROGRAM ११११ APR 10 AT 7 PM - APR 29 AT 5 PM

Gardiner, Montana Julianne Baker, M.A., Carolyn Harwood

Limit: 12 • \$1,500 • 160401 In this professional-level certification course, you will gain the skills of a naturalist and the experience for sharing that knowledge. Learn to understand and interpret the wildlife, geology, plants, and climate of a landscape. Acquire the skills for effective interpretation, including interpretive principles and how to facilitate and manage a group during a program or tour. You can become a certified interpretive guide (National Association for Interpretation) and Leave No Trace trainer (Leave No Trace, Inc.), and earn four undergraduate credits through the University of Montana Western. Most of the class is outdoors.

#### A GUIDE'S GUIDE TO YELLOWSTONE ≹≹

MAY 9 AT 8 AM – MAY 13 AT 5 PM Gardiner, Montana, and Old Faithful Julianne Baker, M.A., George Bumann, M.S., Jim Garry, M.S.

Limit: 12 • \$710 • 160501

Here's your chance to learn about Yellowstone from area experts who know this park inside and out. Spend one day at each of the park's major areas: Old Faithful and the Upper Geyser Basin, Yellowstone Lake, Grand Canyon of the Yellowstone, and the northern range. Find out what each location has to teach you about geology, wildlife, and human history. Whether you are new to the park, a seasoned veteran, or a naturalist in training, you will learn new details about the inner workings of the world's first national park.

#### WILDERNESS FIRST AID \*

#### MAY 16 AT 8 AM – MAY 17 AT 5 PM Gardiner, Montana

Wilderness Medicine Institute Staff Limit: 30 • \$285 • 160502

Do you spend a lot of time in the outdoors? Have you ever wondered how you would respond to a backcountry emergency? This 16-hour certification course is ideal for hikers, skiers, and outdoor professionals who want to learn the basics of emergency care in remote settings. You'll learn patient assessment and how to treat shock, wounds, fractures and dislocations, hypothermia, heat illness, and altitude illness. May be used to recertify a current or in re-entry year WMI Wilderness First Responder. No previous certification is required.

#### CELEBRATE THE MARVELS OF MIGRATION के MAY 20 AT 7 PM - MAY 22 AT 4 PM

Gardiner, Montana Katy Duffy, M.S.

#### Limit: 13 • \$270 • 160503

Each spring, migratory birds pour north across the continent as they hasten to breeding areas. Some stop here to nest; others stop to refuel before resuming their journey. Join us to welcome them. You'll enjoy an evening program about the birds you are likely to see and learn how birds weighing as little as a nickel find their way back to summer nesting sites. Rise up early the next two mornings to spend all day in the bird-rich habitats of Yellowstone's northern range and the Hayden Valley. We'll drive to a number of sites to do the "birders' shuffle"—slowly walking to observe as many migrants as possible.

#### INTRODUCTION TO WOLF MANAGEMENT AND ECOLOGY १११९

#### MAY 27 AT 5 PM - MAY 29 AT 4 PM

Lamar Buffalo Ranch Jon Trapp, M.A. Limit: 13 • \$270 • 160504

In this class, you can walk in the footsteps of wolf biologists—literally. You'll visit some of the original reintroduction sites, following the trails worn by the biologists' daily visits. Stop at roadside locations where park biologists listen for signals from radio-collared wolves. Discuss questions such as: How have wolves affected coyotes, grizzlies, cougars, ravens, and vegetation in Yellowstone? Can wolves survive outside the protection of the park? What happens now that wolves are no longer an endangered species? You will be up early and out late looking for wolves. Be prepared to spend time outdoors in any weather.

#### NEW! SLOUGH CREEK WILDLIFE BACKPACK केवेवेके

#### MAY 27 AT 6 PM – MAY 30 AT 5 PM Gardiner, Montana

Jim Garry, M.S., Patty Walton Limit: 8 • \$465 • 160505

In May, the entire park is alive with the abundance of spring. Animals have emerged from winter; the grasses are greening; creeks are filling with snowmelt. Baby animals—from bison and elk calves to bear cubs and baby birds—are starting to appear across the landscape. It's a great time to leave behind the pullouts and boardwalks and venture into the backcountry in Slough Creek, an area teeming with new life. You'll begin with an evening session that will cover safety and preparation. Hike to a base camp on the second day, from which you'll wander up to 8 miles on daily explorations of this inspiring backcountry valley.

#### MAMMAL SIGNS: INTERPRETING TRACKS, SCAT, AND HAIR ▓€

MAY 28 AT 9 AM – MAY 31 AT 5 PM Lamar Buffalo Ranch James Halfpenny, Ph.D. Limit: 13 • \$495 • 160506

Mammals are elusive and hard to observe in the wild, but you can discover their behavior in the signs they leave behind. Through illustrated lectures and laboratories, you'll learn about natural history, ecology, anatomy, gaits, track averaging, relative size, estimating track age and speed, identifying prints, finding clues, and following trails. During afternoons in the field, you'll put your learning into practice as you explore animal behavior by reading the stories that tracks tell. Evenings will be spent analyzing data collected in the field. Expect to be hiking off trails, in mud, and wading in water.

#### NEW! WINGS AND TALONS: BIRDS OF PREY OVER YELLOWSTONE

MAY 30 AT 7 PM - MAY 31 AT 5 PM Lamar Buffalo Ranch Brad Bulin, M.S. Limit: 13 • \$150 • 160507

The Lamar Valley is home to the bald eagle famous symbol of the United States—its cousin the golden eagle, and the fish-eating osprey. On bird watching field trips in Lamar, you'll search for these iconic species to observe their behavior and learn about their place in the complex terrestrial and aquatic communities they call home. Delve into cultural history as you discuss the role these birds play in different American cultures. You'll also study how these three species escaped extinction in the 20th century, and what researchers in Yellowstone are discovering about them today.

#### WHO'S THERE? OWLS IN YELLOWSTONE \*\* JUN 1 AT 9 AM - JUN 2 AT 12 PM

Lamar Buffalo Ranch Katy Duffy, M.S. Limit: 13 • \$180 • 160601

Are you fascinated by owls—their huge eyes, fabled hearing, secretive habits, and cryptic beauty? Through talks and field trips, you'll explore how these adaptations work and why they help owls successfully live in Yellowstone. Visit places in the park that owls call home to find out why these habitats work so well for them. Learn to read other park landscapes for signs of good owl habitat, and read signs that these secretive birds leave as clues. You might even see owls hunting in daylight—and find out why this suits them so well.

#### SPRING INTO WILDLIFE PHOTOGRAPHY क्षे

JUN 1 AT 9 AM – JUN 4 AT 4 PM Lamar Buffalo Ranch Meg Sommers Limit: 13 • \$495 • 160602

Calling all photographers looking to advance your skills! Now is the time to learn tips for photographing Yellowstone's spring wildlife in action. You'll spend most of the day outdoors, learning how animals big and small behave and where they are—keys to finding them for your photos. You'll also practice photographic fundamentals, techniques, and the ethics of wildlife photography, including ways to keep you safe. In class sessions, you'll focus on composition, lighting, equipment, and computer skills. So, pack your digital camera and tripod and head into the wild that is spring in Yellowstone.

#### THE BEARS OF YELLOWSTONE

JUN 3 AT 7 PM – JUN 5 AT 4 PM Lamar Buffalo Ranch

Sue Consolo-Murphy, M.S., Mark Haroldson Limit: 12 • \$315 • 160603

June is the month when grizzly bears roam nose to the ground, searching for elk calves and other vulnerable prey. You'll be in the midst of the bruin action, learning about bear biology and behavior through presentations, field trips, and discussions. You'll also practice simple ways to keep yourself—and bears—safe while you and the bears are both out and about in Yellowstone.

#### NEW! HIKING NORTHERN YELLOWSTONE'S GEOLOGY রররর

JUN 5 AT 5:30 PM – JUN 8 AT 6 PM Gardiner. Montana

John Gillespie, Carolyn Harwood Limit: 13 • \$455 • 160604

Strap on your pack and lace up your boots for three full days exploring the fascinating geology of the northern range. On adventurous hikes of up to 12 miles, you'll investigate firsthand how microclimates, soil types, and landforms drive the conditions for both human settlement and habitat for the diverse wildlife you observe along the way. As you hike, you'll learn why geology was key to Yellowstone becoming the world's first national park, and travel back in geologic time to visualize the forces that shaped the landscape you see today.

#### NATURALIST SERIES: BIRDING ११ €

JUN 11 AT 7 PM – JUN 13 AT 5 PM Lamar Buffalo Ranch

David Laufenberg, Joshua Theurer, M.S. Limit: 12 • \$315 • 160605

With a wide variety of habitats, Yellowstone is a great place to begin a birding practice. Although birds are one of the most visible and auditory—forms of wildlife in any given ecosystem, many of us rarely slow down enough to really observe them. During this course you will search for birds in the field—utilizing all of your senses to develop identification skills learn life history strategies, and develop field journaling techniques. This course is part of the Yellowstone Naturalist series; learn more on the back cover.

#### GHOST HOTELS &

**JUN 12 AT 8 AM – JUN 13 AT 5 PM** Old Faithful Leslie J. Quinn, M.Ed. Limit: 13 • \$260 • 160606

his is your chance to tour Yellowstone while earning about its ghost hotels and other historical oddities. Which park hostelry did an English nobleman describe as "the last outpost of "civilization"? Was the Canyon Hotel lost because of a conspiracy to make the new Canyon Lodge viable? Do you really drive right hrough a now-vanished tunnel somewhere on he Grand Loop Road? You'll uncover other fun bieces of Yellowstone's history through antique shotographs and stories told by your instructor a park hotel expert. A limited number of rooms will be held until 30 days prior to the course; call us for details.

