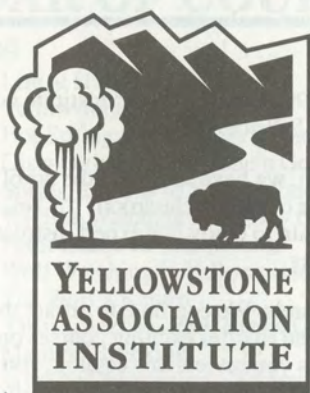
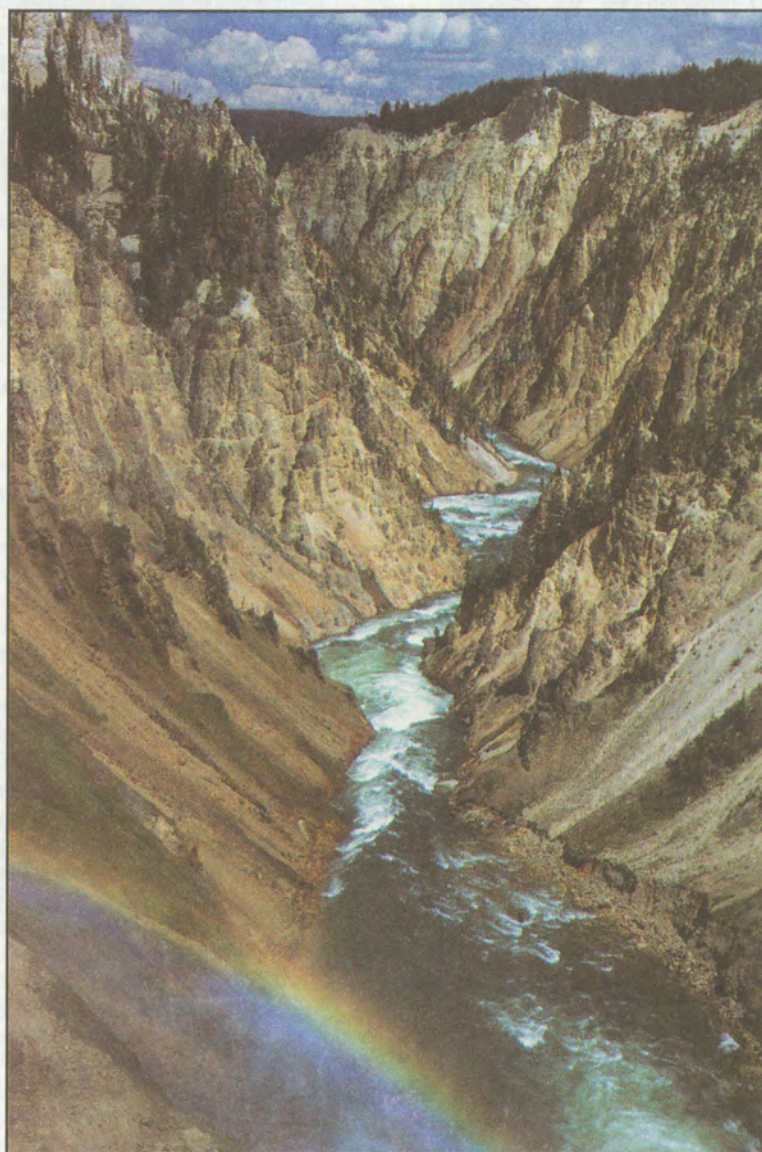




***Yellowstone
Association
Institute
Field Courses***
1999/2000 *winter*



Phillips / Reese
YI Collection

Join us for a closer look at Yellowstone

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**Yellowstone
Association Institute
Mammoth Office
307-344-2294
Lamar Buffalo Ranch
June-August
307-344-7749**

www.YellowstoneAssociation.org
dkline@YellowstoneAssociation.org

Dear Friend of the Institute,

I am pleased to introduce our 1999/2000 catalog of Institute courses offered in partnership with the National Park Service.

Now in our 24th year of operation, we have mastered the art of providing top-quality educational programs in the outdoor "classroom" of Yellowstone National Park. Students return again and again to enjoy our expert instruction, small class sizes, and spectacular natural setting.

But we are not resting on our laurels. We continue to attract the most distinguished instructors in their fields and to offer exciting courses on the natural and cultural history of Yellowstone! As you review this catalog, you will see that it includes almost **forty** new courses, on subjects as diverse as astronomy and grizzly bear management.

We appreciate your interest and hope you will join us for a course in the months ahead. Please give us a call if you have any questions. We'll be glad to help you plan a remarkable "behind the scenes" visit to the world's first national park.

Sincerely,

Jeff Brown

Director of Educational Operations

P.S. For the very latest information on Institute and Association activities, we invite you to visit our website at www.YellowstoneAssociation.org.

Yellowstone Association

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Animal photos in this catalog were taken with telephoto lenses from safe distances. Some photos were cropped and enlarged for a "full-frame" look.

Cover photo by Pam Gontz
Catalog layout by Pam Gontz

CALENDAR OF COURSES

May-June 1999

- > May 9-11 501 Life at High Temperatures
- > May 10-12 502 Yellowstone Geyser Gazing
- > May 13-15 503 Hot Springs, History, & Habitat
- > May 15-16 504 Discovering Yellowstone's Geysers
- > May 16-18 505 Spring Returns to Yellowstone
- > May 19-21 506 Wildlife Watching in Grizzly Country
- > May 21-23 507 ✓ Plant Eaters of Yellowstone
- > May 21-23 508 Wolf Watching in Yellowstone
- > May 25-27 509 The Wolf's Return
- > May 25-27 510 Yltn Grizzlies: Past, Present, & Future
- June 1-4 601 ✓ Mammal Tracking
- June 1-4 602 Wildlife Observation—Spring
- * June 4-6 603 Exploring Yellowstone's Bird Life
- >* June 4-6 604 Pronghorn Antelope
- June 11-14 605 Grizzly Bear Ecology & Management
- June 13-16 606 ✓ Mammals Great & Small
- June 15-17 607 ✓ Bears—Folklore & Biology
- June 17-19 608 ✓ The Evolution of the Wolf Family
- June 18-20 609 Fly Fishing the West Side
- * June 18-20 610 Learning Birds by Sound
- June 20-23 611 Wildlife Observation—Spring
- June 21-24 612 ✓ Bears: Bones, Signs, & Stories
- > June 24-26 613 Day Hiking in Wonderland
- > June 25-26 614 Elk & Their World
- June 25-27 615 ✓ Wild Edible Plants & Medicinal Herbs
- June 26-28 616 Family Horsepacking—Tetons
- June 26-28 617 Family Days in the Lamar—Wolves
- June 27-29 618 Nature Writing
- June 28-Jul 1 619 The Art of the Field Journal

July 1999

- July 1-3 701 ✓ Yellowstone Birds of Prey
- July 1-3 702 Family Horsepacking—Hellroaring
- > July 1-3 703 Along the Yltn River with Lewis & Clark
- July 2-4 704 Fossils of Yellowstone
- July 4-6 705 ✓ Introduction to Yellowstone's Birds
- > July 5-8 706 Mountain Folklore—A Llama Trek
- July 6-7 707 ✓ Aquatic Insects of Yellowstone
- July 7-10 708 Photographing Nature in Yellowstone #1
- July 8-10 709 ✓ Butterflies of Greater Yellowstone
- July 8-11 710 Historic Field Journals
- July 11-13 711 ✓ Amphibians & Reptiles
- > July 11-13 712 ✓ Great Earth Odyssey
- July 11-14 713 ✓ Mammal Tracking
- July 11-15 714 Photographing Nature in Yellowstone #2
- July 12-16 715 Horsepacking—Hellroaring
- July 14-16 716 ✓ Headwater Watershed Ecology
- July 16-17 717 Wildflowers of Yellowstone
- July 16-18 718 ✓ Geysers, Mudpots, & Hot Springs
- > July 16-19 719 Shoshone Lake Sea Kayaking
- * July 17-18 720 Women & Yellowstone
- >* July 17-18 721 Family Adventures—Mammoth
- > July 18-20 722 Plants of Yellowstone
- July 19-21 723 Botanical Sketchbook—Drawing Wkshp
- July 19-22 724 ✓ Wildflowers Llama Trek
- > July 20-21 725 Family Adventures—Canyon
- July 20-22 726 ✓ Geysers, Mudpots, & Hot Springs
- July 21-23 727 Yellowstone's Fisheries
- > July 22-23 728 Fire Ecology of Yellowstone Forests
- July 23-25 729 Exploring Yellowstone's Microbes

July (cont.) 1999

- * July 23-25 730 ✓ Alpine Wildflower Walks
- > July 24-27 731 Watercolor Painting
- July 25-29 732 Horsepacking—Snake River
- July 26-29 733 ✓ Carnivores of the Yltn Ecosystem
- July 28-30 734 ✓ Environmental Ethics & Yellowstone
- July 29-Aug 3 735 Horsepacking—Fox Park
- July 30-Aug 1 736 Fly Fishing—Less Experienced
- * July 30-Aug 1 737 ✓ The Bison of Yellowstone

August 1999

- > Aug 2-4 801 Backpacking—Leave No Trace
- Aug 2-4 802 Yltn's Northern Roadside History
- > Aug 2-4 803 Smoking Mountains—Indians & Yellowstone Park
- Aug 3-5 804 Family Days in the Thermal Basins
- Aug 3-8 805 Horsepacking: Trapper Trails
- > Aug 5-8 806 Day Hiking Yellowstone—Beginners
- Aug 6-8 807 Fly Fishing—More Experienced
- Aug 9-11 808 Yltn's Southern Roadside History
- > Aug 9-12 809 Day Hiking Yellowstone—Advanced
- Aug 9-13 810 ✓ Geology of the Yellowstone Country
- > Aug 13-15 811 Hiking Through Time
- Aug 14-16 812 Backpacking in Grizzly Country
- > Aug 15-17 813 ✓ Fire & Ice
- Aug 15-20 814 Responding to the Elements—Painting
- Aug 15-20 815 Responding to the Elements—Writing
- > Aug 18-23 816 Backpacking Old Faithful to Bechler
- > Aug 22-24 817 Map, Compass, & Stars Across Yltn
- > Aug 22-25 818 Exploring the New Universe
- > Aug 22-26 819 Horsepacking: Trails of Indian People
- > Aug 25-28 820 Base Camp in the Beartooths
- > Aug 31-Sept 1 821 Wilderness First Aid

September-December 1999

- Sept 3-6 901 Horsepacking: Nez Perce Route
- > Sept 3-6 902 Shoshone Lake Sea Kayaking
- Sept 4-6 903 ✓ Wild Edible Plants & Medicinal Herbs
- Sept 14-17 904 Wildlife Observation—Fall
- Sept 17-19 905 Fly Fishing in the Fall
- > Sept 17-20 906 Shoshone Lake Sea Kayaking
- Sept 23-26 907 Autumn Photography in Yellowstone
- > Dec 4-5 1201 Wilderness First Aid

January-March 2000

- Jan 2-11 1001 Wilderness First Responder
- Jan 14-17 1002 Snowshoeing in Yellowstone
- * Jan 21-23 1003 Snow Tracking
- * Jan 29-30 1004 How Mammals Survive Winter
- Feb 3-6 2001 Exploring Yellowstone on Skis
- > Feb 12-14 2002 Weather Cycles in the Big Sky
- > Feb 15-17 2003 Exploring Yltn for the Gravity Phobic
- Feb 18-20 2004 Winter Ecology & Survival
- > Mar 8-10 3001 Coyote & Raven—Fact & Folklore
- * Mar 10-12 3002 Yellowstone's Wolves
- Mar 17-20 3003 Wildlife Observation—Winter

> denotes a *New* class

* denotes a weekend class (may begin on Friday evening)

✓ denotes classes that are available for university credit

REGISTRATION INFORMATION

Registration

Registration for Yellowstone Association members begins January 25, 1999, at 8:00 am, Mountain Standard Time (MST). Non-member registration begins February 1, 1999, at 8:00 am, MST. Most courses are limited to 10 to 15 students and early registration is advised.

Three Easy Ways to Register

Telephone: Call 307-344-2294, 8:00 am to 4:30 pm, Monday through Friday, MST. Please have your VISA, Discover, or MasterCard number and expiration date ready.

Mail: Complete and return the registration form on the back page, along with the tuition fee (and cabin fee if applicable).

Fax: Complete the registration form and fax it to 307-344-2485.

Payment: Immediate payment of the full amount is required to guarantee your reservation. Payments by mail must be received within 10 days or your reservation will be cancelled.

Remember you can access our catalog and registration form by visiting our website at:

www.YellowstoneAssociation.org

Note: When registering by phone or fax, it will be necessary to mail in the original, signed Release and Assumption of Risk on the registration form.

Tuition

The costs listed in this catalog are for tuition and required course materials. Unless otherwise specified, the tuition charge does not include lodging, meals, transportation, or university credit fees. There is a \$10 discount for Yellowstone Association members, including those who join when they register.

Lodging and Meals

For courses based at the Lamar Buffalo Ranch, lodging is available for an additional fee of \$15 per person per night, and students must bring and cook their own meals. For all other courses, students must make their own arrangements for lodging and meals.

Transportation

Students must arrange their own transportation to and from Yellowstone and to the location where the class begins. For those arriving by air, we recommend renting a car or contacting 4x4 Stage at 406-848-2224 to arrange transportation. When appropriate, the Institute's 15-passenger vans will be used for field trips. Carpooling may be necessary in some cases.

Location

Most courses are held at our Lamar Buffalo Ranch Field Campus (see map on pg 5). Some courses are held at other locations within the Yellowstone ecosystem. Course locations and meeting times are included in each description.

Student Packet

Detailed course information will be mailed to each student at least four weeks prior to the class.

Insurance and Liability

Students must provide their own health and accident insurance. Please read and sign the liability waiver on the registration form.

Academic Credit

Courses for which academic credit is available are designated with a (U) for undergraduate credit and/or a (G) for graduate credit. To receive academic credit, students may be required to successfully complete exams and other assignments.

Institutions which offer credit include:

University of Montana, (U of MT),
Montana State University (MSU),
Montana State University-Billings (MSUB),
Idaho State University (ISU), and
University of Wyoming (U of WY).

Registration forms will be provided on the first day of the course. Fees for credit are collected on the first day of class and are usually \$80-\$120 per semester hour, payable by check only.

The Institute will gladly provide a letter of course completion, which includes the course title, description, and hours of instruction.

Refund Policy

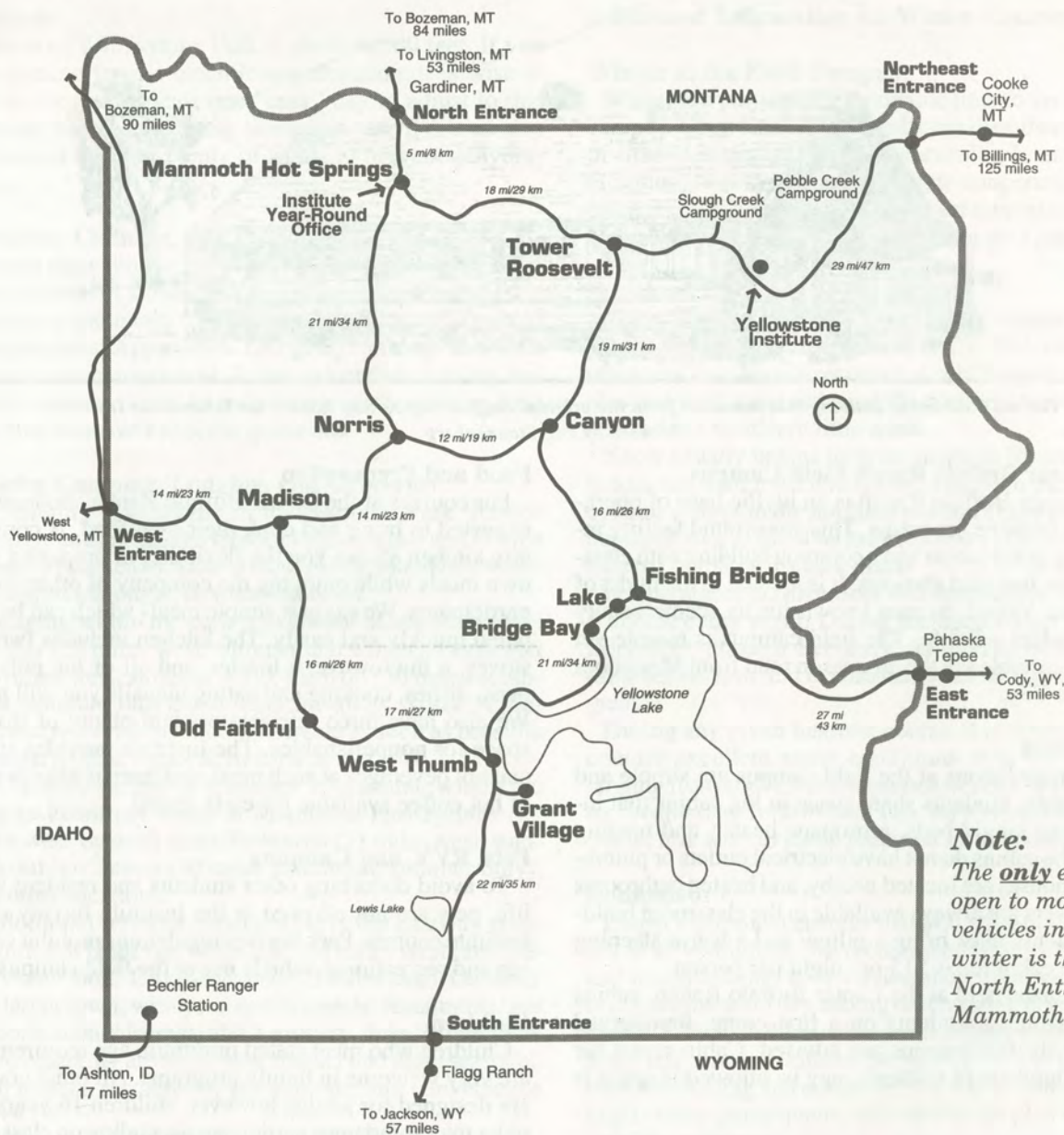
Payments for Institute courses are fully refundable, less a \$35 per course processing fee (\$20 for Association members), if cancellation takes place **at least 60 days** before the course. No refunds can be made for cancellations received fewer than 60 days before the start of the course, unless your space can be filled. If we can fill your space, a refund will be made, less the course processing fee. As an alternative, we can credit your tuition to another course offered before September 30 of the same year on a space available basis. Cabin fees are 100% refundable.

The Institute reserves the right to cancel a course up to 30 days before the first class day. If we cancel, you will receive a full refund.

Important:

We regret that the Institute cannot make exceptions to this refund policy for any reason, including, but not limited to, illness, travel delays, personal situations, emergencies, or weather. We strongly urge you to take out accident, baggage, and trip cancellation insurance through a travel agent. Travel insurance helps protect you against financial loss if you must cancel or interrupt a trip because of illness or injuries to yourself, a family member, or traveling companion.

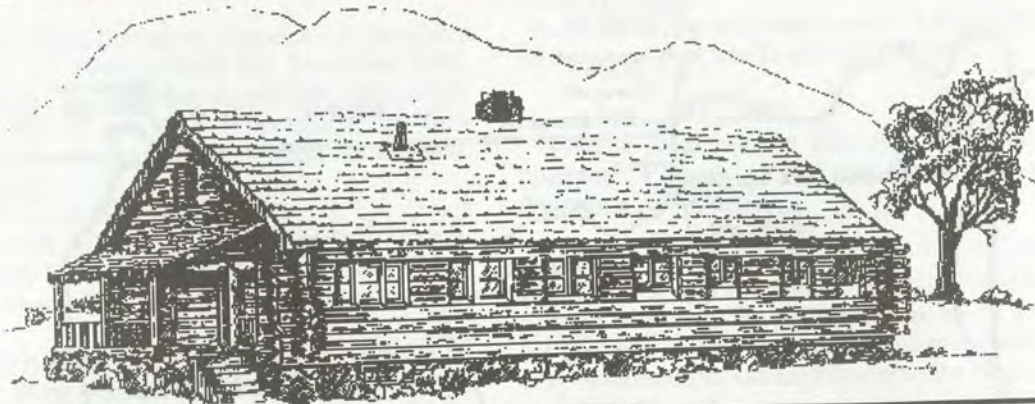
TRAVEL INFORMATION & DIRECTORY



Note:
The only entrance open to motor vehicles in the winter is the North Entrance at Mammoth.

Distances/Auto Travel Times to Yellowstone Association Institute			Directory
Major Airports			Camping & Park Information
Bozeman, MT	From Bozeman		National Park Service
Billings, MT	via Livingston	118 mi. 2 1/2 hrs	Visitor Services 307-344-7381
	From Billings		www.nps.gov/yell/
	via Red Lodge	143 mi. 3 1/2 hrs	
	via Livingston	207 mi. 3 3/4 hrs	
Regional Airports			Park Lodging, RV Park, Marina
Cody, WY	From Cody		AmFac Parks & Resorts
Jackson, WY	via East Entrance	126 mi. 3 hrs	307-344-7311
West Yellowstone, WY	via Northeast Entrance	84 mi. 2 1/4 hrs	
Idaho Falls, ID	From Jackson	146 mi. 3 1/2 hrs	
	From West Yellowstone	70 mi. 2 hrs	
Plan on extra driving time in the park. The speed limit is 45 mph.			Wyoming Travel Information
			Wyoming Division of Tourism
			800-225-5996

GENERAL INFORMATION



*The old bunkhouse building that remained from the original Buffalo Ranch now houses the Yellowstone Institute.
Artwork by Peg Steunenberg*

The Lamar Buffalo Ranch Field Campus

The Lamar Buffalo Ranch is an idyllic base of operations for Institute programs. This year-round facility includes log guest cabins and a common building with classrooms, kitchen, and showers. It is located in the midst of the Lamar Valley, an area known for its scenic beauty and abundant wildlife. The field campus is remote yet easily accessible via the all-season road from Mammoth to Cooke City.

Log Cabins

Accommodations at the field campus are simple and comfortable. Students share space in log cabins that include three single beds, a propane heater, and reading lights. The cabins do not have electrical outlets or plumbing. Outhouses are located nearby, and heated bathrooms and showers are always available in the classroom building. Students must bring a pillow and a warm sleeping bag. The cabin fee is \$15 per night per person.

For courses held at the Lamar Buffalo Ranch, cabins are available to students on a first-come, first-served basis. Early reservations are advised. Cabin rental for family members of students may be allowed if space is available.

The Bunkhouse

The historic Bunkhouse is located a short walk away from the sleeping cabins and serves as the center of activity at the field campus. The Bunkhouse is fully heated and includes two classrooms, a self-service kitchen, and three rest rooms with showers. The classrooms have chairs, tables, and audio-visual equipment. This building is open around the clock to match the needs of early morning and late evening wildlife watchers. The kitchen table, the back porch, and the outside picnic tables are favorite places for students to relax and recount daily adventures.

Visit our website at:
www.YellowstoneAssociation.org

Food and Preparation

For courses at the Lamar Buffalo Ranch, students are expected to bring and cook their own food. A community kitchen allows you the flexibility of preparing your own meals while enjoying the company of other course participants. We suggest simple meals which can be prepared quickly and easily. The kitchen includes two gas stoves, a microwave, a toaster, and all of the pots and pans, dishes, cooking and eating utensils you will need. We also have three refrigerators and plenty of storage space for nonperishables. The Institute provides spices and hot beverages at each meal, and there is always a pot of hot coffee available for early risers!

Pets, RV's, and Camping

To avoid disturbing other students and resident wildlife, pets are not allowed at the Institute facility or on Institute courses. Park Service regulations prohibit camping and recreational vehicle use at the field campus.

Children

Children who meet stated minimum age requirements are very welcome in family programs. All other courses are designed for adults; however, children 16 years and older may sometimes participate depending on class content and activities. Minors approved by the Institute manager and instructor must be accompanied by a participating adult.

Physical Condition

It is important that you accurately evaluate your own physical fitness. Hiking is a major part of almost every course we offer. Classes which involve backpacking, horsepacking, canoeing, or extensive field work will be more demanding. Please read each course description carefully and ask in advance if you have any questions about physical requirements.

GENERAL INFORMATION (cont.)

Altitude

Most of Yellowstone Park is above 6,000 feet. If you are coming from a much lower elevation, it is wise to allow yourself at least one "easy" day to adjust to this altitude before beginning strenuous activity. It is also important to drink plenty of fluids to prevent dehydration.

Weather, Clothing, and Equipment

Much class time will be spent outdoors and all courses are held rain or shine. Students should be prepared for a variety of mountain weather conditions, including cold temperatures. Appropriate rain gear, clothing, and footwear are very important. A recommended clothing and equipment list is sent to each course participant, and we are glad to answer specific questions.

Nearby Camping, Lodging, and Groceries

Camping is available in the National Park Service campgrounds at Slough Creek (7 miles west) and Pebble Creek (9 miles east). Sites at these campgrounds are available on a first-come, first-served basis.

Lodging within the park is available at Mammoth Hot Springs (29 miles west, summer and winter), Roosevelt (11 miles west, summer only), Canyon (30 miles southwest, summer only), and other locations. Space is limited and reservations should be made as soon as possible through AmFac Parks & Resorts at 307-344-7311.

A limited supply of groceries is available within the park in Hamilton stores at Mammoth Hot Springs (29 miles west, open all year), Roosevelt (11 miles west, summer only), Canyon (30 miles southwest, summer only), and other locations.

Additional services are available in the gateway communities of Gardiner, Montana, (34 miles west) and Silver Gate/Cooke City, Montana, (23 miles east). Gardiner is a larger town, with year-round motels, restaurants, gas stations, a laundromat, and a grocery store. Silver Gate and Cooke City are somewhat smaller and more seasonal, with motels, restaurants, gas stations, and convenience stores.



Leave No Trace

Leave No Trace (LNT) is a national educational program designed to encourage minimum impact skills and ethics among outdoor users. The Institute endorses this program and includes the LNT curriculum in our classes. We also offer a certification program for LNT trainers (see pg 33).

Additional Information for Winter Courses:

Winter at the Field Campus

Winter is a particularly enjoyable time to visit the field campus. Class sizes are generally smaller, there is plenty of time to socialize during the evening hours, and the facilities are cozy and warm despite temperatures which often slip below zero. It is also a great time to see wolves, bison, elk, and other winter wildlife in the Lamar Valley.

Weather

Yellowstone is a big place with great variation in temperature and snowfall. While it is true that Yellowstone often sets the nation's records for cold temperatures, it is also true that some areas of the park are much warmer and receive relatively little snow.

Snow usually begins to accumulate in November, and it does not melt until late spring, except in the lower elevation valleys in the northern portion of the park. Snow depths of two to four feet are common in the areas where most of our ski trips take place.

Temperatures in November will drop below 20 degrees F almost every night. During the deep winter period of December through February, temperatures frequently drop below zero and occasionally fall as low as -40 degrees F.

During any given Institute course, it is common to encounter excellent snow conditions with temperatures ranging from above freezing to below zero. Because winter weather in Yellowstone can vary from mild to extreme, it is wise to come prepared for all possibilities.

Equipment

Proper equipment ensures that you will stay warm and dry in all conditions. We recommend layers of synthetic and wool clothing, with a nylon shell to provide protection from the wind. By adding or removing layers as your exertion level changes, you can maintain a comfortable body temperature without perspiring. A list of recommended clothing and equipment for winter courses is sent to all course participants, and we will be glad to answer specific questions.

Ski and Snowshoe Rental

Cross-country skis and snowshoes can be rented from the AmFac Parks & Resorts ski shop in Mammoth at 307-344-5276. Skis can be rented from Park's Fly Shop in Gardiner, Montana, at 406-848-7314.

Custom Courses

Special educational programs can be arranged for school groups or other interested groups. Please call 307-344-2487 for more information.

Early Season Discount

Yellowstone National Park Lodges will offer discounted lodging rates for participants in courses 501, 502, 503, 504, 505, and 506. This is a great opportunity to stay in some of Yellowstone's nicest facilities for very reasonable rates. Please call 307-344-7901 and ask for "Yellowstone Institute Lodging Reservations." To qualify for these special rates, you must make your reservations prior to April 1, 1999.

LIFE AT HIGH TEMPERATURES: 501 **NEW**
May 9-11 **\$140 (Member's fee \$130)**
Location: Old Faithful **Limit: 13**
Instructor: Thomas D. Brock, Ph.D.

The brilliant colors of Yellowstone's thermal areas are due to vast populations of microorganisms. Life occurs even in boiling water. Some of these organisms have found great use in medicine and industry. Field trips, lectures, and simple observations will demonstrate the nature and biotechnological uses of these fascinating organisms found at the outer limits of existence. In this course we avoid the boardwalks, visiting thermal areas off the beaten track. Walks will not be lengthy or strenuous, although rain or snow is always a possibility. The course begins with an orientation hike on Geyser Hill at 3:00 pm on the first day followed by a 7:00 pm video and slide show. The course ends at 3:00 pm on the last day. *Rooms have been set aside at Old Faithful—see lodging note above for details.*

YELLOWSTONE GEYSER GAZING: 502 **NEW**
May 10-12 **\$160 (Member's fee \$150)**
Location: Old Faithful **Limit: 13**
Instructor: Jim Garry, M.S.

Yellowstone is one of the wonders of the planet, containing the world's greatest collection of geysers, hot springs, mud pots, and fumaroles. Old Faithful, Castle, Great Fountain, Grand Prismatic, Artist Paint Pots—the names themselves send shivers up your spine. You can carry the sight of them with you for a lifetime.

Join us for a closer look at these natural wonders. This class will explore Yellowstone's thermal features and the geology that underlies them. We will also unfold the fascinating geologic story of the world's largest active volcano. Finally, we'll see why this amazing geology dictates that the park's incredible collection of wildlife is found only in certain areas. The course will meet in the Old Faithful area at 9:00 am on the first day and end late afternoon on the last day. *Rooms have been set aside at Old Faithful—see lodging note above for details.*



Photo by Pam Gontz

HOT SPRINGS, HISTORY, & HABITAT—A CLOSER LOOK AT MAMMOTH: 503 **NEW**
May 13-15 **\$160 (Member's fee \$150)**
Location: Mammoth Hot Springs **Limit: 13**
Instructor: Jim Garry, M.S.