#### NATURALIST SERIES: WILDLIFE ⅔ ♦

**UN 13 AT 7 PM – JUN 15 AT 5 PM** .amar Buffalo Ranch

Carolyn Harwood

imit: 13 • \$270 • 160607

fellowstone is one of the most intact cosystems in the lower 48 states, boasting indiverse array of wildlife species. In this broad introduction, you will rise early to learn how and where to search for animals, and observe their behavior. You'll venture out on short hikes to examine wildlife habitat while developing observational skills through sketching and ournaling. Along the way, explore the biology and ecology of a variety of wildlife species, heir interactions with each other and their environment, and the management challenges hat affect them. This course is part of the fellowstone Naturalist series; learn more on he back cover.

#### SPRING BABIES ≹ JUN 14 AT 9 AM – JUN 16 AT 4 PM Lamar Buffalo Ranch Shauna Baron

#### Limit: 13 • \$360 • 160608

It's spring! And time to look for spring babies in the wilds of Yellowstone. You'll look for bear cubs, wolf pups, bison calves, elk calves, bighorn lambs, and lots of young birds. Find them with spotting scopes and binoculars, and by taking short walks to better vantage points. As you search, you'll also talk about why species choose certain birthing grounds, and how they protect and raise their young. Expect to be outside from before dawn throughout the day to after sundown. Even so, you'll have plenty of free time to enjoy all aspects of Yellowstone's vibrant spring.

#### NATURALIST SERIES: MASTERING YOUR SKILLS 秋 🔶

JUN 16 AT 9 AM – JUN 17 AT 5 PM Lamar Buffalo Ranch Ken Voorhis, M.S. Limit: 13 • \$240 • 160609

What is it that makes a good naturalist? Explore the skills every good naturalist needs and gain ideas about how you can help others develop a greater sense of place and connection to the natural world. Utilizing the stimulating surroundings in Yellowstone, you will also develop some of the more abstract skills of observation and inspiration, through sketching, stories, writing, solo time, and other activities. This course will be reflective, as well as fun. Plan to travel off-trail with some hill-climbing to explore a few special places. This course is part of the Yellowstone Naturalist series; learn more on the back cover.

#### HO! FOR WONDERLAND: EXPLORING YELLOWSTONE TOURISM क्षेत्र

JUN 17 AT 6:30 PM – JUN 20 AT 6 PM Gardiner, Montana Elizabeth Watry, M.A.

imit: 13 • \$395 • 160610

If you can make but one Western trip in your life, let it be through Yellowstone National Park," exclaimed Yellowstone excursionist Myra Emmons in 1901. Following the arrival of railroad service to Yellowstone in the late 19th-century, thousands of visitors alighted from trains and boarded brightly colored stagecoaches, and later touring cars, to embark on a Grand Tour of America's Wonderland. Enjoy a glimpse into several colorful eras of tourism in Yellowstone as you explore many of the park's bygone cultural landscapes, as well as its historic vehicle collection, on this field-intensive course.

#### BIRDS OF YELLOWSTONE

#### **JUN 17 AT 7 PM – JUN 19 AT 4 PM** Lamar Buffalo Ranch Brian Thorpe, M.S. Limit: 13 • \$270 • 160611

Yellowstone's varied habitats make the park a great place to begin watching birds. You'll start with a classroom introduction to birding that includes tips on key markings, behavior, sound, and habitat, which will give you the basics for bird identification in the field. Then spend two full days in the park, closely examining the more common species in Yellowstone; learning which birds live in particular habitats in Yellowstone; and exploring the wonder of bird migration, song, and courtship. You'll also find out how to help birds wherever you live and to enjoy birding no matter where you are.

#### BEARS: BONES, SIGNS, AND STORIES ११

**JUN 19 AT 9 AM - JUN 22 AT 4 PM** Lamar Buffalo Ranch

Jim Garry, M.S., James Halfpenny, Ph.D. Limit: 12 • \$570 • 160612

Jrsophiles (Greek for "bear lovers") unite! Discover a uniquely broad view of bears from heir evolutionary origins to interpretation of heir sign to compelling renditions of classic bear ales. In lectures and in the field, you'll learn about bear evolution, ecology, and management from carnivore ecologist James Halfpenny, and about the rich cultural history of bears from folklorist Jim Garry. We will observe these magnificent animals during the field trips.

#### OFF-TRAIL HIKING ON THE NORTHERN RANGE ११११

**JUN 20 AT 7 PM – JUN 23 AT 4 PM** Lamar Buffalo Ranch Julianne Baker, M.A. Limit: 13 • \$390 • 160613

Barbara Kingsolver has written: "People need wild places...We need to be able to taste grace and know once again that we desire it." Hiking off-trail in the northern range is to taste Yellowstone's grace. You'll explore this area of grassy meadows and sagebrush while enjoying wide vistas, easy route finding, and zigzag meanderings. After an evening of review on the basics of safe, comfortable, low-impact backcountry travel, you will head off the beaten path on hikes ranging up to 5 miles with climbs up to 1000 feet. Come wander this wild, seldom-seen place.

#### NEW! THE GRASSES OF YELLOWSTONE

JUN 23 AT 9 AM – JUN 24 AT 5 PM Lamar Buffalo Ranch

Matt Lavin, Ph.D. Limit: 13 • \$240 • 160614

Enhance your understanding of the northern range by studying a lesser known yet critical piece of its ecology: the grasses. You'll wander along streams and rivers, open arid benches, and forests to find and identify over 30 of the most common graminoid (grass and grasslike) species in the park. You'll study in the classroom in the morning, then head into the field with hand lenses and taxonomic keys to study grasses on the landscape in the afternoon learning basic tools that will help you identify additional species that you encounter after the course.

PHOTOS RIGHT TO LEFT. NEALA FUGERE, TED GATLIN BILL ZAGAR, ROBERT HARRIS; JIM FUTTERER; ROSEMARY JOHNSON; MARIA BISSO

# RANGER STATIO TOWER FALL MAMMOTH



#### NEW! HELL AND HIGH WATER: GEOLOGY ON THE NORTHERN RANGE 法法法

**JUN 23 AT 5:30 PM – JUN 26 AT 5 PM** Gardiner, Montana John Gillespie

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Limit: 13 • \$390 • 160615

Cataclysmic volcanic eruptions, epic floods, giant seas and oceans, petrified forests, glaciers, massive mud and landslides, mountains as large as the Himalayas. What do earth-shaping forces like these have to do with the northern range we see today? On roadside excursions and short hikes you'll look for clues to Earth's ancient history in the rocks of the northern range, traveling sequentially through geologic time from the Big Bang to today's geysers and hot springs. Delve into "deep" geologic time imagining hundreds, thousands, millions, even billions of years and pondering the forces at work on our living, breathing planet.

#### SUMMER WILDLIFE WATCHING १११

JUN 24 AT 7 PM – JUN 27 AT 4 PM Lamar Buffalo Ranch

Brad Bulin, M.S. Limit: 13 • \$390 • 160616

Welcome to Yellowstone's northern range, known worldwide for its "charismatic megafauna" such as grizzly bears, bison, wolves, and elk. You'll spend three full days looking for these and other wild animals and learning how they fit into the park's ecosystem. Enjoy early morning and evening searches for wolves, bears, and songbirds, then look to the midday sky for eagles, falcons, and other birds of prey. Keep a watchful eye elsewhere too, where you might spot river otters feasting on spawning trout or badgers hunting ground squirrels.

#### THE ART OF THE ILLUMINATED

#### JUN 25 AT 9 AM – JUN 28 AT 5 PM Lamar Buffalo Ranch

Hannah Hinchman Limit: 13 • \$480 • 160617

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An illustrated field journal is a nimble instrument, where you can combine drawings, maps, commentary, and questions, enfolding the smallest of events into the largest of landscapes. As a beginner or a veteran journal keeper, you will learn a world of ways to bring your Yellowstone experiences to the page. You'll use your journal both in active adventure and quiet absorption, exploring many tools and techniques. If you want to expand fieldjournaling to the digital world, consider the optional iPad sketching session.

#### LIFE AQUATIC: RIVER OTTERS IN YELLOWSTONE १११

#### JUN 29 AT 9 AM – JUL 1 AT 5 PM Lamar Buffalo Ranch

Thomas Serfass, Ph.D., Kelly Pearce, M.S. Limit: 12 • \$360 • 160618

Late June is the perfect time to learn about one of Yellowstone's most endearing mesocarnivores: river otters. You'll join two researchers and hike to river otter habitat to study their field sign, learn about their ecology and habitat, and hopefully observe these compelling creatures. Back at the Lamar Buffalo Ranch, you'll get to try your hand at research techniques, such as evaluating river otter food habits by identifying aquatic prey remains from their scat. You'll also learn how field biology and social science are used to promote the conservation of otters and aquatic ecosystems.

#### A YELLOWSTONE NATURALIST EXPERIENCE १११

JUL 2 AT 6 PM – JUL 4 AT 4 PM

Lamar Buffalo Ranch Katy Duffy, M.S., Jim Garry, M.S. Limit: 12 • \$315 • 160701

Explore northern Yellowstone as a naturalist does—with your senses on full alert. You'll become more familiar with Yellowstone's animals and plants by using your ears and eyes, feeling with your feet and fingers, and interpreting scents. Explore a track with your fingers to feel clues to the animal's behavior. Examine a daybed with your nose to detect who slept there. You'll observe nesting birds discreetly, and decipher their songs and calls. And don't forget the plants—search for wildflowers and their pollinators in forests, meadows, and wetlands. With this naturalist experience, you will become an insider outside in Yellowstone.