The Mammoth Terraces, Fort Yellowstone, the Lamar Valley—thermals, history, and wildlife—we will explore all three in this introduction to the natural and cultural history of this region of Yellowstone. The ever-changing Mammoth Terraces are well named; until you are amidst these thermals, you cannot realize their size. Below them is park headquarters, still using many buildings from Fort Yellowstone, built when the Army ran the park. And a few miles to the east is the Lamar Valley, Yellowstone's "Serengeti."

We will not only see the terraces, but also learn about their incredible underlying geology. We won't just look at the history of the fort, but at the whole fascinating history of the first national park in the world. We'll also go to one of the world's great wildlife viewing areas, the Lamar Valley, where we stand a good chance of seeing not only elk and bison but also coyotes, bears, and wolves. The course will meet in the Mammoth Hot Springs area at 9:00 am on the first day and end late afternoon on the last day. *Rooms have been set aside at Mammoth—see lodging note above for details.*

DISCOVERING THE WONDERS OF YELLOWSTONE'S GEYSER BASINS: 504 **NEW**
May 15-16 **\$115 (Member's fee \$105)**
Location: Old Faithful **Limit: 13**
Instructor: Rick LoBello, M.S.

The largest collection of thermal features in the world can be observed along the easy walking trails of the park's thermal basins. Late spring is a wonderful time to explore these areas, especially in the early morning when cool temperatures help to create spectacular steam clouds. This is also a great time to observe some of the park's larger mammals including bison, elk and bear.

Starting at Old Faithful and moving north to the Norris Geyser Basin, our easy-going exploration will give us numerous opportunities to study some of the

Visit our website at:
www.YellowstoneAssociation.org

park's most fascinating thermal features. At Norris, we will have an opportunity to learn about the park's hottest and most changeable geyser basin including a first-hand account of a historic eruption of Steamboat, the world's largest geyser. The course will meet in the Old Faithful area at 9:00 am on the first day and end at 3:00 pm on the last day. *Rooms have been set aside at Old Faithful—see lodging note above for details.*

SPRING RETURNS TO YELLOWSTONE: 505

May 16-18 **\$160 (Member's fee \$150)**

Location: Lake/Canyon **Limit: 13**

Instructor: Jim Garry, M.S. **NEW**

Yellowstone comes alive in springtime, and we'll be there to witness the rebirth. Through daily field trips and discussions, we'll take a closer look at the wildlife, geology, and history of the Yellowstone Lake area. In Hayden Valley, we'll search for bears that have recently emerged from their dens and bison that have just been born. On the shores of Yellowstone Lake and at the Grand Canyon of the Yellowstone River, we'll see geological forces at work. At the Lake Hotel, we'll imagine what Yellowstone was like in earlier years. By the end of the course, we'll be well acquainted with a special place at a special time of year. Participants should be prepared for short hikes in easy terrain. The course will meet in the Lake area at 9:00 am on the first day and end late afternoon on the last day. *Rooms have been set aside at Lake—see lodging note above for details.*

WILDLIFE WATCHING IN GRIZZLY

COUNTRY: 506

NEW

May 19-21 **\$160 (Member's fee \$150)**

Location: Mammoth Hot Springs **Limit: 13**

Instructor: Gene Ball

Spring is a superb time for viewing wildlife in Yellowstone. Field observation will be the major goal and activity of this introduction to the park's wildlife with a focus on bears and wolves. Methods of unobtrusive observation and the ethics of interaction with wildlife will be central themes. The flexible schedule of daily field trips allows for discussions on various wildlife topics, issues, and controversies. Participants should be prepared for occasional moderate hikes at higher elevations. The opening session will include discussion on the use of scopes and binoculars for wildlife observation.

The course will meet in the Mammoth Hot Springs area at 10:00 am on the first day and end with an optional evening outing on the last day. *Rooms have been set aside at Mammoth—see lodging note above for details.*

PLANT EATERS OF YELLOWSTONE: 507 NEW

May 21-23 **\$170 (Member's fee \$160)**

Location: Lamar Buffalo Ranch **Limit: 15**

Credit available: U, 1 semester hour, MSU

Instructors: Harold Picton, Ph.D. &

Terry Enk, Ph.D.

Much of the wildlife excitement of the Yellowstone area is provided by its eight species of large herbivores. The intricacies of the biology of these species and how they fit together to form a complex and dynamic ecosystem will be observed in the field. Their special adaptations and the roles that they serve as predators upon the plant community and as prey for the carnivores will be examined. How the "part herbivores" of the bear world fit into the system will be included. Featured species of the Yellowstone area include: white-tailed deer, mule deer, antelope, bighorn sheep, mountain goats, moose, elk, bison, black bears, and grizzly bears. The course will begin at 9:00 am on the first day and end in the late afternoon on the last day.

WOLF WATCHING IN YELLOWSTONE: 508 NEW

May 21-23 **\$160 (Member's fee \$150)**

Location: Lamar Buffalo Ranch **Limit: 13**

Instructor: Norman A. Bishop

Yellowstone National Park may be the best place in the world to watch wolves. Bring your binoculars, scope and tripod, clothing for freezing mornings, and join the crowd. Between looks, consider the scientific and social reasons why Americans turned from reviling to revering wolves. Think through the process of justifying their restoration as an experimental population under the Endangered Species Act. Find out what the wolves are eating, how they are killing their prey, who does the killing, and the effect wolves are having on other animals, including livestock outside the park. The course will begin at 9:00 am on the first day and end by 3:00 pm on the last day.



Photo by Pam Gontz



Photo by Pam Gontz

THE WOLF'S RETURN—MYTHOLOGY TO RECOVERY: 509**May 25-27****\$185 (Member's fee \$175)****Location: Lamar Buffalo Ranch****Limit: 15****Instructors: Brian Peck & Linda Miller**

The wolves are back! This year Yellowstone will be home to more than ten packs and we'll be there. Using slide shows, storytelling, expert speakers, and field trips (3- to 5-mile hikes), we'll learn of the wolf's demise and be part of its triumphant return. An emphasis will be placed on field trips and nature hikes whenever possible. Readings will range from Barry Lopez's *Of Wolves and Men* to Rick McIntyre's *A Society of Wolves*. Extensive handouts will be provided. Join us for a howling good time as we welcome home the wolves of Yellowstone. The course will begin at 8:00 am on the first day and end late afternoon on the last day. An optional outing to scout the valley for wolves will begin at 7:00 am at the Lamar facility on the first day. *Fee includes \$15 for course materials.*

YELLOWSTONE GRIZZLIES: PAST, PRESENT, & FUTURE: 510**May 25-27****\$160 (Member's fee \$150)****Location: Lamar Buffalo Ranch****Limit: 13****Instructor: Chuck Schwartz, Ph.D.**

Join us and receive the latest information on grizzlies in Yellowstone. We'll review the history of bear management in the park, then take a closer look at the current status of Yellowstone's grizzlies, including population estimates, reproductive performance, and mortality rates. Finally, we'll talk about the bears' future, including the possible removal of this population from the endangered species list. Our schedule will include a combination of field trips (some in the early morning hours!) and lectures. Moderate, but not strenuous hiking will occur. The course will begin at 9:00 am on the first day and end by 3:00 pm on the last day.

MAMMAL TRACKING: INTERPRETING TRACKS, SCAT, & OTHER SIGN**June 1-4: 601****July 11-14: 713****\$235 (Member's fee \$225)****Limit: 15****Location: Lamar Buffalo Ranch****Credit available: U, 1 semester hour, U of MT/MSU****Instructor: James Halfpenny, Ph.D.**

Mammals are elusive and hard to observe in the wild. Much can be learned about them by detecting and reading their sign. Nature detective work will teach trackers the joys of interpreting natural history from sign. Emphasis is placed not on track identification, but on tracking as a process for understanding animal behavior.

Topics will include the role of natural history and ecology, field notebooks, taxonomy, anatomy, terminology, measurements, track averaging, relative size, estimating track age, print identification, gait patterns, estimating speed, finding clues, and following trails. Slide lectures will provide access to Jim's field experience, and laboratories will introduce concepts of gaits and speed. Field sessions will aid in learning to trail and read stories in tracks. The course will begin at 9:00 am on the first day and end at approximately 5:00 pm on the last day. *Fee includes \$25 for a copy of the instructor's book, A Field Guide to Mammal Tracking, plus other course materials.*

WILDLIFE OBSERVATION—SPRING**June 1-4: 602****June 20-23: 611****\$160 (Member's fee \$150)****Limit: 15****Location: Lamar Buffalo Ranch****Instructor: Gene Ball**

Late spring is a superb time for viewing wildlife in Yellowstone. Field observation will be the major goal and activity of this introduction to the park's wildlife. Methods of unobtrusive observation and the ethics of interaction with wildlife will be central themes. The flexible schedule will feature early morning and evening field trips and programs on various wildlife topics, issues, and controversies. Participants should be prepared for occasional moderate hikes at higher elevations. The opening session will cover selection and use of binoculars, spotting scopes, and tripods for quality wildlife observation. The course will begin at 1:00 pm on the first day and end at noon on the last day.



Photo by Pam Gontz

EXPLORING YELLOWSTONE'S BIRD LIFE: 603**June 4-6** **\$140 (Member's fee \$130)****Location: Lamar Buffalo Ranch** **Limit: 13****Instructor: Pam Gontz**

Explore Yellowstone's bird life and learn to identify individual species by looking at their habitats, behaviors, and songs. The goal will be to visit a variety of habitats in order to observe many of the park's bird species, from the magnificent trumpeter swan to the beautiful harlequin duck. While the focus of this class will be on birds, there will also be opportunities to view many of the park's mammals. Field trips will involve moderate hiking (1 to 3 miles) but will occur in the early morning and evening hours when the weather can be cold and inclement. The course will begin at 7:00 pm on the first day, with introductions and an overview of Yellowstone's birds, and end at 4:00 pm on the last day. *Fee includes \$10 for course materials.*

PRONGHORN ANTELOPE IN THE GREATER YELLOWSTONE ECOSYSTEM: 604 **NEW****June 4-6** **\$130 (Member's fee \$120)****Location: Lamar Buffalo Ranch** **Limit: 13****Instructor: William C. Edwards, Ph.D.**

The return of the pronghorn antelope is one of the most remarkable stories of wildlife management in North America. Restricted to lands containing sagebrush, pronghorn are a unique species, endemic to North America with a fossil record dating back millions of years. Hear about their return from near extinction, the role game management played in their recovery, and what their recent history has been in the Yellowstone area. Find out about their unusual anatomy and physiology which has resulted in their being the fastest large mammal in North America. Observe them in the field and study their behavior. The course will begin at 7:00 pm on the first day and end at 3:00 pm on the last day.

GRIZZLY BEAR ECOLOGY & MANAGEMENT: 605**June 11-14** **\$195 (Member's fee \$185)****Location: Lamar Buffalo Ranch** **Limit: 13****Instructor: Sue Consolo Murphy, M.S.**

Are greater Yellowstone's grizzly bears endangered? What are the biggest threats to their long-term survival? Explore the bears' history and current status through field trips, lectures by researchers and managers, and early morning searches for these magnificent bruins. Walks are not lengthy or strenuous, but may occur in cold or inclement weather; warm clothing, and sturdy footwear are essential. The course begins with a picnic at 6:00 pm on the first day and ends at 3:00 pm on the last day. *Fee includes \$20 for course materials.*

*Photo by Pam Gontz***MAMMALS GREAT & SMALL: 606****June 13-16** **\$210 (Member's fee \$200)****Location: Lamar Buffalo Ranch** **Limit: 15****Credit available: U or G, 2 semester hours, ISU****Instructor: Don Streubel, D.A.**

The focus of this course will be the ecological role of mammals in the Yellowstone Ecosystem. We will study their behavior, factors affecting their distribution and abundance, and their management. Field work and observation in different parts of the park will be emphasized, including early morning and evening observations of elk, bison, bears, bighorn sheep, pronghorns, ground squirrels, pikas, and possibly wolves. Both large and small mammals will be considered, including a short study of ground squirrel behavior. No specific biological background is required, but enthusiasm and a desire to enjoy long hours in the field with animals is a prerequisite. Moderate, but not strenuous hiking will occur. The course will begin at 8:30 am on the first day and end late afternoon on the last day.

BEARS—FOLKLORE & BIOLOGY: 607**June 15-17** **\$170 (Member's fee \$160)****Location: Lamar Buffalo Ranch** **Limit: 15****Credit available: U, 1 semester hour, MSU****Instructors: Harold Picton, Ph.D. &****Jim Garry, M.S.**

Bears are the ultimate charismatic megafauna. This class will, by combining two disciplines and field observation time, explore why the bear looms so large both in Yellowstone and in our psychic landscape. We'll explore the bear's basic biology, including reproduction, behavior, food habits, home ranges, habitat use, and population biology. We'll delve into the bears of our myths, dreams, folklore, cults, and popular culture. A continuing course theme will be the comparing and contrasting of scientific and folk knowledge, and the importance of both as part of a conversation with the land. The course will begin at 9:00 am on the first day and end late afternoon on the last day.

THE EVOLUTION, ECOLOGY, & FUTURE OF THE WOLF FAMILY: 608**June 17-19** \$185 (Member fee \$175)**Location:** Lamar Buffalo Ranch **Limit:** 15**Credit available:** U, 1 semester hour, MSU/U of MT**Instructors:** Elaine Anderson, Ph.D., &

James Halfpenny, Ph.D.

Dire, gray, red, and timber wolves, coyotes, and foxes: these canids have all roamed North America. Some still survive here in spite of their human cohabitants. How did they evolve and how do they fit together in the overall scheme of things? Where does the domestic dog fit in? What is the modern ecology of North American wolves? How do we study these animals in the field? What is happening with the dynamic Yellowstone wolf reintroduction? Will wolves survive the steadily increasing human population? Join Elaine, carnivore paleontologist; Jim, carnivore ecologist; and invited lecturers to answer these and more questions.

Morning and evening lectures will be supplemented by afternoon field trips. Field trips will emphasize: 1) wolf observation; 2) wolf reintroduction into Yellowstone; and 3) coyotes and foxes of Yellowstone. The course will begin at 9:00 am on the first day and end at 5:00 pm on the last day. *Fee includes \$15 for course materials.*

FLY FISHING THE WEST SIDE: 609**June 18-20** \$200 (Member's fee \$190)**Location:** West Yellowstone **Limit:** 9**Instructor:** Richard Parks

Based out of West Yellowstone, this course will focus on fishing the Madison, Firehole, and Gibbon drainages. It is geared for the more experienced person who has mastered the basics. The instructor will act primarily as a resource person in assisting participants in polishing their skills. Most instruction will be on an individual basis or in small groups. The class will divide into three groups, with one-on-one instruction for each group on one day. During the two days you are not having the intensive instruction, you will practice on your own and meet with the group for morning and evening discussions. The course will meet in the West Yellowstone area at 8:30 am on the first day and end late afternoon on the last day. *Participants need to secure their own campsite or lodging in West Yellowstone. A Yellowstone Park fishing permit, available at most visitor centers, is required.*

LEARNING BIRDS BY SOUND: 610**June 18-20** \$140 (Member's fee \$130)**Location:** Lamar Buffalo Ranch **Limit:** 8**Instructor:** Terry McEneaney

One of the most pleasant features of bird life is the sound they make. The most noticeable sounds in the spring are the songs of the perching birds; however,



Photo by Pam Gontz

birds make a variety of other sounds such as calls, chip notes, clucks that are vocal, quivering, fluttering, gaping, and even flying noises that emit sound complementing a display. Designed for birders with little, if any, experience in bird sound identification, participants in this class will learn how to identify the sounds of approximately 50 species of birds. If you feel you can identify birds by sight, but are interested in identifying more birds by the sounds they make, then this course is for you. Be aware, this course is not easy and requires tremendous concentration. Field trips will be the major emphasis, with a chance for individual skill development. The course will begin at 7:30 pm on the first day and end at 5:00 pm on the last day. An optional outdoor barbecue will begin at 6:00 pm on the first day on the west porch of the classroom building.