#### NEW! PHOTOGRAPHING WILDFLOWERS AND WATERFALLS ११

JUL 3 AT 9 AM- JUL 5 AT 5 PM Lamar Buffalo Ranch Tom Kirkendall, Greg Vaughn Limit: 12 • \$360 • 160702

Combine Yellowstone's legendary scenes with the peak of summer wildflowers as you practice the art of landscape and close-up photography. Focusing on creative expression and composition, you'll explore Yellowstone to capture images of wildflowers, waterfalls, grand vistas, and intimate portraits of the land. Traveling by mini-bus and on brief hikes, you'll be on location both at sunrise and sunset to take advantage of the best light. In class you'll discuss field technique and digital file preparation, and enjoy a slideshow of participants' photos on the final afternoon. Beginners welcome. An SLR camera and tripod are highly recommended.

#### DIGITAL PHOTOGRAPHY IMMERSION १११

#### JUL 5 AT 5:30 PM – JUL 10 AT 5 PM Lamar Buffalo Ranch Cindy Goeddel

Limit: 13 • \$630 • 160703

Take your intermediate or advanced digital photography skills to the next level with five days of photographing the best of Yellowstone. Shoot, eat, breathe, and discuss the endless wonders of this park while mastering the technical aspects of camera, equipment, and workflow. In the field, learn to strengthen and simplify your compositions. In classroom sessions, learn to optimize those images and to work with metadata, keywording, and templates. This class requires specific equipment-a digital SLR camera capable of capturing in RAW, laptop computer with at least 8GB RAM and three empty, portable, external hard drives, plus Adobe Lightroom, Adobe Photoshop, and Adobe Bridge.

#### WOLVES: REALITY AND MYTH

**JUL 6 AT 7 PM – JUL 8 AT 3 PM** Lamar Buffalo Ranch Nathan Varley, Ph.D. Limit: 12 • \$270 • 160704

Immerse yourself in the scientific and spiritual realm of the wolf with the guidance of a scientist who studies these provocative carnivores. Through field observations and classroom discussions, you'll explore how different cultures relate to wolves, how these relationships may relate to various myths and stories, and how the stories relate to the actual wild animal living in Yellowstone. Look for wolves on sunrise forays; hike through their habitat during the day. Throughout, learn how the wolf recovery project has ushered in a new era of scientific understanding.

#### TECTONIC TROUT AND BOILING BACTERIA: THE GEOLOGY OF ECOLOGY 38 6

JUL 8 AT 9 AM – JUL 10 AT 6 PM Gardiner, Montana, and Yellowstone Lake Paul Doss, Ph.D.

#### Limit: 13 • \$380 • 160705

Ever wonder why Yellowstone is called America's Serengeti, or why NASA scientists come here to look for clues to potential life on Mars? On short hikes off the beaten path, you'll explore the incredible convergence of geologic factors that created one of the world's largest volcanoes, with its life-sustaining and lifethreatening heat flow and its expansive high-altitude plateau. Delve into the details as you study the park's complex array of climate and soil. Follow the behavior and distribution of life in Yellowstone and how it relates to the geology of this magnificent landscape. This course moves locations each night, so a limited number of rooms will be held in Gardiner and at Yellowstone Lake; call us for details.

#### NEW! BACKCOUNTRY COOKING ४१४

#### JUL 9 AT 5 PM - JUL 11 AT 3 PM

Lamar Buffalo Ranch Debra Dirksen, Ph.D. Limit: 13 • \$300 • 160706 All meals included!

Are you tired of freeze-dried food on your backcountry trips? In this delicious course, you'll learn how to use lightweight backpacking stoves and campfires to make trail meals that are lightweight, tasty, and affordable. Each day you'll work with classmates to create great food and then enjoy the fruits of your labor. You'll spend most of the time outdoors at the Buffalo Ranch campfire ring or on short hikes of 3–5 miles, practicing your camp-cooking skills and learning new recipes. Meals and cooking equipment are included—just bring a healthy appetite and hiking gear.

#### NEW! MEANDERING THROUGH WILDFLOWERS &

**JUL 11 AT 9 AM – JUL 13 AT 5 PM** Lamar Buffalo Ranch Wayne Phillips Limit: 13 • \$367 • 160707

Go beyond simple flower identification in this fun and engaging course. Delve into plant ecology, learning the structure of plants and their flowers from the ground up; and study the edible, medicinal, Native American, and wildlife uses for the plants you encounter. Meandering at a relaxed pace through sagebrush and grassland valleys, colorful sub-alpine meadows, and the cool, shady spruce forests along streams, you'll have time for careful observation and meditation. Creative tools like poetry, song, photography, and sketching will help you learn, remember, and document the features of the plants and flowers you've come to know.

#### HIGH ENERGY AND ALPINE WILDFLOWERS 秋秋秋 JUL 14 AT 7 AM - JUL 16 AT 5 PM

Lamar Buffalo Ranch Wayne Phillips

Limit: 13 • \$367 • 160709 Spend three glorious summer days hiking in subalpine woodlands and meadows, in carpets of intensely colorful wildflowers and climbing to reach the alpine tundra above tree line. You'll visit three alpine locations in Yellowstone National Park and the Beartooth Plateau, hiking up to 8 miles each day with elevation gains up to 1500 feet. Your rewards: dazzling light, eye-popping color, and discovering plants that grow in cushions and forests full of trees about your height.

#### ROADSIDE GEOLOGY OF YELLOWSTONE COUNTRY &

**JUL 15 AT 9 AM – JUL 17 AT 4 PM** Lamar Buffalo Ranch Robert C. Thomas, Ph.D. Limit: 13 • \$360 • 160710

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Jump into the bus for three days of exploring the most amazing roadside geology in the world: Yellowstone, Earth's largest active volcano. You'll examine rocks formed in continental collisions billions of years ago, ponder the forces that buried forests, and follow glaciers that covered the entire park in thousands of feet of ice. While traversing roads in and around the park, you'll find evidence of volcanic eruptions during the past 2.2 million years—including signs that the volcano continues its action today.

#### DRAWING THE LANDSCAPES OF YELLOWSTONE ₹₹ ●

JUL 17 AT 7 PM – JUL 20 AT 4 PM Lamar Buffalo Ranch Alan Petersen, M.A. Limit: 13 • \$390 • 160711

How did Thomas Moran begin his memorable paintings of Yellowstone? The same way you will learn in this class—by using time-tested drawing and observation skills to capture the forms and details of the land. You'll learn these techniques during two indoor sessions and then spend the rest of the time outdoors applying what you've learned to create your own landscapes. Whether you are new to drawing or experienced, you'll learn to see Yellowstone National Park in a new way.

#### FLY FISHING FOR BEGINNERS क्षेत्रे

JUL 18 AT 9 AM – JUL 20 AT 5 PM Lamar Buffalo Ranch Jesse Logan. Ph.D.

Limit: 8 • \$385 • 160712

Wily trout await you in the legendary fly-fishing waters of Yellowstone National Park. Learn how to catch them with classic fly-fishing techniques that you learn on dry land, and further refine on the park's streams and rivers. You'll find out how to choose and use the right equipment and gear. On the water, you'll learn to select flies for different conditions and how to read water to improve your success. In between casts, you'll look beneath the surface to examine the world of trout and the aquatic insects they depend on.

#### OLD TIMES AT OLD FAITHFUL ११

JUL 21 AT 9 AM – JUL 21 AT 5 PM Old Faithful Leslie J. Quinn, M.Ed. Limit: 20 • \$140 • 160713

Imagine diving into a geyser-heated swimming pool as Old Faithful erupts in the background, or enjoying flowers grown in Old Faithful Village's thermally-heated greenhouse. Explore these long-gone experiences through site visits, antique photographs, and discussions with a park hotel expert. Find out why the village's oldest building is abandoned in the forest and why the Upper General Store is nicknamed the B.A.C.; take your seats at the Bear Feeding Grounds that closed in 1936; and learn other interesting details about Old Faithful Village past and present. A limited number of rooms will be held until 30 days prior to the course; call us for details.

#### NEW! FLY FISHING II: BEYOND THE BEGINNER 教教

JUL 21 AT 7 PM – JUL 24 AT 5 PM Lamar Buffalo Ranch

Jesse Logan, Ph.D., Steve Harvey Limit: 8 • \$480 • 160714

Up your fly-fishing game by taking your skills to the next level. The Yellowstone and Lamar rivers will be your classroom as you learn to think like a trout. During full days on the river, you'll dig in to trout ecology and stream entomology, deepening your understanding of cold water systems and improving your ability to catch those canny fish. Learn how to handle difficult conditions, such as winds, brushy stream banks, and variable currents, while practicing responsible fishing. In evening classroom sessions, you'll learn how to tie your own flies, and consider challenges facing Yellowstone's waters.

#### NEW! EXPERIENCE THE GEOLOGY OF YELLOWSTONE ≹≹

JUL 22 AT 7 PM – JUL 24 AT 5 PM Lamar Buffalo Ranch Dave Egan, M.S. Limit: 13 • \$270 • 160715

Yellowstone is a geologist's paradise. Explore the natural features of Yellowstone and the surrounding area as a geologist does. On short walks to a variety of formations in and around the park you'll examine up-close the diversity of rock types and features characteristic of Yellowstone and its many geysers. Learn to make your own interpretations of what you see on the landscape, and gain a greater appreciation of the geologic processes that created the park. You'll also leave with a new perspective—the ability to look at the landscape through the eyes of a geologist—in Yellowstone, or beyond.

#### NATIVE AMERICAN PLANTS AND THEIR USES 🕅

#### **JUL 25 AT 7 PM – JUL 28 AT 4 PM** Lamar Buffalo Ranch Linda Black Elk, M.S., Luke Black Elk

Limit: 12 • \$415 • 160716

Explore the relationship between people and plants from instructors whose ancestors passed on intimate knowledge of plants that spans thousands of years. Learn how to identify plants of the Greater Yellowstone Ecosystem and how Native Americans use them for food, medicine, and other purposes. You will identify and collect plants during field trips in the Gallatin National Forest. In classroom sessions, you will use these collections to make traditional and contemporary medicinal salves, teas, and other medicines that you can use and take home.

#### NEW! EVOLUTION OF THE NORTHERN YELLOWSTONE LANDSCAPE %%%

JUL 25 AT 9 AM - JUL 27 AT 2 PM

Lamar Buffalo Ranch Grant Meyer, Ph.D. Limit: 13 • \$330 • 160717

From Tower Junction to the Northeast Entrance, investigate how dynamic events in the recent geological past have sculpted this mountain country. See how volcanoes, glaciers, landslides, and fast-flowing water formed today's landscape. Through daily hikes, field observations, maps, and illustrated programs, you'll explore how landforms and soils underpin the ecosystem. Learn how streams shape their channels and valleys by measuring their flow rates and sediments, and how scientists use past landscape changes to understand the future. Hikes will be less than 3 miles a day, however primarily off-trail on sometimes loose, steep terrain requiring good balance.

#### THE ARTISTIC JOURNAL: CULTIVATING COLOR AT OLD FAITHFUL ११

#### JUL 28 AT 9 AM – JUL 31 AT 4 PM Old Faithful

Eleanor Williams Clark, M.L.A. Limit: 13 • \$532 • 160718

Pack your journal and paints and tap into your creative side amidst the steam, hot water, and brilliant colors in the dynamic Old Faithful area. On the balcony of the Old Faithful Inn, and on wanderings through geyser basins, you'll learn to sketch and paint this remarkable area. Spend the early mornings and evenings exploring and searching for colorful thermal features, wildlife great and small, and other Yellowstone vignettes to observe and record. Experiment with paint and papers, practicing your skills as you capture Yellowstone on paper. A limited number of rooms will be held until 30 days prior to the course; call us for details.

#### NEW! LAKOTA CREATION STORIES: THE ANIMALS OF YELLOWSTONE के

#### JUL 28 AT 7 PM - JUL 30 AT 4 PM

Lamar Buffalo Ranch Luke Black Elk, Linda Black Elk, M.S. Limit: 12 • \$270 • 160719

Journey into the hearts and minds of the Lakota people as you learn about the cultural significance that Yellowstone animals have to the tribe. Stories, songs, and star knowledge will guide you into Lakota traditions as you travel to some of the park's most beautiful settings. During the day, search for animals, and hike to culturally significant sites. In the evenings, you'll gather around the campfire as the Lakota ancestors did, to hear stories of the creation of the world and the animals within it.

#### NEW! WILDLIFE TRACKING PRIMER & JUL 30 AT 9 AM - JUL 30 AT 5 PM

Lamar Buffalo Ranch James Halfpenny, Ph.D. Limit: 13 • \$125 • 160720

Understand mammal lives and find their hidden stories by becoming a natural history detective. In this one-day mammal tracking primer, you'll learn basic tracking skills—footprint identification, measuring and aging tracks, analyzing mammal gaits, interpreting animal trails, and making plaster casts. Learn how the detective reads tracks and trails to observe and decipher the clues left behind by elusive mammals. After a morning classroom session, you'll practice reading the story written on the wildlife trail by finding, identifying, interpreting, and casting footprints.

#### THE BISON OF YELLOWSTONE &

#### JUL 31 AT 9 AM - AUG 2 AT 3 PM

Lamar Buffalo Ranch Jim Garry, M.S., Harold Picton, Ph.D. Limit: 12 • \$420 • 160721

The big boys are rumbling. It's mating time in the land of the buffalo. You'll divide your time between the field—observing the fascinating behavior of rutting buffalo—and the classroom learning about one of the Old West's enduring symbols. You'll look at the biology and natural history of bison, its role in native cultures, and its role in the expanding white culture of 19th-century America. Learn how the Lamar Buffalo Ranch played a part in the survival of the bison, and explore the current turmoil surrounding bison management in the Greater Yellowstone Ecosystem.

#### THE SECRET WORLD OF BADGERS &

AUG 1 AT 9 AM – AUG 1 AT 5 PM Lamar Buffalo Ranch

James Halfpenny, Ph.D. Limit: 13 • \$125 • 160801

Seldom seen by visitors, badgers spend much of their time underground, are low to the ground, and hide easily in the sagebrush, making them difficult to observe and study. Through morning lectures and an afternoon jaunt to badger den sites, you'll learn all about badger ecology, from cooperative hunting and predation to disease. By studying and analyzing observation data, you'll also experience firsthand the role citizen science can play in understanding badger behavior. With a little luck, hopefully you'll get to see one yourself! Consider pairing this class with The Story of Wolverine or Wildlife Tracking Primer.

#### THE STORY OF WOLVERINE AND LYNX & AUG 2 AT 9 AM - AUG 2 AT 5 PM

Lamar Buffalo Ranch James Halfpenny, Ph.D. Limit: 13 • \$125 • 160802

Sometimes referred to as the "demons of the north," wolverines are victims of bad publicity and the secretive Canada lynx simply lacks publicity. Learn the real story about these seldom-observed creatures who haunt the dark environs of Yellowstone's mountain forests. In a combination of a classroom session and a short hike into wolverine and lynx habitat, you'll learn what research—such as DNA analysis and GPS—tells us about where these animals live and their role in local ecology. You'll also discuss management challenges and protection under the Endangered Species Act. Consider pairing this class with The Secret World of Badgers or Wildlife Tracking Primer.

#### YELLOWSTONE FAMILY RETREAT १-१११

AUG 3 AT 5:30 PM – AUG 7 AT 9 AM Lamar Buffalo Ranch Institute Staff

Limit: 26 • Minimum age: 5 • 160803 \$831 per adult/\$756 per child under 12 All meals included!

This summer, leave the planning, driving, and meals to us! In this family-style retreat, you and the kids will learn side-by-side about Yellowstone's wildlife, geology, and history through a variety of engaging activities. Do as much or as little as you like, depending on the interests and ages of your children. Head out for a full- or half-day excursion, or stay on campus for nature art and exploration. You'll stay in private log cabins and enjoy delicious and kid-friendly meals in the historic bunkhouse. We welcome all combinations of adults and children who want to rediscover their sense of wonder, make new friends, and take home memories that last a lifetime.

#### NEW! BACKPACKING AND FLY FISHING: HEART LAKE TO SOUTH BOUNDARY ARAA

AUG 9 AT 6 PM – AUG 15 AT 3 PM Gardiner, Montana Jesse Logan, Ph.D., Patty Walton Limit: 8 • \$885 • 160805

The joy of fly fishing for native trout in a remote backcountry setting is your reward on this backpacking trip in southern Yellowstone. On daily hikes of 5-8 miles, explore the rich land south of the Yellowstone Caldera, where the water flows to the Pacific from the Continental Divide. Our itinerary will allow plenty of time to fly fish some of Yellowstone's spectacular rivers and streams, and perhaps even catch an elusive fine-spotted cutthroat trout. You'll also have the chance to climb Mt. Sheridan on our layover day, from which you can survey a land of spectacular beauty and interesting park history.

#### NEW! GEOLOGY: PAST TO PRESENT ON YELLOWSTONE LAKE ৫৫৫৫

AUG 17 AT 7 PM - AUG 21 AT 5 PM

Yellowstone Lake Lisa Morgan, Ph.D. Limit: 12 • \$530 • 160806

Woven into the landscape around Yellowstone Lake is a tapestry of history, geology, and science. The largest high altitude lake in North America straddles the southeast margin of the Yellowstone Caldera, one of the most geologically dynamic places on Earth. On daily hikes of 4-8 miles, you'll interpret features in and around the lake-such as rhyolitic lava flows, hydrothermal explosion craters, fissures, faults, and spires—which tell a fascinating geologic story. Learn how scientists map underwater features like hydrothermal vents and spires, and walk in the footsteps of scientific mapping explorations from Hayden's 1871 survey to today. A limited number of rooms will be held until 30 days prior to the course; call us for details.

#### NAVIGATING THE WONDERS OF YELLOWSTONE'S BACKCOUNTRY ११११

#### AUG 20 AT 7 PM - AUG 22 AT 4 PM

Lamar Buffalo Ranch Orville Bach, Ed.D. Limit: 13 • \$270 • 160807

Step off the trail and into adventure during this combination navigation, hiking, and natural history class. You'll begin with an evening presentation about how to utilize a compass and topographic map to explore the wonders of Yellowstone's backcountry. During the day, you'll practice your new navigation skills and experience the thrill of setting your own course across the landscape. The pace is slow, so you can observe the life and land around you. Along the way, you'll learn about the animals, plants, and geology you are seeing, as well as some of the park's human history. Your guide is one of the park's most experienced park rangers.



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PHOTOS TOP DOWN: MARIA BISSO; MARIA BISSO; MARIA BISSO; MARIA BISSO; MARIA BISSO; MARIA BISSO; JIM FUTTERER; MARIA BISSO "I found I was able to gain a new perspective on the connectivity between every tree, wolf, elk, and bear. I found myself understanding where I fit into nature more so than before."–Benjamin B., Ontario, Canada

#### NEW! BACKPACKING THE CARNIVORE CORRIDOR: THE BUFFALO PLATEAU ক্রেক্র

#### AUG 21 AT 6 PM – AUG 25 AT 3 PM Gardiner, Montana

Brad Bulin, M.S., Carolyn Harwood Limit: 8 • \$605 • 160808

Walk in the footsteps of wolves, cougars, and bears in the Buffalo Plateau area between Hellroaring and Slough creeks. As you explore this wild country-a busy migration corridor, critical winter range for ungulates, and important year-round habitat for carnivoresyou'll learn about Yellowstone's key predators by studying their habitat and the sign they leave behind. On daily travels up to 8.5 miles, you'll imagine the area's rich human history, from native cultures to the early trappers and poachers that frequented the area, and also discuss the work of early environmentalists, such as Roosevelt, Grinnell, and Hough. who fought to protect this area from economic development.