WILDLIFE OBSERVATION—SPRING: 611**June 20-23** (see description on pg 10)**BEARS: BONES, SIGNS, & STORIES: 612****June 21-24** \$245 (Member's fee \$235)**Location:** Lamar Buffalo Ranch **Limit:** 15**Credit available:** U, 1 semester hour, MSU/U of MT**Instructors:** Elaine Anderson, Ph.D., James

Halfpenny, Ph.D., & Jim Garry, M.S.

Ursophiles (Greek for "bear lovers") unite! Supplement your knowledge of bears with a unique triad of instructors. From Dr. Elaine Anderson you will learn the evolutionary history of carnivores, especially ursids, as she talks about fossil and recent bears—their bones and their distribution. Dr. Jim Halfpenny will teach about modern signs of bears and conduct a research project cataloging the "bear trees" of Yellowstone. Jim Garry will explore the vast and fascinating folklore of the bear, while examining the bear's habitat and behavior. Lectures will be supplemented by field trips to study bear trees, interpret stories left by claw marks, and to map tree distribution. Evening programs will share the lore of bears from a worldwide perspective. The course will begin at 9:00 am the first day and end late afternoon on the last day. *Fee includes \$15 for course materials.*

DAY HIKING IN WONDERLAND: 613 **NEW**
June 24-26 **\$160 (Member's fee \$150)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Tom Watson

The purpose of this course is to explore Yellowstone's diverse natural world through casual hikes off the beaten path. Through our rambles into Yellowstone's moderately rugged interior we'll attempt to immerse ourselves in the sights and sounds of this natural world. Such hikes will give bird watchers, animal observers, geology explorers, and plant identifiers a chance to experience and learn from one of the world's greatest outdoor classrooms. For people who enjoy light to moderately strenuous hikes of 1.5 to 4.5 miles per day, this is your chance to see and experience a Yellowstone with an experienced and knowledgeable guide. Good hiking shoes and an appetite to learn will be your ticket to what some people call "Wonderland." During our three days together at the Buffalo Ranch, we'll begin at 9:00 am each day in the classroom and quickly shift to the field for the rest of the day until late afternoon.

ELK & THEIR WORLD: 614 **NEW**
June 25-26 **\$115 (Member's fee \$105)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: David Petersen

The North American elk, or wapiti, is among our largest and grandest mammals, the most numerous and visible at Yellowstone National Park. Join naturalist, writer, and "elkoholic" David Petersen in this intensive two-day field workshop to observe, listen to, and even smell this second-largest and most musical member of the deer family. Emphasis will be on elk natural history, including the evolution and functions of antlers, elk's relationship with bears, wolves and other natural predators, and human influences on elk from prehistory into the future. Weather permitting, both days will be spent entirely outdoors, and extensive day hiking may be involved. The course will begin at 9:00 am on the first day and end late afternoon on the last day.



Photo by Pam Gontz



Photo by Pam Gontz

WILD EDIBLE PLANTS & MEDICINAL HERBS
June 25-27: 615 **September 4-6: 903**
\$180 (Member's fee \$170) **Limit: 15**

Location: Squirrel Meadows/Warm River Area, Targhee National Forest, Idaho

Credit available: U, 1 semester hour, U of MT
Instructors: Wayne Phillips & Robyn Klein, A.H.G.

The blue camas meadows, ponds, aspen groves, and coniferous forests in the Bechler/Falls River area between Yellowstone and Grand Teton National Parks were an important food and medicine gathering area for early American people. The diversity of these ecosystems provides participants with an exceptional area to study the edible and medicinal properties of many of the native plants of the West. This year we will emphasize field identification of wild plants, major poisonous plants of the area, gentle harvesting techniques, and safe herbal practices. With the help of an ecologist and an herbalist, participants will learn to develop their own wild food meals and herbal preparations and will gain important knowledge and respect for safe herbal self-care with natural remedies.

Classroom headquarters for the June course will be at a Forest Service cabin located at Squirrel Meadows, which is situated along the scenic road between Ashton, Idaho, and the Flagg Ranch near the South Entrance to the park. The August class will be located at the former Warm River Fish Hatchery near the huge falls of the Henry's Fork of the Snake River between Ashton and Island Park, Idaho. The courses will meet in Ashton at 8:00 am. Expect short, leisurely walks from 1 to 3 miles with an elevation gain/loss of 300 feet. *Participants should come prepared to camp out, or may choose to stay in a motel in Ashton, which is less than an hour away. Fee includes \$10 for course materials.* **Note:** If the second course held on September 4-6 is taken for credit, grades for this course will be available some time after first of October.

FAMILY HORSEPACKING—WEST SLOPE OF TETONS: 616 **June 26-28** (see description on pg 35)



Photo by Pam Gontz

**FAMILY DAYS IN THE LAMAR—THE WOLVES
COME HOME: 617**

June 26-28

Limit: 20

Adult-\$170 (Member's fee \$160)

Child-\$95 (Member's fee \$85)

Location: The Lamar Valley

Instructors: Sandra Nykerk & Jim Garry, M.S.

The Lamar Valley of Yellowstone National Park has often been referred to as "America's Serengeti," a sweeping river valley that supports an amazing diversity of flora and fauna. During this three-day course, we will explore the many aspects of the Lamar ecosystem, including the role of predators in such a system and the cultural and biological events that led to the removal and eventual return of the wolf to the Lamar Valley. Field observation and group hikes will integrate information acquired through more formal classroom settings. We'll be up early and out late hoping to catch a glimpse and hear the soulful howl of the Lamar wolves, so we'll allow some siesta time in the middle of the day. An evening campfire storytelling session will introduce the mythology and folklore of the Yellowstone country. All activities will be paced for families and the final itinerary will be based on the ages and abilities of class participants.

The course will meet in the Lamar Valley at 9:00 am on the first day and end around 4:00 pm on the last day. Children in this course should be at least 8 years of age. *Families who camp must secure their own campsites early in the day or make reservations through AmFac Parks & Resorts at 307-344-7311. Participants must provide their own camping equipment and food, including field lunches. Participants will caravan for field trips.*

**NATURE WRITING—FROM APPRECIATION TO
PUBLICATION: 618**

June 27-29

\$160 (Member's fee \$150)

Location: Lamar Buffalo Ranch

Limit: 13

Instructor: David Petersen

If you've ever wanted to write creatively about your feelings and experiences in nature—just for the joy of

expressing yourself on paper, or for publication—this intense seminar is for you. In an informal blend of classroom and field instruction and discussion, we'll define "nature writing," study the nuts and bolts of nonfiction writing in general and nature writing in particular—including listening to your senses, field notes, research, writing, and revision—and conclude with a primer for getting published. Participants are encouraged, but not required, to read brief samples of their work for group criticism. May include some moderately strenuous hiking (options can be arranged). The course will begin at 9:00 am on the first day and end around 5:00 pm on the last day.

**A TRAIL THROUGH LEAVES—THE ART OF
THE FIELD JOURNAL: 619**

June 28-July 1

\$210 (Member's fee \$200)

Location: Lamar Buffalo Ranch

Limit: 13

Instructor: Hannah Hinchman

A field journal is one of the best bridges between a person and the land. This three and a half day course at the Buffalo Ranch will introduce a kind of journal keeping that mixes words and images, exploration and introspection, to create a new way of entering the world of nature. The pattern of our days includes early morning writing rambles, classroom and field instruction in basic drawing methods, creating mapping, design and color, and deep observation. The course is designed to allow ample time for solitude, or for browsing in the instructor's extensive library, balanced by the creative energy of an enthusiastic group of people in a magical place. Hikes of moderate length can be expected. The course will begin at 10:00 am on the first day and end at noon on the last day.

YELLOWSTONE BIRDS OF PREY: 701

July 1-3

\$200 (Member's fee \$190)

Location: Lamar Buffalo Ranch

Limit: 15

Credit available: U, 1 semester hour, MSU

Instructor: John Martin, M.S.

This course features Yellowstone's hawks, eagles, falcons, and owls, collectively known as raptors, in their natural habitats. Identification in the field is emphasized along with the role of predation in biological communities, predator-prey relationships, breeding strategies, and habitat influences. Conservation measures unique to raptors will also be examined. A special boat trip to Frank Island and other points on Lake Yellowstone will be made to observe nesting and hunting osprey and bald eagles. The course begins at 9:00 a.m. on the first day and ends at 4:00 pm on the last day. John's wife, Marsha, will accompany the class and assist with logistics. *Fee includes \$25 for boat trip on Yellowstone Lake and course materials.*

**FAMILY HORSEPACKING IN
HELLROARING: 702**

July 1-3 (see description on pg 35)

**ALONG THE YELLOWSTONE RIVER WITH
LEWIS & CLARK: 703** **NEW**

July 1-3 \$160 (Member's fee \$150)

Location: Mammoth Hot Springs/Three Forks Area
Instructor: Jim Garry, M.S. Limit: 13

In the summer of 1805, Lewis and Clark passed through the Yellowstone region en route to the Pacific Ocean. They came up the Missouri River from the Great Falls and camped in the Three Forks area before continuing west. On the return trip, William Clark explored the Yellowstone River and Corps of Discovery member John Colter left the expedition to venture into the area we now know as Yellowstone National Park.

Almost two hundred years later, we will walk in their footsteps, see what they saw and read their journals. We'll see Three Forks and then journey along Clark's route to the Yellowstone. Along the way, we'll see where he found cottonwood trees large enough to make canoes, and we'll visit a buffalo jump that was still in use when he passed through. And we'll speculate on what they would think of this country today. The course will meet in the Mammoth Hot Springs area at 9:00 am on the first day and end at Mammoth midday on the last day. *Participants need to secure their own campsite or lodging in Mammoth Hot Springs and Three Forks—contact registrar for lodging information.*

FOSSILS OF YELLOWSTONE: 704

July 2-4 \$160 (Member's fee \$150)

Location: Lamar Buffalo Ranch Limit: 13
Instructor: Vincent L. Santucci

The fossil record of life is well represented within the rock layers of Yellowstone. A wide range of fossil types including marine invertebrates, petrified wood, leaves, and even dinosaurs have been discovered in the park. A paleontological survey was initiated at Yellowstone in 1996. This research documented over 20 fossil-producing units in the park. Field trips will include visits to a variety of paleontologic localities, which preserve both plant and animal fossils. Participants can assist paleontologists with field surveys and help document new sites and fossils. The course will begin at 8:00 am on the first day and end around 5:00 pm on the last day.

**INTRODUCTION TO YELLOWSTONE'S
BIRDS: 705**

July 4-6 \$200 (Member's fee \$190)

Location: Lamar Buffalo Ranch Limit: 15

Credit available: U, 1 semester hour, MSU

Instructor: John Martin, M.S.

This course for birders of all abilities will focus on



Photo by Pam Gontz

the life histories, distribution, population dynamics, and ecological roles of species in the Greater Yellowstone Ecosystem. After a half-day classroom introduction to bird identification characteristics and field ornithology, the remainder of the course is in the field, regardless of weather conditions. This course does not attempt to view all the species in Yellowstone, but does include a special boat trip to Frank Island and other points on Yellowstone Lake to observe shorebirds, waterfowl, osprey, and bald eagles. The course will begin at 9:00 a.m. on the first day and end at 4:00 pm on the last day. John's wife, Marsha, will accompany the class and assist with logistics. *Fee includes \$25 for boat trip on Yellowstone Lake and course materials.*

MOUNTAIN FOLKLORE—**A LLAMA TREK: 706****NEW**

July 5-8

\$525 (Member's fee \$515)

Location: Green Lakes, Tetons

Limit: 10

Instructor: Jim Garry, M.S.

The high mountains are where winter spends the summer. Spring becomes fall with only a nod in between. Uncertainty of season makes this alpine environment more spectacular. Here plants, animals, and people must adapt to survive.

With llamas as our companions, our trek will study "folk natural history" and look at how folklore and current scientific thinking compare. You'll need your imagination as well as your hiking boots. We'll explore the mountains during the days and, around the campfire, we'll explore the tales.

The course will begin at 8:00 am the first day (details will be provided in the student packet). The hikes each day will vary from 4 to 6 miles with elevation gains of 500 to 2000 feet. There will be numerous stream crossings and some bushwhacking. *Participants must bring their own tent, sleeping bag, pad, and pack. Fee includes group equipment, food, and llama packing. A camp cook will prepare meals.*

AQUATIC INSECTS OF YELLOWSTONE: 707
July 6-7 \$115 (Member's fee \$105)
Location: Lamar Buffalo Ranch **Limit:** 13
Credit available: U or G, 1 semester hour, ISU
Instructor: Robert Anderson, Ph.D.

The ponds, riffles, streams, and rivers of Greater Yellowstone support an abundance of aquatic insects. Their biomass, density, and diversity can be impressive. Mayflies, caddisflies, salmonflies, and their relatives are extra-aquatic as winged adults, but the nymphal immature stages are adapted to life in the water where they live with backswimmers, water boatmen, water striders, water bugs and scavengers, diving beetles, whirligigs, and a variety of maggots—the larvae of real flies. The diversity and habitats of the aquatic forms on which so many birds and fish depend for survival will be examined through excursions in the lab and field. The course will begin at 9:00 am on the first day and end at 5:00 pm on the last day.

PHOTOGRAPHING NATURE IN YELLOWSTONE COUNTRY #1: 708
July 7-10 \$225 (Member's fee \$215)
Location: Lamar Buffalo Ranch **Limit:** 13
Instructor: Sandra Nykerk

This four-day workshop will begin with the basics of photographic principles including the ethics of nature photography, creative visualization, and learning to see the light, metering, exposure, and composition. With this foundation, more advanced topics will be discussed, including film and equipment selection, macro photography, and using flash in the field. Classroom lectures and slide programs are integrated with in-the-field shooting to allow maximum opportunity for "hands-on" learning and enjoyment of this spectacular region. Yellowstone's magnificent diversity—including misty early morning scenics, majestic wildlife, and the brilliant colors and steamy surrealism of the thermal features—offers an unparalleled setting for learning and expanding photographic skills. Emphasis will be on developing personal vision and creativity combined with technical excellence and an understanding that a really good nature photographer is an even better naturalist! If you are looking for an intermediate photography course, see *Photographing Nature in Yellowstone Country #2*, course number 714, page 18. The course will begin at 9:00 am on the first day and end at 4:00 pm on the last day. *Participants will be expected to pay for their own lab film processing.*

Visit our website at:
www.YellowstoneAssociation.org



Photo by Pam Gontz

BUTTERFLIES OF GREATER YELLOWSTONE: 709

July 8-10 \$160 (Member's fee \$150)
Location: Lamar Buffalo Ranch **Limit:** 13
Credit available: U or G, 1 semester hour, ISU
Instructor: Robert Anderson, Ph.D.