#### NEW! CROW TRIBAL CULTURE AND YELLOWSTONE &

**AUG 23 AT 9 AM – AUG 24 AT 2 PM** Lamar Buffalo Ranch Shane Doyle, Ed.D. Limit: 13 • \$240 • 160810

The land we now call Yellowstone National Park used to be the heart of Crow country. Today it remains a place of deep meaning to the tribe. In this class led by a Crow tribal member, you will examine the tribe's relationship to Yellowstone through a combination of classroom sessions and field trips to critical cultural sites. Hear explanations of how natural features within the park were created, and how the park figures into the origin of the tribe. You'll also learn about contemporary Crow beliefs and practices in the park.

#### NATURALIST SERIES: CULTURAL HISTORY

**AUG 26 AT 9 AM - AUG 27 AT 5 PM** Lamar Buffalo Ranch David Laufenberg Limit: 13 • \$240 • 160813

Bring your own unique perspective to this course on Yellowstone's cultural history. Create your own "Top Ten Historic Events" list as you learn what others have stated in the past. To do so, you'll explore cultural sites in the park, including Fort Yellowstone, old railroad sites in Gardiner, Montana, and the park's collection of historic automobiles. Dig deeper on a behindthe-scenes tour of the Heritage and Research Center, which houses the park's museum collection, rare books, and archives. History will come alive as you explore Yellowstone's "top ten"—and beyond. This course is part of the Yellowstone Naturalist series; learn more on the back cover.

#### NATURALIST SERIES: THERMAL GEOLOGY AND BIOLOGY ≹≹ ●

AUG 27 AT 7 PM - AUG 29 AT 5 PM

Lamar Buffalo Ranch Shauna Baron Limit: 13 • \$270 • 160814

At a glance, the waters of Yellowstone's magnificent thermal features offer bright colors and stunning photographic opportunities. But look closely and you'll find they are teeming with a hidden world full of tiny, heat-loving microscopic organisms. Visit enormous terrace formations, steaming pools, and diverse communities of microbes to learn about different thermal life forms. You'll also gain an understanding about the volcanic forces deep underground driving the heat and water systems that define this microbial community. Use field journaling to capture your observations, both large and small, from geothermal landscapes to the microscopic life. This course is part of the Yellowstone Naturalist series; learn more on the back cover.

#### SLOW HIKING AND CAREFUL OBSERVING \*\*

AUG 28 AT 9 AM – AUG 30 AT 4 PM Lamar Buffalo Ranch Gene Ball

Limit: 13 • \$360 • 160815

If you like to hike with plenty of time to enjoy the scenery and smell the wildflowers, then come along on these rambles down Yellowstone's trails. You'll take two easy short hikes each day, stopping often to observe wildlife, birds, wildflowers, and whatever comes into view. Along the way, discuss and learn about the park's wildlife, history, and challenges—or whatever else comes to mind. You'll hike through a variety of habitats in different parts of the park, each with its own hidden gems awaiting those who slow down and observe.

#### THE INTELLIGENCE OF ANIMALS 秋法

AUG 30 AT 9 AM – SEP 1 AT 4 PM Lamar Buffalo Ranch George Bumann, M.S. Limit: 13 • \$360 • 160816

What is the raven's word for eagle? How does a wolf know when to give up chase? How do animals pass on information through time? Delve into these and other questions of animal intelligence by directly observing Yellowstone's summer wildlife. You'll learn to decipher body language, behavior, and vocalizations for clues about intelligence. Watch how different species interact with each other and their environment. Explore how they learn and pass their knowledge to their offspring. And consider how this information applies to other species—including those you may know from home.

#### INTO THE HEART OF THE YELLOWSTONE VOLCANO 法法法 AUG 30 AT 7 PM - SEP 1 AT 5 PM

#### Old Faithful Jacob Lowenstern, Ph.D.

Limit: 13 • \$290 • 160817

Explore one of the world's largest volcanoes with one of its leading researchers. You'll be based at Old Faithful, in the heart of the hydrothermal action. Investigate the geyser basins, study steam vents, and take a close look at rocks for clues to the volcano's behavior. Visit other geologic features that reveal details about the volcano's history and learn how the Yellowstone Volcano Observatory monitors for current activity. And explore that intriguing question, "What's in store for the future?" A limited number of rooms will be held until 30 days prior to the course; call us for details.

#### NEW! **BIG HIKES IN BIG SKY COUNTRY** 教教教教+ SEP 1 AT 7 PM - SEP 4 AT 4 PM

Lamar Buffalo Ranch David Laufenberg, Joshua Theurer, M.S. Limit: 13 • \$455 • 160901

If you long to explore remote mountain terrain, this course is for you. Stretch your legs, your lungs, and your mind exploring the far reaches of Yellowstone's backcountry on foot. You'll travel light and fast through some of the most spectacular territory in northern Yellowstone, learning to cover miles to remote destinations while still appreciating the ecological forces at play on the landscape. From a comfortable base camp at the Lamar Buffalo Ranch, you'll hike up to 15 miles and 3000 feet elevation gain per day, exploring distant and challenging trails rarely covered in Institute hiking courses.

#### BLACK CANYON BACKPACKING ११११

#### SEP 2 AT 6 PM - SEP 5 AT 5 PM

Gardiner, Montana Jim Garry, M.S., Patty Walton Limit: 8 • \$465 • 160902

The Black Canyon of the Yellowstone beckons hikers new to backpacking or those seeking a short trip to end the season. Hike through landscape built up by lava and scoured by glaciers. Learn about the plants and animals of the canyon and the people who have explored it. You'll also learn how to backpack comfortably and safely in bear country. Your adventure begins with an evening classroom session followed by three days of backpacking about 5 to 7 miles each day. The hike ends with an invigorating climb from the river and rewarding views of Yellowstone's wild landscape.

#### LATE SUMMER WILDLIFE WATCHING ११

#### SEP 2 AT 7 PM - SEP 5 AT 4 PM

Lamar Buffalo Ranch Brad Bulin, M.S. Limit: 13 • \$390 • 160903

Welcome to Yellowstone's northern range, known worldwide for its "charismatic megafauna," such as grizzly bears, bison, wolves, and elk. You'll spend three full days looking for these and other wild animals and learning how they fit into the park's ecosystem. Enjoy early morning and evening searches for wolves, bears, and songbirds, and then look to the midday sky for falcons and other birds of prey as they migrate for warmer temperatures. Keep a watchful eye on the ground, too, where you might spot small animals preparing their food caches for winter.

#### RAPTORS OVER YELLOWSTONE %\*

SEP 9 AT 7 PM – SEP 10 AT 6 PM Gardiner, Montana Katy Duffy, M.S.

Limit: 13 • \$150 • 160904

It's a raptor time of year. Start your weekend with an evening classroom session about raptor identification and ecology and then head out in the field the next morning to watch for birds of prey (raptors) flying overhead on their journeys south. Join a former Yellowstone education ranger and bird expert and visit one of Yellowstone's valleys—such as Hayden Valley where you might see individuals filling up on plentiful grasshoppers and small rodents. With any luck, you'll see eagles, osprey, and a variety of hawks and falcons.

#### PAINTING THE FALL LANDSCAPES OF YELLOWSTONE 👯

**SEP 16 AT 7 PM - SEP 19 AT 4 PM** Gardiner, Montana Molly Hashimoto Limit: 13 • \$390 • 160906

Discover the pleasure of plein-air watercolor painting in Yellowstone, painting at the colorful thermal areas as well as at locations where fall color is at its best. Enjoy studio time in Gardiner learning watercolor techniques and developing your palette. Practice each day outdoors at one of the park's spectacular landscapes, drawing and painting Yellowstone's landforms and hydrothermal features. You'll also have the opportunity to view the magnificent art collection held in the Yellowstone Heritage and Research Center, which includes works by Moran and others who played a critical role in establishing Yellowstone as the world's first national park.

#### AUTUMN WILDLIFE WATCHING ११

SEP 18 AT 9 AM – SEP 20 AT 4 PM Gardiner, Montana Gene Ball

#### Limit: 13 • \$360 • 160907

Who's gone missing? Who's new on the scene? Can you spot the wolf pups trying to act like adults? See if you can find a bear doing anything other than eating. Are the bison still busy mating? Which female elk are paying attention to which bugling bull? Watch all this and more as we explore the behavior of critters during three full days out and about in Yellowstone's wildlife-rich north and central areas.

#### AUTUMN DAY HIKING IN YELLOWSTONE क्षेत्रेक्षेत्रे

SEP 22 AT 7 PM - SEP 25 AT 4 PM

Gardiner, Montana Carolyn Harwood Limit: 13 • \$390 • 160908

Some days are diamonds—and autumn sparkles with more diamond days than any other season in Yellowstone. Chilly mornings give way to sunny afternoons. Cobalt skies press against the white of new snow in the high country. Golden sunlight plays upon cured yellow grasses. Elk enliven the air with their eerie bugles, and birds flock as they prepare to migrate south. Come spend three diamond days in Yellowstone, hiking up to 12 miles each day, with elevation gains up to 2000 feet.

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SEP 22 AT 9 AM – SEP 24 AT 4 PM Gardiner, Montana Brad Bulin, M.S.

Limit: 13 • \$360 • 160909

Spend three days immersed in the lives of Yellowstone's wolves. Through a combination of discussions, field trips, and hikes, you'll explore wolves and their lives, their interactions with other predators, and their relationship with humans. Visit one of the pens where wolves spent time acclimating to Yellowstone after their abrupt departure from Canada. Look for wolves in the Lamar Valley and other wolf habitat. And find out what we have learned about wolves since their restoration 20 years ago.



#### AUTUMN WILDLIFE WATCHING ११

#### SEP 27 AT 9 AM - SEP 29 AT 4 PM

Gardiner, Montana George Bumann, M.S. Limit: 13 • \$360 • 160910

Who's migrating and who's hunkering down? Which animals are still busy mating, and which have already gone underground? You'll spend three full days in the field observing as many species as possible, with the guidance of a seasoned naturalist. You'll see how different animals deal with this transitional time and learn to recognize their patterns of behavior. Compare what you observe with what scientists have discovered about Yellowstone's wildlife, and engage in lively discussions about your experiences and those of other participants.

#### AUTUMN WILDLIFE PHOTOGRAPHY क्षेत्र

SEP 28 AT 9 AM – OCT 1 AT 4 PM Gardiner, Montana Meg Sommers

Limit: 13 • \$495 • 160911 Calling all photographers, novice and veterans alike! Now is the time to learn tips for photographing Yellowstone's autumn wildlife action. You'll spend most of the day outdoors, finding out what animals, big and small, do and where they are—keys to finding them for your photos. You'll also practice photographic fundamentals, techniques, the ethics of wildlife photography, and tips to keep you safe. In class sessions, you'll focus on composition, lighting, equipment, and computer skills. So, pack your digital camera and tripod and head into Yellowstone's wild autumn.

#### BECOME A CERTIFIED INTERPRETIVE GUIDE 🕅

#### OCT 3 AT 8 AM – OCT 7 AT 3 PM Gardiner, Montana

Jessica Haas, M.S., Carolyn Harwood Limit: 24•\$425•161001

In this professional certification course presented in partnership with the National Association for Interpretation (NAI), you'll learn from professional interpreters as they work in the world's first national park. Sessions will be held on the trail focusing on informal interpretation as well as indoors emphasizing formal interpretation techniques. To earn certification, you'll prepare a written outline of a 10-minute presentation, deliver the presentation, and complete an open-book multiple-choice exam. The week will end with a celebratory wildlife-watching morning and closing ceremony. All materials, certification, and NAI membership fees are included in vour tuition.

#### WILDERNESS FIRST RESPONDER RECERTIFICATION &

#### OCT 10 AT 8 AM – OCT 12 AT 5 PM Gardiner, Montana

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SUIBER NOITRATS

JAN 13, 2016,

Wilderness Medicine Institute Staff Limit: 30 • \$305 • 161002

Are your wilderness medicine skills a bit rusty? Review and practice evacuation and decision-making guidelines in this scenario-based course. You'll also receive current updates in the wilderness medicine field. Upon successful completion, your current Wilderness First Responder from most organizations, will be recertified. CPR is included.

"This program lets you see the most magnificent vistas that would take hours to plan without a knowledgeable instructor." –Beverly G., Texas

# CENTENNIAL COURSES

FOR THE BENEFIT AND ENJOYMENT OF THE PEOPLE

As the National Park Service approaches its 100th anniversary in 2016, we invite you to embark on a journey with us to celebrate the unique American legacy that parks represent. Seven new courses delve into Yellowstone's cultural, scientific, conservation, and artistic legacy. Hike, journal, explore, and learn, while celebrating the past and looking forward to the next century of parks!

20

#### NEW! DAY HIKING YELLOWSTONE'S ANCIENT ROUTES 👯 🎊

JUN 29 AT 7 PM – JUL 2 AT 4 PM Lamar Buffalo Ranch Julianne Baker, M.A.

Limit: 13 • \$390 • 160619

To hike Yellowstone is to become part of its rich history. This land has felt the steps of Native Americans, fur trappers, poachers, U.S. cavalry officers, early tourists, and the first national park rangers. In celebration of the National Park Service centennial, step back in time to enjoy some of the same views seen by those early travelers, as you follow old wildlife trails, Native American travel routes, and outfitter trails. Much of our travel will be off-trail, 8-12 miles each day, in the scenic and culturally rich northern range.

#### NEW! BETWEEN A ROCK AND A HARD PLACE: FACING GEOLOGICAL CHALLENGES IN YELLOWSTONE A (

JUL 12 AT 9 AM – JUL 14 AT 5 PM Lamar Buffalo Ranch Paul Doss, Ph.D. Limit: 13 • \$360 • 160708

How does the park manage issues like threatened and endangered species, millions of annual visitors, and building infrastructure in the land of hydrothermal features, rockfall, debris flow, and an active volcano? Geological processes in Yellowstone are dynamic, unpredictable, and easily exploited, providing serious challenges for park managers. On short field excursions to places in and around the park, you'll observe historic and current geological challenges firsthand, make your own field observations, and consider the management implications related to

resource protection, visitor safety, and the conduct of scientific research on public lands.

#### NEW! AN ARTIST RETREAT: RECONNECTING WITH THE NATURAL WORLD AX • AUG 8 AT 9 AM - AUG 12 AT 9 AM

Lamar Buffalo Ranch Daniel and Kara Hidalgo, Joshua Theurer, M.S. Limit: 26 • \$665 • 160804

Artists play an important role in preserving public lands like Yellowstone National Park by eliciting emotional connections to the natural world. Celebrate the National Park Service centennial during this artist retreat in the Lamar Valley, where you'll meld art and science to strengthen your artistic approach. With a naturalist, you'll gain a deeper understanding of your subject. With artists, you'll capture the essence of the landscape based on your enhanced perspective. Experiment with different artistic mediums, and share your work with other students who also have a passion for nature and art. Guest speakers will explore the connections between nature, art, and our public land legacy.

#### NEW! JOURNALING IN THE SPIRIT OF LEWIS AND CLARK &

AUG 21 AT 9 AM – AUG 23 AT 4 PM Lamar Buffalo Ranch Susan Zwinger, Ph.D. Limit: 13 • \$375 • 160809

Imagine how shocked early explorers would be at today's unwild West, and how grateful for national parks they would be. Come see Yellowstone anew by journaling in the spirit of 19th-century explorers like Lewis and Clark. Each morning, you'll learn basic descriptive, drawing, and observation skills. Spend afternoons traveling to different areas to record the wilds of Yellowstone. As a class, compile your favorite journal pages into illustrated letters to Meriwether, Sacajawea, William, York, and Colter. Keep a copy of this compilation for yourself and we will send one to the National Park Service to document the experience of modern-day explorers—like you.

#### NEW! 100 IDEAS FOR KEEPING A TRAVEL SKETCH BOOK &

AUG 24 AT 9 AM – AUG 26 AT 4 PM Lamar Buffalo Ranch Suzie Garner, M.A., M.F.A. Limit: 13 • \$360 • 160811

Celebrate 100 years of national parks by learning 100 ways to document your park experiences in a travel sketchbook. Through quick sketches, notes, stamps, maps, ephemera, color, and drawing techniques you'll explore new approaches to capturing the moment. Experience first-hand the centennial celebration at the historic Roosevelt Arch, and then fill your pages with visual information that captures the essence of your experience. Afterwards, you can look back and see your travel adventures laid out in creative and engaging ways.

#### NEW! YELLOWSTONE'S GEOLOGICAL LEGACY 依然依

AUG 24 AT 5:30 PM – AUG 27 AT 4 PM Old Faithful Pat Shanks

#### Limit: 13•\$410•160812

Over 100 years of geological exploration has contributed to today's understanding of Yellowstone's geyser basins and hot water systems. As you travel through the park—with hikes up to 8 miles on boardwalks and trailsyou'll visit a variety of hydrothermal areas, including lesser-known sites first described by early explorers. Learn about key scientific breakthroughs, from the 1870 Washburn expedition to the modern day Yellowstone Volcano Observatory, which have helped scientists understand how geysers work. By the end, you'll recognize characteristics of the waters, mineral deposits, vents, and bacteria found in geothermal areas, and gain a deeper appreciation for the processes at work underground. A limited number of rooms will be held until 30 days prior to the course; call us for details.

#### NEW! FOUNDATIONS OF THE NATIONAL PARK SERVICE IN YELLOWSTONE \*

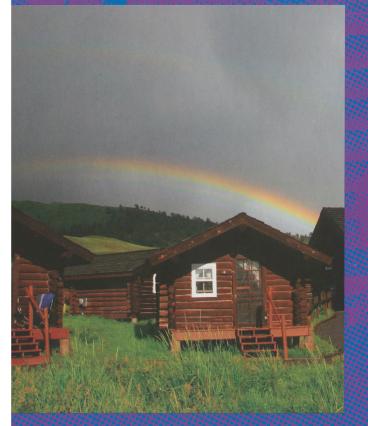
SEP 10 AT 6:30 PM – SEP 13 AT 6 PM Gardiner, Montana Elizabeth Watry, M.A., Wes Hardin, M.Ed., M.A. Limit: 13 • \$390 • 160905

With the stroke of a pen on August 25, 1916, President Woodrow Wilson signed into being the National Park Service. One of America's greatest legacies, the NPS formed new ideals of conservation, education, and perceptions of nature. The innovation and ingenuity of many early NPS trailblazers helped shape public land stewardship from 1872 to today, in a model that is emulated around the world. On field trips to historic sites throughout the park, history will come alive as you gain a deeper understanding of Yellowstone, and the evolution of the American ideal of national parks.

Historic photos from Yellowstone's rich past, courtesy of Yellowstone National Park.

# LODGING

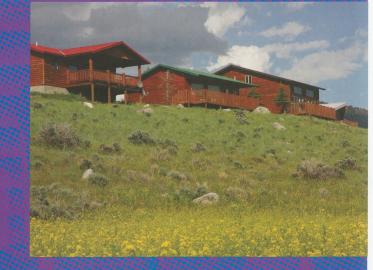
is exclusively for Institute students. When you learn with us, you can stay with us! Inquire when you register. Rates are effective through October 31, 2016, and do not include taxes.