This course on butterflies explores their unexcelled beauty and aesthetic appeal. Their diverse colors and patterns have inspired many a naturalist, both amateur and professional. The biotic sensitivities of butterflies to local environments and microhabitats have resulted in a rich array of genera, species, and subspecies. Indeed, many—especially those that survive in confined or compressed habitats—are rare or endangered and on the verge of extinction. The Greater Yellowstone Ecosystem supports nearly 130 species representing 7 families of butterflies, many of which can delight our vision in subtle ways as their presence passes between bluebirds and bison. Participants will discover the butterfly bounty of Yellowstone and its environs, with an emphasis on family characteristics, while observing their numbers, variety, flight characteristics, food requirements, life cycles, and other attributes. The course will begin at 9:00 am on the first day and end at 4:00 pm on the last day.

HISTORIC FIELD JOURNALS: 710

July 8-11 \$220 (Member's fee \$210)
Location: Old Faithful **Limit:** 13
Instructor: Eleanor Williams, M.L.A.

Wandering Firehole River edges and astonished by geysers and fumeroles, early explorers recorded 1871 landscapes in journals. Peering into the journals of early field artists such as Holmes and Moran, we will discover techniques and tools they used. Inspired by the unique thermal wonders and historic volumes, 1999 field journals will reveal the observations of an incredible journey. As we explore paths edged in steaming rivulets, listen to fissures filled with vapor, touch delicate crenellations and await wildlife, we will

expand the expression of the page. After we make a simple field journal we will investigate tools and techniques for field observation. We will be in the field and around the quiet areas of the Old Faithful Inn. Ink, graphite, and watercolor provide swift mediums for sketches and notes that will define an individual journey through a spectacular landscape. The course will meet in the Old Faithful area at 9:00 am on the first day and end at 2:00 pm on the last day. *Rooms have been set aside at Old Faithful—contact registrar for reservation information. Fee includes \$10 for course materials.*

AMPHIBIANS & REPTILES OF THE GREATER YELLOWSTONE ECOSYSTEM: 711

July 11-13 \$190 (Member's fee \$180)

Location: Lamar Buffalo Ranch **Limit:** 15

Credit available: U or G, 1 semester hours, ISU

Instructor: Charles R. Peterson, Ph.D., Edward D. Koch, M.S., & Debra A. Patla, M.S.

The objectives for this course are to develop 1) the ability to identify amphibians and reptiles in the Greater Yellowstone Ecosystem; 2) basic knowledge of their natural history; 3) an appreciation of the importance of amphibians and reptiles; and 4) an understanding of conservation threats and actions. Course activities will include field trips and lectures illustrated with slides, recordings, and live animals. There will be opportunities to photograph live animals. Moderate hiking in hilly terrain will be required for the field trips. We hope to observe the following species: tiger salamanders, boreal toads, boreal chorus frogs, Columbia spotted frogs, sagebrush lizards, bull snakes, wandering garter snakes, and prairie rattlesnakes. The course will begin at 9:00 am on the first day. It will meet from 9:00 am through 5:00 pm on the following days except one day will go from 7:00 am to 8:00 pm, with a long drive to Grand Teton National Park and back. If we have visited all of the field sites by mid-afternoon on the last day, we may finish earlier than 5:00 pm. Recommended reading: *The Amphibians & Reptiles of Yellowstone and Grand Teton National Parks*, by C. R. Petersen and E. D. Koch, is available through the Yellowstone Association. *Bring hip waders if you have them. Fee includes \$20 for course materials.*



Photo by Pam Gontz



Photo by Pam Gontz

GREAT EARTH ODYSSEY: 712

NEW

July 11-13 \$170 (Member's fee \$160)

Location: Old Faithful **Limit:** 15

Credit available: Credit Pending-U of MT/U of ID

Instructors: Julie A. Scanlin & Roy Mink, Ph.D.

Yellowstone provides the ideal backdrop for the study of geothermal systems. The dynamic geysers, bubbling mud pots, and colorful hot springs we see on the surface are, however, only part of the story. Beneath our feet is another fascinating world rich in untapped and possibly even unidentified resources. This course will review how geologic structures, the earth's inner heat, and groundwater work in concert to produce these and other geothermal features. We will also discuss possible uses of geothermal resources on a national and world-wide scale.

Though this course is open to anyone, it will be particularly useful to teachers hoping to take what they see and learn back to their classrooms. The park will provide an outdoor lab to illustrate a new geothermal education curriculum fashioned after the popular Project WET (Water Education for Teachers) curriculum. This is an interdisciplinary curriculum with activities for history, social studies, geography, science, and other subjects. The course will meet in the Old Faithful area at 9:00 am on the first day and end late afternoon on the last day. *Rooms have been set aside at Old Faithful—contact registrar for reservation information.*

MAMMAL TRACKING: 713

July 11-14 (see description on pg 10)



Photo by Pam Gontz

PHOTOGRAPHING NATURE IN YELLOWSTONE COUNTRY #2: 714

July 11-15 **\$235 (Member's fee \$225)**
Location: Yellowstone Area **Limit: 13**
Instructor: Sandra Nykerk

This four-day intermediate field photography course will continue the development of skills learned in *Photographing Nature in Yellowstone Country #1* (course number 708, page 16) by having more time in the field. We will base at three different locations in the park and each day will be spent photographing Yellowstone; all of our learning will be through hands-on experience. In the four days, we'll work with the thermals of Mammoth, the Grand Canyon of the Yellowstone, Yellowstone Lake, and the beautiful colors of the Old Faithful area, allowing for the serendipity of wildlife. A wide variety of subjects will be covered, from selecting the right film and lens for your subject, to coping with environmental conditions in the field. Consideration will be given to the continuing development of personal vision and creativity and the importance of natural history knowledge to the nature photographer. You need not have taken *Photographing Nature in Yellowstone Country #1* to take this course but it will be assumed that you have a working understanding of photographic principles and a fundamental familiarity with your equipment. The course will meet in the Mammoth area at 7:00 pm on the first day and end around 4:00 pm on the last day. *We recommend the following dates and areas for camping or lodging: July 11 and 12—the Mammoth area; July 13—the Yellowstone Lake area; July 14—Old Faithful area. Rooms have been set aside at Mammoth, Lake, and Old Faithful—contact registrar for reservation information.*

HORSEPACKING: HELLROARING & THE BLACK CANYON: 715

July 12-16 (see description on pg 36)

HEADWATER WATERSHED ECOLOGY: 716

July 14-16 **\$170 (Member's fee \$160)**
Location: Lamar Buffalo Ranch **Limit: 15**
Credit available: U or G, 1 semester hour, U of MT
Instructor: Roy Mink, Ph.D.

Yellowstone Park offers a unique opportunity to study a watershed that has had minimal impact by man. The park is very unusual in that it is the headwaters for two major United States river systems: the Yellowstone-Missouri-Mississippi and the Snake-Columbia.

The goal of this course is to understand a watershed. The watershed approach takes into account how each aspect of the ecosystem interrelates with every other. Participants will study several Yellowstone watersheds and look at the hydrology and stream ecology in order to understand the relationship of various aspects of the watershed including effects of fire and wildlife. We'll also investigate the relationship of the stream macroinvertebrates and riparian systems as indicators of stream health. You will learn how to conduct a "stream walk" survey as part of the course. This survey could be used for teachers or citizen groups interested in stream monitoring. The course will begin at 9:00 am on the first day.

WILDFLOWERS OF YELLOWSTONE: 717

July 16-17 **\$115 (Member's fee \$105)**
Location: Lamar-Buffalo Ranch **Limit: 13**
Instructor: Wayne Phillips

During this class, basic plant identification skills will be developed through botanical walks and short classroom sessions. A variety of forest, meadow, and streamside habitats will be studied. Field identification of the trees, shrubs, grasses, and wildflowers of northern Yellowstone will be emphasized. Plant ecology, wildflower photography, and historic plant uses will also be discussed. Most walks are 2 to 3 miles with up to 600-foot elevation gains. More strenuous walks vary with group interest. The course will begin at 9:00 on the first day and end around 4:00 pm on the last day.

GEYSERS, MUDPOTS, & HOT SPRINGS

July 16-18: 718 **July 20-22: 726**
\$180 (Member's fee \$170) **Limit: 15**
Location: Old Faithful
Credit available: U, 1 semester hour, MSU
Instructor: Duncan Foley, Ph.D.

The rare, spectacular geothermal features of Yellowstone will be explored in this course. After a short introduction, visits to mudpots, hot springs, and geysers will begin, with hikes timed to see several of the less common geysers erupt. The class will meet at the Grand Canyon of the Yellowstone at 11:00 am on the first day and then proceed to the Old Faithful area for a full day of geyser gazing on the second day. Norris Geyser Basin and other sites will be visited on the third day of

class, with class ending late afternoon. No background in geology is required. *Rooms have been set aside at Old Faithful—contact registrar for reservation information. Fee includes \$20 for course materials.*

SHOSHONE LAKE SEA KAYAKING **NEW**
July 16-19: 719 **Sept 3-6: 902**
Sept 17-20: 906 **\$650 (Member's fee \$640)**
Location: Shoshone Lake, Yellowstone Backcountry
Instructor: Rich Bloom, M.A. **Limit: 6**

A combination of wilderness travel without loads on one's back and natural history exploration—what could be better! The focus of these trips will be general Yellowstone natural history, thermal geomorphology and ecology, and fire ecology. We'll also learn appropriate outdoor and sea-kayaking skills. All trips are led by experts in both wilderness sea kayaking and Yellowstone natural history. If you are willing to rise early and paddle, you will enjoy the rewards of this adventure. Highlights include the opportunity to explore backcountry thermal features around the lakes, view wildlife in their natural habitat, camp near pristine shores, and fish and hike in relative solitude.

Your guide/naturalist will lead you around Lewis Lake and into the clear flowing waters of Lewis channel. We'll then tow our kayaks through the upper section of the channel to roadless Shoshone Lake—headwaters of the Snake River. Two days on Shoshone Lake will allow us time to swim, fish, and explore. For most, the highlight is spending a full day exploring the wonders of nearby Shoshone Geyser Basin. No prior kayak experience required. Class will start from the Lewis Lake campground boat dock at 9:00 am on the first day. *Fee includes all kayaking equipment, group camping gear, and food.*

WOMEN & YELLOWSTONE—A HISTORICAL PERSPECTIVE: 720

July 17-18 **\$135 (Member's fee \$125)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Karen Krieger

This course explores Yellowstone as seen by women in the late nineteenth and early twentieth centuries. Using diaries, letters, photographs, and other historical resources, the group will discover the variety of experiences encountered by women residents and visitors to the park during its early years. Day hikes and a stagecoach ride will include visiting old tourist sites, cemeteries, and natural features that reveal the many ways women interacted with Yellowstone. Short hikes of up to a mile can be expected. The course will begin at 8:30 am on the first day and end at 5:30 pm on the last day. *Fee includes \$20 for a stagecoach ride from Roosevelt Lodge and course materials.*

FAMILY ADVENTURES IN YELLOWSTONE

Mammoth—July 17-18: 721 **NEW**
Canyon—July 20-21: 725 **Limit: 20**
Adult—\$130 (Member's fee \$120)
Child—\$80 (Member's fee \$70)
Instructor: Clare Long, M.S.

Come discover the natural wonders of Yellowstone with your family. We'll explore different habitats, searching for signs of animal and plant life. We'll head out on forest forays and try to answer some of the natural history mysteries found in the wilds of Yellowstone. A variety of informal outdoor learning activities encourage hands-on discovery of the environment for kids ages 8 to 80. Join us for this great introduction to the Yellowstone outdoors.

Mammoth: In Mammoth, we'll learn about geology and be introduced to the rich history of Yellowstone National Park. In the Lamar Valley, we'll see large mammals (maybe even wolves!) in a spectacular setting.

Canyon: Unlock the secrets of Yellowstone Canyon and the Hayden Valley area. Search for signs of life in the nooks and crannies of the different ecosystems we'll visit on easy-paced day hikes, several miles each day.

For both courses, an evening activity at the campground will help us explore nightlife in Yellowstone. Both courses will meet at 9:00 am on the first day and end around 4:00 pm on the last day. *Families who camp must secure their own campsites early in the day or make reservations through AmFac Parks & Resorts at 307-344-7311. Participants must provide their own camping equipment and food, including field lunches. Participants will caravan for field trips.*



Photo by Pam Gontz

PLANTS OF YELLOWSTONE: 722 **NEW**
July 18-20 **\$160 (Member's fee \$150)**
Location: Lamar-Buffalo Ranch **Limit: 13**
Instructor: Jennifer Whipple, M.A.

This three-day course will focus on the fascinating wildflowers and vegetation of Yellowstone National Park, from the subalpine slopes of Mt. Washburn to the specialized plants of the thermal areas. Participants will learn to recognize plant families, genera, and species, including some that are rarely seen in the park. We'll also discuss a variety of related park issues during informal field sessions. Be prepared to spend some time in vehicles as the course explores the varying wildflowers scattered at different locations throughout the park. Many different habitats will be investigated so don't be surprised to get your feet wet although walks will usually be short and less than one mile. The course will begin at 9:00 am on the first day and end late afternoon on the last day.



Photo by Pam Gontz

BOTANICAL SKETCHBOOK—DRAWING WORKSHOP: 723

July 19-21 **\$160 (Member's fee \$150)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Peg Steunenber

To know it is to draw it—an in-depth exploration of the wildflowers of Yellowstone. Morning sessions include hiking, field sketching, and field observation. Afternoon sessions assist artists in developing the field sketches, transferring the drawing to their preferred working surface, and experimenting with the medium of choice. Demonstrations in graphite, colored pencil, pen and ink, and mixed media will be offered. The delights and dilemmas of working from photographs will be discussed. Free time in the evenings can be spent finishing artwork or reading up on illustration techniques in various books supplied by the instructor. The course will begin at 8:30 am on the first day.



Photo by Pam Gontz

WILDFLOWERS OF THE HIGH COUNTRY (LLAMA TREK): 724

July 19-22 **\$525 (Member's fee \$515)**
Location: Beartooth Backcountry **Limit: 10**
Credit available: U, 1 semester hour, U of MT
Instructor: Wayne Phillips

For this backcountry study of alpine plants and their environment, group gear, food, and 20 pounds of personal gear per person will be transported by llama to a campsite near the high country lakes of the Beartooth Mountains. Personal gear over 20 pounds must be carried by the participants, who should be physically fit and prepared for carrying a pack on strenuous off-trail hikes in rugged mountain terrain. Wildflowers along the edges of the many lakes, streams, snow banks, and glaciers will be featured, from the alpine tundra to the open subalpine forest. The hikes each day will vary from 4 to 6 miles, or more, with elevation gains of 500 to 2,000 feet. More than half of these miles will be off-trail through rugged boulder-strewn terrain with numerous stream and snow bank crossings, at elevations of 9,000 to 11,000 feet. The class will meet at the Island Lake campground between Cooke City and Beartooth Pass at 9:00 am on the first day. *Participants must bring their own personal gear, including a tent, sleeping bag, pad, eating utensils (cup, bowl, etc.), clothes, and backpack. Fee includes group equipment (stoves, fuel, etc.), food, and llama packing. A camp cook will prepare meals.*

FAMILY ADVENTURES IN YELLOWSTONE—CANYON: 725 **NEW**
July 20-21 (see description on pg 19)

GEYSERS, MUDPOTS, & HOT SPRINGS: 726
July 20-22 (see description on pgs 18 & 19)

YELLOWSTONE'S FISHERIES BEYOND ANGLING: 727

July 21-23 **\$170 (Member's fee \$160)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructors: Dan Mahony, M.S. & National Park Service Fisheries Biologists

Fish in Yellowstone Park have been highly valued by members of the angling community since the park's

creation. These fish populations also directly or indirectly affect many other aquatic and terrestrial species of the ecosystem. National Park Service fishery biologists from the Aquatic Resources Center will discuss current impacts to the fish populations in Yellowstone Park and examine management options available to ensure perpetuation of these often unseen aquatic residents.