#### Lamar Buffalo Ranch Field Campus

Far from other development, the ranch in Yellowstone's northeast corner offers comfortable lodging in a historic wilderness setting. You'll enjoy a log cabin with a propane heater, a bathhouse with private showers, and a common building with fully equipped kitchen where you prepare your own meals. The Lamar Buffalo Ranch is available to participants in Field Seminars based out of Lamar.

NIGHTLY RATE IN SHARED CABIN \$37 per person



#### Yellowstone Overlook Field Campus

Perfect for families and groups, the Yellowstone Overlook features comfortable cabins on 80 acres, aweinspiring views, and easy access to the northern section of the park. Cabins have self-serve kitchens for preparing meals and open floor plans perfect for group dining and evening activities. Enjoy our educational learning libraries. Groups that need a formal classroom setting can arrange to use the classrooms at our headquarters just down the hill in Gardiner, Montana. The Yellowstone Overlook is available for Private Tour participants, Youth & College groups, and participants in Field Seminars based out of Gardiner.

#### **Nightly Rates**

**ELECTRIC PEAK OR DAVIS CABIN** \$420 for up to 15 people

BUNSEN PEAK CABIN \$210 for up to 7 people

FIELD SEMINAR RATE IN SHARED CABIN \$40 per person for shared room \$100 for private room

# INSTRUCTORS

**ORVILLE BACH, Ed.D.**, has worked for over 40 years as a seasonal interpretive ranger in Yellowstone National Park. He is the author of *Exploring the Yellowstone Backcountry*, and *Tracking the Spirit of Yellowstone: Recollections of Thirty-One Years as a Seasonal Ranger.* He has traveled Yellowstone's backcountry during all seasons, including an 18-day wilderness ski trip through the park.

JULIANNE BAKER, M.A., joined the Institute over a decade ago after a career teaching environmental science in Michigan. This experience, coupled with her certification as an interpretive trainer, makes her one of the Institute's most valued mentors for up-and-coming naturalists. When she's not teaching, she can be found hiking, skiing, or nature journaling in the wilds of Yellowstone.

**GENE BALL** was director of the Yellowstone Association and Institute from 1985 to 1988. He now lives in Cody, Wyoming, and teaches a wide range of topics and pursues other freelance projects for a variety of organizations throughout the West.

SHAUNA BARON has been a resident instructor for the Yellowstone Association Institute for more than a decade. She has studied large and small carnivores and worked with the Colorado-based Mission Wolf captive wolf program and U.S. Fish and Wildlife Service Red Wolf Project, as well as a volunteer for the Yellowstone Wolf Project.

LINDA BLACK ELK, M.S., is a Catawba ethnobotanist specializing in traditional uses of plants by native people of the Great Plains. She holds degrees in botany, anthropology, science education, ecology, and environmental sciences. She lives on the Standing Rock Reservation in South Dakota and teaches ethnobotany at Sitting Bull College.

LUKE BLACK ELK (Thithunwan Lakota, Itázipčho Band) has spent his life learning oral traditions, creation stories, and star knowledge from elders throughout the Lakota Nation. He is a Sundance leader, practitioner of the seven sacred rites of the Lakota people, and specializes in culturally significant plants and animals of the Great Plains.

**BRAD BULIN, M.S.**, is a wildlife biologist who has taught science at the K-12 and college levels and conducted extensive field research on carnivores, raptors, amphibians, and plants. He is a professional wildlife cinematographer who spends considerable time capturing Yellowstone on camera.

**GEORGE BUMANN, M.S.**, can draw, sculpt, and teach about all aspects of Yellowstone. He has a degree in wildlife ecology and works as a professional artist and educator. His art and writing have appeared in popular and scientific publications, and his sculptures can be found in collections throughout the United States and abroad.

**ELEANOR WILLIAMS CLARK, M.L.A.**, has produced more than 200 volumes of artistic field journals. Her work in field journaling and landscape design involves ecology, sculptural aspects of landscape, and the influence of art in shaping our connections to the land. She has numerous years of experience in art illustration and comprehensive planning in Yellowstone National Park.

**SUE CONSOLO-MURPHY, M.S.**, is the chief of science and resource management for Grand Teton National Park and the John D. Rockefeller, Jr. Memorial Parkway. She worked previously for Yellowstone National Park, where she helped formulate the Grizzly Bear Conservation Strategy and restore bear habitat in the Fishing Bridge area and elsewhere.

**DEBRA DIRKSEN, Ph.D.**, is an education professor at Western New Mexico University. Since the 1980s she has spent several weeks in the Yellowstone backcountry each year, logging 300–500 miles annually. She is passionate about backcountry cooking and has developed a delicious repertoire of lightweight, home-cooked meals for the trail. **PAUL DOSS, Ph.D.**, makes geology come alive for his students. A former supervisory geologist for Yellowstone National Park, he now teaches in the Department of Geology and Physics at the University of Southern Indiana. For more than three decades, he has taught field geology, conducted research, and completed geologic mapping in the Rocky Mountain Region and the Yellowstone Plateau.

SHANE DOYLE, Ed.D. works with Montana tribes as a post-doctoral researcher for the Centre for Geogenetics in Denmark. A singer of Plains Indian-style music, he travels throughout Montana Indian Country as a professional educator, researcher, and pow-wow participant. He is currently writing a book about the cultural geography of the northern plains.

KATY DUFFY, M.S., identifies raptors on the wing and songbirds by sound. She is a licensed bird bander specializing in owls, hawks, and songbirds, and holds an ecology degree from Rutgers University. She has lived and worked in the Greater Yellowstone Ecosystem for more than three decades, primarily as an education ranger in Yellowstone National Park.

DAVE EGAN, M.S., has been leading geology trips in the U.S. and Canada for more than 25 years, making complicated geologic concepts accessible and fun. The author of numerous articles in professional journals, Dave also enjoys kayaking, coaching Unified Sports for Special Olympics, and teaching yoga.

**SUZIE GARNER, M.A., M.F.A.**, leads the art department at Colorado Mesa University, where she teaches drawing and graphic design. She has led field sketching workshops in several western national parks. Her work has been exhibited nationally and published in *1,000 Artist Journal Pages: Personal Pages and Inspirations*.

JIM GARRY, M.S., weaves natural history, human history, folklore, and myth into spellbinding stories. A naturalist and folklorist, he has spent most of the past four decades in the Greater Yellowstone Ecosystem. His latest book is *The Weapons of the Lewis & Clark Expedition*.

JOHN GILLESPIE has been fascinated by the geology of Yellowstone since his first visit in 1972. After studying at the University of Delaware, John founded two geologic consulting firms and applies his 40-year career in natural resources to Yellowstone. He regularly explores the northern range from his home in Paradise Valley.

**CINDY GOEDDEL** is a professional photographer and naturalist whose photographs have been published widely and have won international awards, including first place National Wildlife 2009 and NANPA best of show 2015 and 2016. She enjoys leading tours in the park for aspiring and professional photographers. An Adobe Certified Expert, she provides the ultimate in digital photography training.

JESSICA HAAS, M.S., is a program manager and instructor for the Yellowstone Association Institute. She landed in the Rockies while teaching at the McCall Outdoor Science School, has researched wolverines in Central Idaho, and has taught science and math both in and out of the classroom. She is certified through the National Association for Interpretation as a certified interpretive guide (CIG) and host (CIH).

JAMES HALFPENNY, Ph.D., travels the world teaching about bears, wolves, animal tracks, and cold ecosystems. He produces educational books, computer programs, and videos. He coordinated the Long-Term Ecological and Alpine Research programs at the University of Colorado. His books include Yellowstone Wolves in the Wild and Yellowstone Bears in the Wild. WES HARDIN, M.Ed., M.A., has worked at museums and cultural institutions throughout the United States and as an interpretive park ranger in Yellowstone. He is the author of the upcoming book about early bicycling in Yellowstone titled *Wheeling Through Yellowstone: Adventurers, Tourists, and the Twenty-fifth Infantry Bicycle Corps in America's First National Park*, 1883–1898.

MARK HAROLDSON has studied and written about bears for more than 40 years. He recently co-authored papers about long-term grizzly bear survival in the Greater Yellowstone Ecosystem and using DNA techniques to investigate trends in effective population size for Yellowstone grizzly bears. He is the supervisory wildlife biologist for the USGS Interagency Grizzly Bear Study Team.

**STEVE HARVEY** built his first fly rod and taught himself to cast at the age of 12. He has since spent more than four decades fishing fresh and salt water on four continents. An International Federation of Fly Fishers certified instructor, he loves sharing his experience with others. When he's not fishing, Steve pursues climbing, mountaineering, hiking, skiing, and photography adventures worldwide.

**CAROLYN HARWOOD** is a resident instructor for the Yellowstone Association Institute. She studied outdoor recreation leadership and management at Northern Michigan University. For the past several years, she has hiked more than 2000 miles in the Greater Yellowstone Ecosystem and tracks and films cougars in her free time.

**MOLLY HASHIMOTO** has been painting watercolors for more than 25 years. Her paintings of the North Cascades and Pacific Northwest have been widely exhibited and have appeared as Pomegranate Communications notecards for many years. In addition to teaching at the Yellowstone Association Institute, she teaches at the North Cascades Institute and the Sitka Center for Art and Ecology.

**DANIEL HIDALGO** has been finding the inspiration for his artwork in the quiet stillness of Yellowstone's wondrous landscapes for many years. He lives in Teton, Idaho, and is the director of education at Idaho Art Lab, where he teaches painting, drawing, sculpture, and pottery. He also creates hand-carved block images printed on paper made from bison dung.