After an introductory talk, on-site visits will be made to several lakes and streams in the park where participants will observe or participate in current fishery management activities. Conditions will be variable, so be prepared for everything from rain to mosquitoes. Rain gear and chest waders are recommended, but optional. The course will begin at 9:00 am on the first day and end late afternoon on the last day. *Fee includes \$10 for a copy of Yellowstone Fishes: Ecology, History, and Angling in the Park by John Varley & Paul Schullery.*

FIRE ECOLOGY OF YELLOWSTONE FORESTS: 728

July 22-23 **\$115 (Member's fee \$105)** **NEW**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Roy Renkin, M.S.

Explore the history, ecology, and management of fire in the forest communities of Yellowstone National Park. A half-day lecture/slide show will be followed by one and a half days of touring recent/historic burns, sampling postburn forest regeneration in contrasting sites, dating previous fire events, and visiting ongoing research sites. Fieldwork will not be strenuous but may occur in inclement weather. Appropriate clothing and footwear are essential. The course will begin at 8:00 am on the first day and end at 5:00 pm on the last day.

EXPLORING YELLOWSTONE'S MICROBES: 729

July 23-25 **\$170 (Member's fee \$160)**
Location: Mammoth Hot Springs **Limit: 10**
Instructor: Anna-Louise Reysenbach, Ph.D.

Given that most of the diversity of life resides with microorganisms, this three-day intensive course will acquaint you with a slice of the spectacular diversity of microbial life in Yellowstone's thermal springs. We will explore the different extremes in which these organisms thrive, consider some of the biotechnological value that they might harbor, and consider whether Yellowstone's thermal springs might tell us something about past life on other planets and how life may have evolved on earth. Each day will start with a short introduction, followed by a visit and occasional short hike to a hot spring area that typifies a different environmental extreme for the microorganisms. Wherever possible we will be joined by other microbiologists who are doing research in the park. Late afternoons or evenings will

be spent viewing the microorganisms under a microscope, for optional demonstrations of laboratory techniques used to study microbial diversity (some entirely dependent on an enzyme obtained from a Yellowstone microorganism) and for an informal presentation of the biology of deep-sea hydrothermal vents. No background in microbiology is required, however a basic understanding of biology is recommended. The course will meet in the Mammoth area at 8:30 am on the first day and end around 3:00 pm on the last day. *Rooms have been set aside at Mammoth—contact registrar for reservation information.*

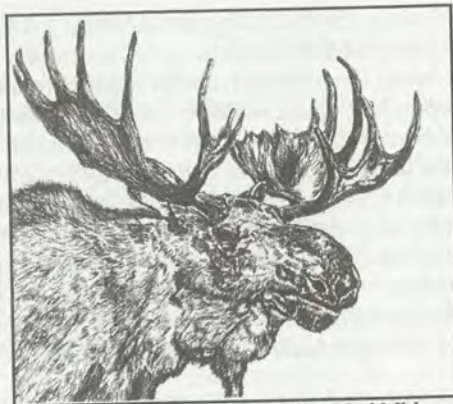
ALPINE WILDFLOWER WALKS: 730

July 23-25 **\$140 (Member's fee \$130)**
Location: Lamar Buffalo Ranch **Limit: 13**
Credit available: U, 1 semester hour, U of MT
Instructor: Wayne Phillips

Wildflowers growing in the alpine tundra above the tree line will be the focus of this course. Participants will make day-hiking trips through the high country of the Beartooth Plateau to study the beauty of flowers found only in circumpolar arctic environments and on the highest mountain tops south of their arctic home. A variety of alpine ecosystems will be studied including the "krummholz," or windbattered, horizontal pygmy forest, the cushion plants of the boulder fellfields, the lush alpine meadows, and the flowers that spring up behind the receding snowbank. The hikes each day will vary from 4 to 6 miles, or more, with elevation gains of 500 to 2,000 feet. More than half of these miles will be off-trail through rugged boulder strewn terrain with numerous stream and snowbank crossings, at elevations of 9,000 to 11,000 feet. Participants should be physically fit and prepared for strenuous hikes in rugged terrain. The course will begin at 4:00 pm on the first day and end at 4:00 pm on the last day. *Fee includes \$10 for course materials.*



Photo by Pam Gontz



Art by Michael J. Halverson

WATERCOLOR PAINTING—VISIONS PAST & PRESENT: 731

July 24-27 **\$210 (Member's fee \$200)**
 Location: Lamar Buffalo Ranch **Limit: 13**
 Instructor: Michael J. Halverson, M.A.

This four-day painting expedition will include a brief summary of the life and times of Thomas Moran, Yellowstone's premier artist. It was his colorful water color images which helped persuade Congress to establish the area as the first national park.

We will paint on location at several of the same areas in which Moran painted and will be able to compare his visions with the way that we see them. The basics of color theory, composition, value, and technique will be addressed in relation to our field studies. Beginning participants will be given the fundamentals of water color while the more advanced can work on improving techniques and developing compositions. Field sketches will be used in determining a future composition which can be worked on and refined during the evening hours. Materials will be kept as simple as possible to afford mobility and ease in handling. The course will begin at 9:00 am on the first day.

HORSEPACKING: GUSTAVUS C. DOANE MEMORIAL RIDE—Yellowstone's Snake River Country: 732 July 25-29 (see description on pg 36)

CARNIVORES OF THE GREATER YELLOWSTONE ECOSYSTEM: 733

July 26-29 **\$225 (Member's fee \$215)**
 Location: Lamar Buffalo Ranch **Limit: 13**
 Credit available: U, 1 semester hour, MSU
 Instructor: Don White, Ph.D.

Carnivores have always fascinated us, even though they make up only 10% of all mammalian genera and only about 2% of all mammalian biomass. The world of the carnivores embraces creatures who represent the very essence of power, endurance and speed, of wit and fang.

This course synthesizes some of the recent advances

in our understanding of the biology, ecology, behavior, and conservation of these fascinating animals. The primary objective is to bring the excitement and beauty of carnivores closer to those who have not had an opportunity to study them. The life history of grizzly bears, black bears, wolves, coyotes, foxes, mountain lions, lynx, bobcats, wolverines, otters, fishers, badgers, and marten will be discussed in detail. These species are generally secretive and occur at low densities, but there is a chance we will see a few of them in the field. This course will feature guest speakers, lectures, readings, videos, extensive discussions, and field trips to the habitats used by the carnivores of the Greater Yellowstone Ecosystem. The course will begin at 9:00 am on the first day. *Fee includes \$15 for course materials.*

MOVING NATURE—ENVIRONMENTAL ETHICS & YELLOWSTONE: 734

July 28-30 **\$180 (Member's fee \$170)**
 Location: Lamar Buffalo Ranch **Limit: 13**
 Credit available: Credit Pending-MSUB
 Instructor: David Strong, Ph.D.

Since the founding of Yellowstone Park, the most extensive transformation of the earth in all of human-kind's history has taken place. However, Yellowstone has mostly resisted this massive transformation. It was the natural wonders of Yellowstone—the *nature* here—that first moved people to take steps to protect and preserve this place.

This course will explore the ambiguity of "moving nature." Through slide shows and field trips we will see how nature has been moved near the park boundaries, and we will give nature a chance to move us as we hike trails here. Join David, who specializes in environmental ethics and the philosophy of technology, in a sophisticated discussion of nature and culture that uses Yellowstone as a focus and a springboard. Expect a mix of reading, classroom instruction applying environmental ethics to Yellowstone issues, discussion, journal writing, and moderate hikes. The course will begin at 9:00 am on the first day and end at 4:30 pm on the last day. *Fee includes \$20 for a copy of the instructor's book, Crazy Mountains: Learning from Wilderness to Weigh Technology, plus other course materials.*



Photo by Pam Gontz

1999 SUMMER FIELD COURSES

JULY/AUGUST

HORSEPACKING: SOUTH BOUNDARY, FOX PARK, & THE TETON WILDERNESS—The Wilderness Story: 735

July 29-Aug 3 (see description on pg 36)

FLY FISHING THE CATCH-AND-RELEASE WAY

July 30-August 1 Less Experienced: 736 Limit: 8

August 6-8 More Experienced: 807 Limit: 9

\$200 (Member's fee \$190)

Location: Lamar Buffalo Ranch

Instructor: Richard Parks

Both sessions of this course will emphasize the special nature of Yellowstone fishing—its abundance of native fish and the special regulations and fishing philosophies that have enabled park managers to protect and maintain a sport fishing resource.

The course for less experienced persons will concentrate on the basics and is intended for those who have progressed far enough to purchase their own equipment but who have not spent much time actually fly fishing. About half the course time in this first session will be spent away from the water practicing casting and other techniques. During the second and third days, the instructor will work with half of the group each day on the stream. He will be available each evening for discussion. The limited enrollment will allow time for the instructor to work with each person one-to-one. Participants should be aware the Yellowstone River in the park lies above 7,000 feet in altitude and neither the stream banks nor their approaches are flat. Some hiking and climbing will be required.

The sessions for the more experienced is for persons who have mastered the basics and will focus almost exclusively on fishing Yellowstone's waters. The instructor will act primarily as a resource person in assisting participants in polishing their skills. Most instruction will be on an individual basis or in small groups. The class will divide into three groups, with one-on-one instruction for each group on one day. During the two days you are not having the intensive instruction, you will practice on your own and meet with the group for morning and evening discussions. Both classes will begin at 8:30 am on the first day. A *Yellowstone Park fishing permit, available at most visitor centers, is required.*

THE BISON OF YELLOWSTONE: 737

July 30-August 1 \$125 (Member's fee \$115)

Location: Lamar Buffalo Ranch Limit: 15

Credit available: Credit Pending-MSU

Instructors: Jim Garry, M.S. & Harold Picton, Ph.D.

The big boys are rumbling. While we're watching the bison rut, we'll learn more than breeding behavior. As buffalo, they are one of the Old West's classic, enduring symbols; as bison, one of the new West's issues. Here



Photo by Pam Gonitz

in Yellowstone, where once the fight was for their survival as a species, now they are a focal point of the fight to define the new West. This class will explore the bison's history and natural history, its role in Indian cultures, and in the expanding white culture of the nineteenth century. Since we're at the Buffalo Ranch, we'll dig into the Ranch's role in the survival of the bison. We'll also explore the incredible current political turmoil around the definition of the Yellowstone Ecosystem and the bison's role in that controversy. The course will begin at 9:00 am on the first day and end mid-afternoon on the last day.

BACKPACKING—LEAVE NO TRACE: A TRAINER'S COURSE: 801

NEW

August 2-4 (see description on pg 33)

YELLOWSTONE'S NORTHERN ROADSIDE HISTORY: 802

August 2-4

\$160 (Member's fee \$150)

Location: Lamar Buffalo Ranch

Limit: 13

Instructor: Lee H. Whittlesey, J.D.

The Yellowstone landscape is rich in evidence of earlier human activity and use of the area, and traveling the park's roads can reveal numerous fascinating sites worth closer examination. Based out of the Institute's Lamar facility, informative daylong field trips and off-road hikes (up to 3 miles round trip) will explain in detail the significance of the places we visit. Examination of sites and discussions throughout the day will guide your understanding of human involvement in Yellowstone, from early Native American use to more recent human activity. This exploration of the park's history will be supplemented with a slide show of historic photos and a special tour of Yellowstone's antique stagecoaches and early busses, a collection not generally open to the public. Included will be stories of early violent deaths in the park from the instructor's book, *Death in Yellowstone*. Bring your questions and try to stump the instructor! The course will begin 8:30 am on the first day.

[course descriptions continue on page 29]

The Institute Store

Show your commitment to Yellowstone.
 Proceeds support education and research in the park.
 Yellowstone Association members receive a 15% discount on all items.

Yellowstone Association Institute



Logo Items

All of these items are embroidered or printed with the "Yellowstone Association Institute" logo.

Short-Sleeved T-Shirt

An old favorite with our new logo – this is our most popular item. Heavyweight t-shirt in 100% cotton. By Hanes. Colors: Blue, Green, Light Blue, Rust, Pink. Sizes: S-XXL. \$18.95

Long-Sleeved T-Shirt

The same classic shirt, with long sleeves to keep out the sun, the wind, and the cold. Heavyweight t-shirt in 100% cotton. By Hanes. Colors: Blue, Green, Navy, Ash. Sizes: S-XXL. \$22.95

Institute Polo

Perfect for cocktails at Roosevelt Lodge, a big night in Cooke City, or your next day at work in the real world. Pique knit sport shirt with short sleeves in 100% combed cotton. By Outer Banks. Colors: Blue, Green, Wine. Sizes: S-XXL. \$34.95

Sweatshirt

A comfortable reminder of your days in Yellowstone. Heavyweight sweatshirt in 50/50 polyester cotton fleece. By Lee. Colors: Blue, Green, Red, Natural. Sizes: S-XXL. \$34.95

Long-Sleeved Denim Shirt

Add some western style to your wardrobe. Buttondown shirt with single pocket in 100% cotton denim. By Woolrich. Color: Light Blue. Sizes: M-XXL. \$49.95

Fleece Vest

For those times when you want to add some insulation without restricting your mobility. Full zip vest with hand-warmer pockets in Kodiak Polarfleece. By Chuck Roast. Colors: Black, Navy, Dark Green. Sizes: S-XL. . \$49.95

Fleece Pullover

Just like your favorite sweatshirt...only warmer and more durable for serious outdoor use. Form-fitting pullover

with zippered neck in Kodiak Polarfleece. By Chuck Roast. Colors: Black, Red. Sizes: M-XXL. \$54.95

Fleece Jacket

Warm and cozy for early morning wolf watching or field trips in the park. Full zip jacket with hand-warmer pockets in Kodiak Polarfleece. By Chuck Roast. Colors: Black, Navy, Dark Green. Sizes: S-XL. \$64.95

Institute Brushed Canvas Cap

Required headwear for western wanderers. Classic baseball cap with adjustable back strap in 100% brushed cotton twill. Colors-cap/bill: Tan/Navy, Tan/Green, Tan/Burgundy. \$14.95

Institute Pigment-Dyed Cap

A soft and comfortable hat designed to fit most heads. Low-profile baseball cap with adjustable back strap in 100% pigment-dyed cotton. Colors-cap/bill: Khaki/Charcoal, Khaki/Dark Green, Navy. \$14.95

Waist Pack

Stay hydrated and be prepared—our new waist pack includes two 20 oz. water bottles and has ample room for your lunch, guidebook, binoculars, and a windbreaker. 450 cubic inch pack in lightweight but rugged Cordura fabric. By Ultimate Direction. Colors: Medium Blue, Dark Green. \$54.95

Nalgene Water Bottle

An extremely tough water bottle screen-printed with the Institute logo. 32 oz. wide mouth loop-top water bottle in smoke-grey Lexan. \$8.95

Institute Enamel Pin

Our new Institute logo is beautifully reproduced in full color on this high quality pin. One-inch pin with butterfly clasp.....\$3.95

Mail sales manager
 Beth Taylor models
 our new fleece jacket.