**KARA HIDALGO** is the executive director of the Idaho Art Lab, where she teaches film and digital photography, painting, and design. Her photos have been published in *Sunset, Idaho Homes and Gardens*, *Builder/Architect*, among other publications. Her specialties are landscapes and water photography.

HANNAH HINCHMAN teaches journal workshops around the country. Her work is included in Cathy Johnson's Artist's Journal Workshop and Danny Gregory's An Illustrated Journey: Inspiration from the Private Art Journals of Traveling Artists, Illustrators and Designers. Her books include the award-winning Little Things in a Big Country: An Artist and Her Dog on the Rocky Mountain Front.

TOM KIRKENDALL has been exploring the outdoors all of his life and working as a professional photographer for half that time. His travels have taken him around the world, and his landscape work has been widely published in calendars, magazines, and books. He uses everything from an 8x10 view camera to a plastic Holga and keeps a darkroom to process and print his work.

**DAVID LAUFENBERG** has a background in avian research and science education. Over the years, he has worked in his home state of Wisconsin, as well as Ecuador, Colombia, California, and Montana. His passion for the natural sciences has drawn him to the field of education and to the Institute. When not birding or teaching, he enjoys rock climbing, skiing, and fly fishing.

MATT LAVIN, Ph.D., has been teaching about regional flora and grasses at Montana State University for almost three decades. A contributor to the *Manual of Montana Vascular Plants* and the *Montana Grasses* app, he has conducted research on plant biodiversity in neotropical forests and woodlands and in the sagebrush steppe for over 30 years.

JESSE LOGAN, Ph.D., is a retired entomologist, a lifelong resident of the Rocky Mountain West, and an avid fly fisherman and outdoorsman. He also holds certificates from the National Association for Interpretation, Leave No Trace, and the Yellowstone Association. He uses this combination of experience and skills to teach seminars about fly fishing. JACOB LOWENSTERN, Ph.D., is a leading expert on volcanoes and geothermal systems and the gases and waters that emerge from them. He is a research geologist with the U.S. Geological Survey and is the scientist-in-charge of the Yellowstone Volcano Observatory. He has studied volcanoes in Yellowstone, California, Chile, Alaska, Italy, Indonesia, Russia, Japan, and Eritrea.

**GRANT A. MEYER, Ph.D.**, investigates the relationships between fire, erosion, and climate change in Yellowstone, which earned him the 1997 Kirk Bryan Award of the Geological Society of America. He is a professor of geomorphology at the University of New Mexico and has conducted research on streams, landforms, and recent geological processes in Yellowstone since 1983.

LISA MORGAN, Ph.D., studies the geology and geophysics of volcanoes in and near Yellowstone as a research geologist for the U.S. Geological Survey. She focuses on caldera-forming eruptions, rhyolitic lava flows, hydrothermal explosions, and the geology of Yellowstone Lake. With Ken Pierce, she developed a model for the Yellowstone hotspot.

TRUDY PATTON is originally from Idaho and has been a ranger in Yellowstone National Park since 1998. Her previous experiences include being a day camp director in Germany and an aquatics camp director in Korea. Trudy taught in the classroom and also at an outdoor school before becoming an Expedition: Yellowstone! ranger.

**KELLY PEARCE, M.S.**, is dedicated to promoting carnivore conservation by developing field education programs for students K-12. She is currently a Ph.D. student at the University of Maryland's Marine, Estuarine, and Environmental Sciences Program. She is a member of the International Union for the Conservation of Nature and Natural Resources' Otter Specialist Group and Nearctic Otter Education Group.

ALAN PETERSEN, M.A., paints the landscapes of the Grand Canyon, the Colorado Plateau, and other inspirational places. He is a professor of art at Coconino Community College and curator of fine art at the Museum of Northern Arizona in Flagstaff. He has published numerous articles about Western art history and painters, and is working on books about painters Merrill Mahaffey and Gunnar Widforss.

WAYNE PHILLIPS is a former U.S. Forest Service ecologist who teaches about the flora of the Rocky Mountains and Great Plains. He has taught for the Institute since the early 1980s. He is the author of *Central Rocky Mountain Wildflowers*, *Northern Rocky Mountain Wildflowers*, and *Plants* of the Lewis and Clark Expedition.

HAROLD PICTON, Ph.D., is professor emeritus of wildlife at Montana State University and studies herbivores, carnivores, and wildlife management history. He and his former graduate students have published more than 100 scientific papers, many about Yellowstone. He has also published three books and produced a television documentary.

**LESLIE J. QUINN, M.Ed.**, trains park bus tour guides, boat guides, and wranglers for the park concessioner Yellowstone National Park Lodges. As a historian, his interests include Yellowstone Village history, the Howard Eaton Trail, and the maritime history of Yellowstone Lake. He contributes to *Yellowstone Science* and other park publications.

THOMAS SERFASS, Ph.D., teaches wildlife ecology and environmental science at Frostburg State University and the University of Maryland. His research focuses on restoration of wildlife populations, particularly mesocarnivores. He is currently the North American coordinator of the International Union for the Conservation of Nature and Natural Resources' Otter Specialist Group.

**PAT SHANKS** has studied Yellowstone's hydrothermal systems for over two decades. As a geochemist with the U.S. Geological Survey, he has also studied hot springs, hydrothermal vents, and black smokers on the deep ocean floor. He was a professor at the University of Wisconsin and University of California-Davis before joining the USGS.

**MEG SOMMERS** shares the beauty and grace of Yellowstone through her award-winning photographs. She visits the park and its environs in all seasons, photographing landscapes, wildlife, and wildflowers. She is also an enthusiastic naturalist, and brings her considerable knowledge of the area to the groups she leads.

# INSTRUCTORS conta

JOSHUA THEURER, M.S., worked in the field as a biological technician contributing to both avian and mammalian research, where his passion for ecology blossomed. As a resident instructor, he now brings a unique perspective to Institute programs as he melds science, art, and philosophy to help students forge a deep connection to the natural world.

**ROBERT C. THOMAS, Ph.D.**, teaches geology at the University of Montana Western. He co-authored geological roadside exhibits along the Lewis and Clark Trail and the book *Roadside Geology of Yellowstone Country*. He is a Montana regents' professor and fellow of the Geological Society of America. In 2009, he was awarded the prestigious Carnegie Foundation U.S. Professor of the Year Award.

**BRIAN THORPE, M.S.**, has been interpreting Yellowstone and Glacier national parks for visitors since 1988 for the National Park Service, Xanterra Parks and Resorts<sup>\*</sup>, and the Yellowstone Association Institute. He earned his master's degree in 2000 with a thesis project examining neotropical migrant birds in Yellowstone National Park.

JON TRAPP, M.A., served as a wolf biologist for Montana Fish, Wildlife & Parks and has worked for wolf programs in Arizona, Idaho, and Wyoming. He earned his master's degree in conservation biology from Prescott College, with a thesis focusing on wolf-den site selection in the Northern Rockies. He is a wildland firefighter who works on fire mitigation projects near Yellowstone.

**NATHAN VARLEY, Ph.D.**, is a natural and cultural historian specializing in the Greater Yellowstone Ecosystem, where he has lived most of his life. He has studied many of Yellowstone's large mammals. For his doctorate, he studied the effects of wolf restoration on the park's northern range elk herd.

**GREG VAUGHN** is a freelance photographer specializing in recreational travel and the natural world. His photography is featured in leading travel magazines and websites and is distributed worldwide through photo agencies. He received the Benjamin Franklin Awards of the Independent Book Publishers Association for his guidebooks *Photographing Oregon* and *Photographing Washington*.

**KEN VOORHIS, M.S.**, is the Director of Education for the Yellowstone Association Institute. An environmental educator, life-long naturalist, and former executive director of the Great Smoky Mountains Institute, he has been connecting people with nature for more than 35 years. An avid photographer, storyteller, and musician, he enjoys many outdoor pursuits including hiking, canoeing, and birding.

**PATTY WALTON** has resided in the Greater Yellowstone Ecosystem for more than 20 years. She is an outdoor enthusiast who shares her passion when teaching safety, communication, and low-impact backpacking techniques through Leave No Trace principles. She is also a paramedic and CPR instructor.

ELIZABETH WATRY, M.A., studies the history of tourism and women in the 19th- and early 20th-century American West. She is the curator for the Museum of the Mountain Man in Pinedale, Wyoming, and has previously worked in many museums, including the Yellowstone Heritage and Research Center. Her most recent books are *Women in Wonderland: Lives, Legends, and Legacies of Yellowstone National Park* and *Images of America: Fort Yellowstone*.

**WILDERNESS MEDICINE INSTITUTE**, an institute of the National Outdoor Leadership School (NOLS), has been a leader in wilderness medicine education since 1976.

**SUSAN ZWINGER, Ph.D.**, infuses her teaching with enthusiasm, curiosity, knowledge, and extensive art and writing experience. She is an avid explorer of natural areas and environmental issues, bringing them to audiences through her writing. She also exhibits her bird and plant illustrations in galleries. Her first of five natural history books, *Stalking the Ice Dragon*, won the 1992 Governor's Writers Award from Washington State.



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> Naturalist Series: Birding June 11 at 7 pm – June 13 at 5 pm SEE PAGE 8

> Naturalist Series: Wildlife June 13 at 7 pm – June 15 at 5 pm SEE PAGE 9

#### Naturalist Series:

Mastering Your Skills June 16 at 9 am – June 17 at 5 pm SEE PAGE 9

#### **Naturalist Series**

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Cultural History August 26 at 9 am – Aug 27 at 5 pm see PAGE 16

#### Naturalist Serie

**Thermal Geology and Biology** August 27 at 7 pm – August 29 at 5 pm SEE PAGE 16