Photo by Pam Gontz

Yellowstone Association



Logo Items

All of these items are embroidered or printed with the "Yellowstone Association" logo.



Grizzly Bear T-Shirt

The popular grizzly bear design from our book bags is now available on high quality t-shirts. Eight-color bear design on back and Yellowstone Association logo on front breast. Screen-printed on heavyweight t-shirts in 100% cotton. By Hanes. Color: Natural. Sizes: S-XL.

Short-Sleeved \$18.95
Long-Sleeved \$22.95

Association Polo Shirt

Our great looking polo with the Yellowstone Association logo. Pique knit sport shirt with short sleeves in 100% combed cotton. By Outer Banks. Color: Medium Blue. Sizes: S-XXL. \$34.95

Association Brushed Canvas Cap

Let everyone know that you support the Yellowstone Association. Classic baseball cap with adjustable back strap in 100% brushed cotton twill. Color-cap/bill: Tan/Navy. \$14.95

Association Pigment-Dyed Cap

A streamlined version of the classic. Low-profile baseball cap with adjustable back strap in 100% pigment-dyed cotton. Color: Charcoal. \$14.95

Association Enamel Pin

Our new Association logo is beautifully reproduced in full color on this high quality pin. One-inch pin with butterfly clasp. \$3.95

Recommended Reading

Reading these books will enhance your understanding and enjoyment of our 1999 courses. Many were written by Institute instructors. More than 600 additional titles can be ordered through our website at www.YellowstoneAssociation.org.

General Park Information

Yellowstone: The Official Guide to Touring America's First National Park

The Yellowstone Association

An indispensable resource for planning a trip to Yellowstone. Just-published guidebook includes information to assist with all aspects of your trip, from reservations to road maps to recommended activities. Includes beautiful color photos and detailed descriptions of park facilities, natural and cultural history. 1998. 80 pages.

10522 \$6.95

Yellowstone Winter Guide

Jeff Henry

Great advice on planning a winter trip to the park, provided by a local writer and photographer. Includes information on travel, lodging, ski tours, and wildlife. 1998. 104 pages. #10322 \$13.95

Getting to Know Yellowstone National Park

Patty Knapp

An educational guide with text and activities designed to help older children learn about Yellowstone. 1997. 48 pages. #10519 \$8.95

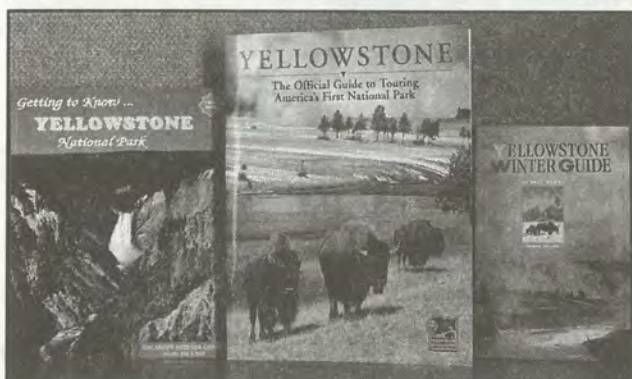


Photo by Pam Gontz

Hiking

Yellowstone Trails: A Hiking Guide

Mark C. Marschall

The definitive guide to backcountry hiking in the park, written by a Yellowstone backcountry ranger and published by the Yellowstone Association. Includes descriptions and mileages for more than 100 trails, including 45 dayhikes. 1995. 172 pages. #10199 \$6.95

Hiking (cont.)

Leave No Trace

Will Harmon

Pocket guide summarizes the low impact outdoor skills and ethics endorsed by the Institute. 1997. 120 pages.

#10557 \$6.95



Photo by Pam Gontz

Bear Aware: Hiking and Camping in Bear Country

Bill Schneider

Pocket guide includes all the information you need to reduce the risk of dangerous encounters. 1996. 128 pages.

#10701 \$6.95

Trails Illustrated Maps

These waterproof/tearproof topographic maps are perfect for the backcountry.

Yellowstone National Park (1:168,500) #70008 .. \$9.95

Old Faithful (1:83,333) #70009 \$8.95

Mammoth (1:83,333) #70010 \$8.95

Tower/Canyon (1:83,333) #70011 \$8.95

Yellowstone Lake (1:83,333) #70012 \$8.95

Animals and Plants

The Wolves of Yellowstone

Michael K. Phillips and Douglas W. Smith

The inside story of wolf reintroduction at Yellowstone, told by the biologists responsible for the restoration. 1996.

Hardcover. 128 pages. #10476 \$12.95

The Bears of Yellowstone

Paul Schullery

An excellent overview of the ecology, management, and popular history of Yellowstone's bears. 1992. 318 pages.

#10018 \$15.00

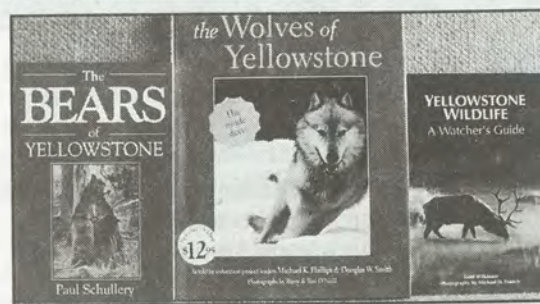


Photo by Pam Gontz

Birds of Yellowstone

Terry McEneaney

An introduction to Yellowstone birds and their habitats, written by the park ornithologist. Includes guide to roadside viewing areas. 1988. 171 pages.

#10036 \$14.95

Small Mammals of the Yellowstone Ecosystem

Donald Streubel

This book teaches us to see and appreciate the often-overlooked small mammals of Yellowstone, from shrews to badgers. Includes an introduction to small mammals and detailed descriptions of 53 species. 1988. 152 pages.

#10258 \$12.50

Wildlife Watcher's Guide

Todd Wilkinson

Authoritative guide includes color photos, habitat, identifying features, natural history, and best places to see birds and mammals found in Yellowstone. 1992. 96 pages.

#10262 \$11.95

Yellowstone Fishes

John D. Varley and Paul Schullery

The best text on Yellowstone fishes, written by the director and the senior editor of the Yellowstone Center for Resources. The sections on natural history, management, and angling are not only for fisherman; anyone interested in the natural history of Yellowstone will enjoy this book.

1998. 154 pages. #10503 \$19.95

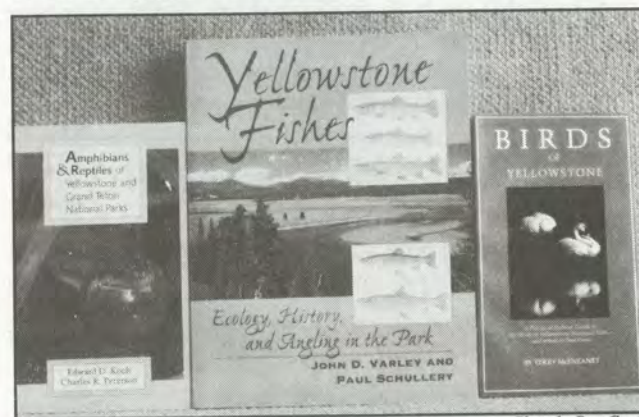


Photo by Pam Gontz

Amphibians and Reptiles of Yellowstone and Grand Teton National Parks

Edward D. Koch and Charles R. Peterson

A comprehensive field guide by the leading experts on the amphibians and reptiles of the Greater Yellowstone Ecosystem. 1995. 188 pages. #10434 \$12.95

Field Guide to Mammal Tracking

James C. Halfpenny

Written by a long-time Institute instructor who is also a renowned tracker, this book explains how to identify tracks and interpret the stories they can tell. 1986. 163 pages.

#10254 \$14.95

Animals and Plants (cont.)

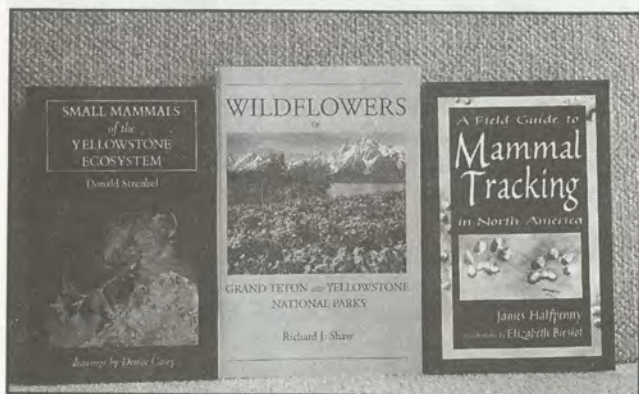


Photo by Pam Gontz

Wildflowers of Grand Teton and Yellowstone National Parks

Richard J. Shaw

Color photos and brief descriptions of 102 wildflowers found within the Greater Yellowstone Ecosystem. 1992. 64 pages. #10306 \$7.95

NEW Scats and Tracks of the Rocky Mountains

James C. Halfpenny

Pocket guide includes descriptions and drawings of the scats, tracks, and gait patterns of 70 species of mammals, birds, reptiles, and amphibians found in the Rocky Mountains. 1998. 145 pages. #10507 \$9.95

Geology

Interpreting the Landscape of Grand Teton and Yellowstone National Parks

John M. Good and Kenneth L. Pierce

An excellent book which uses photos and colorful illustrations to help explain the geological processes that molded the landscape of the Greater Yellowstone Ecosystem. 1996. 58 pages. #10466 \$12.95

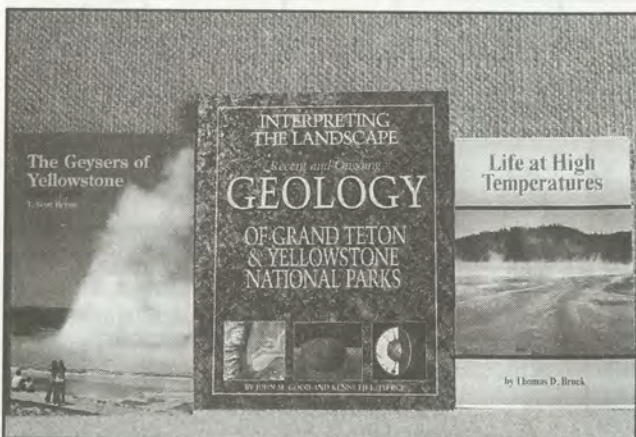


Photo by Pam Gontz

Life at High Temperatures

Thomas D. Brock

A fascinating pamphlet that looks at Yellowstone's thermal areas and the organisms that live there, including those now used in the biotechnology industry. 1994. 31 pages. #10183 \$2.50

The Geysers of Yellowstone

T. Scott Bryan

This popular guide describes in detail each of the more than 300 geysers in Yellowstone. 1995. 463 pages. #10179 \$19.95



Photo by Pam Gontz

History and Art

Death in Yellowstone

Lee H. Whittlesey

Yellowstone's park historian reveals lessons to be learned from more than 300 deaths by everything from earthquakes to bear attacks, poison gas, and lightning. 1995. 276 pages. #10411 \$16.95

Yellowstone Place Names

Aubrey L. Haines

Park history is told through a careful review of the place names given by park residents and visitors. 1996. 318 pages. #10447 \$9.95

NEW Undaunted Courage

Stephen E. Ambrose

This national bestseller offers an exciting and detailed account of the Lewis and Clark Expedition. 1996. 521 pages. #10508 \$17.00

A Trail Through Leaves – The Journal as a Path to Place

Hannah Hinchman

Using beautiful selections from her own journals, Hannah shows us how writing and drawing can enliven our senses and help connect us with the natural world. 1996. Hardcover. 192 pages. #10539 \$24.95

Limited Edition Wolf Etching

The Yellowstone Institute's popular limited edition etching featuring the gray wolf is still available. Only 150 prints have been made, and each is signed and numbered by the artist, Lawrence Ormsby. Ormsby has used the ancient technique of intaglio printing to produce the etchings. Each color on a print is made with a separate plate. The plates are then covered with ink, and each color is transferred individually onto the paper. The cost is \$185 each, plus \$7.50 for insurance, shipping and handling.

#130038 **\$185.00**



Limited Edition Wolf Etching

Photo by Pam Gontz

1999/2000 Order Form

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up to \$10.00	\$5.00	Yellowstone Association members deduct 15%
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Please specify: ☐ Surface (8-12 weeks) ☐ Air (1-2 weeks)

1999 SUMMER FIELD COURSES (cont. from pg 23) AUGUST



Photo by Pam Gontz

SMOKING MOUNTAINS—INDIANS & YELLOWSTONE PARK: 803

August 2-4 **NEW**
\$160 (Member's fee \$150)
Location: Lamar Buffalo Ranch
Instructor: Jeanne M. Eder, M.A.
Limit: 13

Join us as we learn about the people who first inhabited the "Smoking Mountains" of Yellowstone. Through a combination of classroom and field time, we will examine the history of the Indians in Yellowstone Park and the spiritual concepts that they used in living in harmony in nature. There will be a traditional Indian meal and videos to enhance the understanding of Indian people. Some trips to approved sites will also take place. The course will begin at 9:00 am on the first day and end mid-afternoon on the last day.

FAMILY DAYS IN THE THERMAL BASINS: 804

August 3-5
Adult-\$170 (Member's fee \$160)
Child-\$95 (Member's fee \$85)
Location: Madison Campground
Instructors: Sandra Nykerk & Jim Garry, M.S.
Limit: 20

The thermal areas of Yellowstone are unique in the world for their number and diversity. For three days, this family class will explore the thermal basins of Yellowstone, gaining an understanding of the geology and ecological systems that make these features possible. We will spend time at many of the thermal areas both on and off the beaten path, including Old Faithful, Norris, and Mammoth. Both campsite activities and field trips will be paced for a family experience and will allow ample time to enjoy all of Yellowstone's natural history, including wildlife and botany. All activities will be paced for families and the final itinerary will be based on the ages and abilities of class participants. Wildlife watching at dawn will be an option for class participants, and an evening campfire storytelling session will introduce the mythology and folklore of the Yellowstone country.

The course, based at the Madison Campground, will meet at 9:00 am on the first day and end around 4:00 pm on the last day. Children in this course should be at least 8 years of age. *Families who camp must secure*

their own campsites early in the day or make reservations through AmFac Parks & Resorts at 307-344-7311. Participants must provide their own camping equipment and food, including field lunches. Participants will carpool for field trips.

HORSEPACKING: TRAPPER TRAILS THROUGH THE THOROFARE: 805

August 3-8 (see description on pg 36)

DAY HIKING YELLOWSTONE

August 5-8 **NEW**
Beginners: 806
August 9-12 **Limit: 13**
Advanced: 809
\$170 (Member's fee \$160)
Limit: 13

Location: Lamar Buffalo Ranch

Instructors: Michael Bartley & Marla Darby, M.S.

Join us as we explore Yellowstone beyond road's end. Day hiking in the park allows for flexibility and provides a unique opportunity to experience the wild places of Yellowstone. Without the encumbrance of a heavy pack and the limits of overnight backcountry regulations, we will be able to explore Yellowstone's varied landscapes (some of which are closed to overnight camping) while enjoying the comforts of the historic Buffalo Ranch. Each day's hike will include both formal and informal discussions on the natural and cultural history of Yellowstone as well as wilderness travel.

This course has been divided into two sections. The first section (August 5-8) is geared toward beginners and will cover distances between 5 to 10 miles each day. Participants can expect elevation gains of no more than 1,500 feet. The second section (August 9-12) is for experienced or well-conditioned hikers and will cover distances between 8 to 15 miles, with potential for more extreme elevation gain and loss. **All participants should be in good physical condition.** Both courses will begin at 7:30 pm on the first day.

FLY FISHING—MORE EXPERIENCED: 807

August 6-8 (see description on pg 23)



Photo by Pam Gontz



Photo by Pam Gontz

YELLOWSTONE'S SOUTHERN ROADSIDE**HISTORY: 808****August 9-11****\$160 (Member's fee \$150)****Location: Old Faithful****Limit: 13****Instructor: Lee H. Whittlesey, J.D.**

The Yellowstone landscape is rich in evidence of earlier human activity and use of the area, and traveling the park's roads can reveal numerous fascinating sites worth closer examination. Based out of the Old Faithful area, informative daylong field trips and off-road hikes (up to three miles round trip) will explain in detail the significance of the places we visit. Examination of sites and discussions throughout the day will guide your understanding of human involvement in Yellowstone, from early Native American use to more recent human activity. This exploration of the park's history will be supplemented with a slide show of historic photos. Included will be stories of early violent deaths in the park from the instructor's book, *Death in Yellowstone*. Bring your questions and try to stump the instructor! The course will meet in the Old Faithful area at 8:30 am on the first day. *Rooms have been set aside at Old Faithful—contact registrar for reservation information.*

DAY HIKING YELLOWSTONE—ADVANCED: 809**August 9-12 (see description on pg 29)****NEW****GEOLOGY OF THE YELLOWSTONE****COUNTRY: 810****August 9-13****\$255 (Member's fee \$245)****Location: Lamar Buffalo Ranch & Old Faithful****Credit available: U or G, 1 semester hour, U of WY/
U of MT****Instructor: David Fountain, Ph.D.****Limit: 13**

Explore the geologic history of Yellowstone Park from its very ancient beginnings to its spectacular eruptions that formed the world's largest known calderas. Daily field excursions through the park will introduce you in depth to such topics as volcanic rocks and processes, glaciation, earthquakes and faulting, hydrothermal features, sedimentary rocks and processes, metamorphism, and tectonics. This course includes a 1° to 2 mile day hike up to Specimen Ridge,

with an elevation gain of 800 feet. Completion of an introductory geology course is preferable but not required. The course will begin at 8:00 am on the first day and end late afternoon on the last day. The course will be based at the Lamar facility each day except Wednesday evening when participants will spend the evening in the Old Faithful area. *Rooms have been set aside at Old Faithful—contact registrar for reservation information.* **Note:** If taken for credit, grades for this course will be available sometime after mid-September.

**HIKING THROUGH TIME—DAY HIKES INTO
THE GEOLOGICAL PAST: 811****NEW****August 13-15****\$160 (Member's fee \$150)****Location: Lamar Buffalo Ranch****Limit: 13****Instructor: Tom Watson**

Did you know that it's possible to go back into time? In a sense, Yellowstone is a time machine, and by hiking through its interior, you can go back and trace the park's geologic history through almost three billion years. For three days, class participants will have an opportunity to take relatively moderate hikes off road to observe and consider firsthand the ancient processes that shaped what we see today in Yellowstone's rocks, mountains, valleys, and geyser basins. No past experience in geology is required, only a passion for hiking, and a desire to learn about the mysteries of Yellowstone's geology. Each day's hike will not exceed four miles, but good hiking boots, sunscreen, sunglasses, a day pack with lunch and rain gear are recommended. Field journals, cameras, binoculars and hand lenses are optional. This course will begin at 9:00 am each day in the classroom, and quickly shift to the field for the rest of the day until late afternoon.

BACKPACKING IN GRIZZLY COUNTRY: 812**August 14-16 (see description on pgs 33 & 34)****FIRE & ICE—YELLOWSTONE'S LAST
TWO MILLION YEARS: 813****August 15-17****\$160 (Member's fee \$150)****Location: Canyon****Limit: 13****Credit available: Credit Pending-U of MT****Instructor: David Fountain, Ph.D.**

The last two million years in Yellowstone witnessed a dramatic interplay between repeated glaciations and catastrophic volcanic eruptions, an interplay that shaped the park's magnificent landscape and set the stage for the modern ecosystem. From our base in Canyon Village we will examine the evidence for and consequences of these past glacial episodes and the multiple cataclysmic caldera formation events. Field excursions in the Lake, Canyon, and Lamar Valley areas will focus on the products of glacial erosion and deposition, glacial lake deposits, evidence for climate change in the past, catastrophic floods, nature and style of recent

volcanic eruptions, hydrothermal explosions, and evidence for uplift and subsidence of the Yellowstone caldera. We will observe many of these features on short, easy walks. On a more strenuous hike up Mt. Washburn (1,400-foot elevation gain over a 3-mile distance to the 10,000-foot summit) we will have a grand overview of the park's frosty and fiery youth. *The course will begin at 9:00 am on the first day and end late afternoon on the last day.*

RESPONDING TO THE ELEMENTS

Yellowstone's sensational landscapes of textured rocks, patterned aspen groves, exploding geysers, and percolating mud pots challenge our senses at every turn. Responding to the Elements: Painting and Writing will explore the impact of Yellowstone's elements on our deepest selves.

The two classes will take joint field trips, writing and painting together in the park. The courses will begin at 7:00 pm on the first day and end at noon on the last day. Painters and writers will meet together the first evening for orientation and inspiration and on the last day for an art show and reading.

RESPONDING TO THE ELEMENTS—

PAINTING: 814

August 15-20 \$250 (Member's fee \$240)

Location: Lamar Buffalo Ranch Limit 13

Instructor: Deborah Milton Bond, Ph.D.

Each day will be devoted to a particular technique and a way of responding to fire, earth, air, and water. Color and shape, values of light and dark, textures and patterns, positive and negative space will be covered with morning demonstration and skill practice and afternoon field trips for painting, sketching and/or taking photographs.

RESPONDING TO THE ELEMENTS—

WRITING: 815

August 15-20 \$250 (Member's fee \$240)

Location: Lamar Buffalo Ranch Limit 13

Instructor: Dorothy Hinshaw Patent, Ph.D.

"How can I possibly put this into words?" we often ask ourselves, when we undergo a powerful life experience. *Responding to the Elements: Writing* will provide new techniques for self-expression, using the beauty of Yellowstone and the feelings it inspires as inspiration. We'll explore the use of metaphor and story, as well as the possibilities of poetry. We'll begin each day with writing exercises, then travel to a different locale every afternoon to practice what we've learned and to explore the impact of Yellowstone's landscapes and natural features on our spirits. This class is open to anyone interested in learning more about how to capture life experiences in writing.



Photo by Pam Gontz

BACKPACKING—OLD FAITHFUL TO THE BECHLER REGION: 816

NEW

August 18-23 (see description on pg 34)

MAP, COMPASS, & STARS ACROSS YELLOWSTONE: 817

NEW

August 22-24

\$140 (Member's fee \$130)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: James Halfpenny, Ph.D.

A sliver of metal that will point north changed the world. From that chunk of metal, learn practical aspects of finding your way. Learn map, compass, and night navigation. This is a hands-on, do it course. First, we'll make a compass. Then, we'll learn why it doesn't point north. Using compasses corrected for magnetic declination, we will make a map of the Lamar field station and finally turn our map into a topographic map. Of course, there will be some orienteering. We'll review Yellowstone maps and study how UTM's (universal transverse mercator grids) and latitude and longitude help Yellowstone biologists study animals. Also, we'll take a look at GIS (geographic information systems) and GPS (global positioning satellites) systems. The sun and stars will reveal our latitude, directions, and time. This course is designed for beginners. The course will begin at 7:30 pm on the first day and end at 4:00 pm on the last day. *Fee includes \$10 for course materials.*

EXPLORING THE NEW UNIVERSE: 818

NEW

August 22-25

\$190 (Member's fee \$180)

Location: Lamar Buffalo Ranch

Limit: 15

Instructor: Bob Berman

Like a planetarium come to life, the skies over Yellowstone offer an ideal unspoiled site for investigating the universe beyond earth. Using colorful visual presentations such as movies shot in space, images from spacecraft arriving at each planet, and the latest Hubble Telescope photographs, Astronomer Bob Berman takes participants on a fast-paced, humor-filled tour of the universe.

Geared for those with no background in astronomy, this workshop will also be enjoyed by experienced amateurs, even professionals. It will include astonish-

1999 SUMMER/FALL FIELD COURSES AUGUST/SEPTEMBER

ing facts (the moon is exactly as dark as asphalt); timeless observation techniques (how to see earth's shadow any evening); and the finest upcoming sky spectacles of the next several years. Cosmological explorations range from an introduction to String Theory and Spacetime, through black holes, to the possibilities of other universes.

On clear nights, we'll go "hands-on" under the sky to discover little-known secrets of the heavens, such as how to easily trace out every North Star through history, and their influence on that era's lore and legend. The course will begin at 7:30 pm on the first day and end at noon on the last day. *Fee includes \$15 for a copy of the instructor's book, *Secrets of the Night Sky*.*

HORSEPACKING: TRAILS OF INDIAN PEOPLE THROUGH YELLOWSTONE: 819 **NEW**
August 22-26 (see description on pgs 36 & 37)

BASE CAMP IN THE BEARTOOTH—A MOUNTAIN JOURNEY: 820 **NEW**
August 25-28 (see description on pg 34)

WILDERNESS FIRST AID **NEW**
August 31-September 1: 821 December 4-5: 1201
\$125 (Member's fee \$115) **Limit: 24**
Location: Lamar Buffalo Ranch
Instructor: Wilderness Medicine Institute Staff

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. Some of the topics to be addressed are patient assessment, shock, wilderness wounds, fractures and dislocations, hypothermia, heat illness, altitude illness, and bites and stings. Emphasis is placed on learning the principles of medical care rather memorizing information. May be used to re-certify as a Wilderness First Responder. No previous certification is required. The course will begin at 8:00 am on the first day and end at 5:00 pm on the last day.



Photo by Pam Gontz

HORSEPACKING: NEZ PERCE TRAIL—ALTERNATE ROUTE, MIRROR PLATEAU: 901
September 3-6 (see description on pg 37)

SHOSHONE LAKE SEA KAYAKING: 902 **NEW**
Sept 3-6 (see description on pg 19)

WILD EDIBLE PLANTS & MEDICINAL HERBS: 903
September 4-6 (see description on pg 13)

WILDLIFE OBSERVATION—FALL: 904
September 14-17 **\$160 (Member's fee \$150)**
Location: Mammoth Hot Springs **Limit: 13**
Instructor: Gene Ball

Against the backdrop of changing colors, fall stages a variety of interesting wildlife activities. Field observation will be the major goal and activity of this introduction to the pre-winter park. Methods of unobtrusive observation and the ethics of interaction with wildlife will be central themes. The flexible schedule will feature early morning and evening field trips and programs on various wildlife topics, issues, and controversies. Participants should be prepared for occasional moderate hikes at higher elevations. The opening session will cover selection and use of binoculars, spotting scopes, and tripods for quality wildlife observation. The course will headquarter in the Mammoth/Gardiner area. The course will meet in the Mammoth Hot Springs area at 1:00 pm on the first day and end at 1:00 pm on the last day. *Rooms have been set aside at Mammoth—contact registrar for reservation information.*

FLY FISHING IN THE FALL: 905
September 17-19 **\$200 (Member's fee \$190)**
Location: Mammoth Hot Springs **Limit: 9**
Instructor: Richard Parks

This fall course is based out of the Mammoth Hot Springs/Gardiner area and is aimed at an audience of people who have some experience with fly fishing, but want to expand and polish their skills. Participants will have the opportunity to fish several of the park streams, including the Yellowstone, Gardner, and Firehole Rivers. Most instruction will be on an individual basis or in small groups. The class will divide into three groups, with one-on-one instruction for each group on one day. During the two days you are not having the intensive instruction, you will practice on your own and meet with the group for morning and evening discussions. The course will meet in the Mammoth Hot Springs area on the first day of class at 8:30 am. *Rooms have been set aside at Mammoth—contact registrar for reservation information. A Yellowstone Park fishing permit, available at most visitor centers, is required.*

1999 FALL FIELD COURSES

SEPTEMBER

SHOSHONE LAKE SEA KAYAKING: 906 **NEW**
Sept 17-20 (see description on pg 19)

**AUTUMN PHOTOGRAPHY IN
YELLOWSTONE: 907**

September 23-26 **\$225 (Member's fee \$215)**
Location: Mammoth Hot Springs **Limit: 13**
Instructor: Sandra Nykerk

Spend four days with us exploring the many photographic opportunities of a Yellowstone autumn—from bugling elk and rutting pronghorn to the various subtleties offered by the delicate colors of the changing landscape. This course is designed for photographers of all levels, but it will be assumed that participants have a working understanding of photography and a fundamental familiarity with their own equipment. Short classroom sessions will review basic photographic principles and discuss the ethics of field photography,

exposure control, composition, and film and lens selection. From there, we'll spend most of the time in the field for "hands-on" learning and shooting experience. We will allow for the inspiration of the Yellowstone landscape and the serendipity of wildlife, with consideration given to the development of personal vision and creativity and the importance of natural history knowledge to the nature photographer. Photographers working in all formats (35 mm, medium and large formats) are welcome. A list of recommended supplies and equipment will be forwarded to each participant prior to the course. The course will meet in the Mammoth Hot Springs area at 9:00 am on the first day and end at 4:00 pm on the last day. *Rooms have been set aside at Mammoth—contact registrar for reservation information. Participants will be expected to pay for their own lab film processing.*

[winter course descriptions continue on page 37]

1999 BACKPACKING SEMINARS

**ALL YELLOWSTONE ASSOCIATION
INSTITUTE BACKCOUNTRY
COURSES PRACTICE
LEAVE NO TRACE**



**BACKPACKING—LEAVE NO TRACE: A
TRAINER'S COURSE: 801** **NEW**

August 2-4 **\$185 (Member's fee \$175)**
Location: Pebble Creek Backcountry **Limit: 10**
Instructors: Michael Bartley & Marla Darby, M.S.

This course is for certification as a trainer in the national Leave No Trace (LNT) program. LNT is a national educational program endorsed by the National Park Service and other land management agencies. The goal of this program is to promote "minimum impact" skills and ethics, and a key component of the LNT program is the development of trainers to educate the general public. The main goal of this three-day backpacking trip will be to provide the participants with the principles, theories, and skills of Leave No Trace. This class is interactive and participants should come prepared to actively participate. In addition to LNT, there will be ample time to augment your backcountry skills and learn more of the region's natural history. The

planned hike is 12 miles in length with an initial climb of 1,100 feet. The pace of the course is designed for all levels of experience. **All participants must be in good physical condition.** Anyone active in the outdoors is welcome. The course will meet at the Lamar Buffalo Ranch at 9:00 am on the first day. *Participants need to secure their own campsite or lodging before and after the course. The nearest campgrounds are Slough Creek or Tower Fall or lodging in the Silver Gate/Cooke City area*

BACKPACKING IN GRIZZLY COUNTRY: 812
August 14-16 **\$185 (Member's fee \$175)**
Location: Pebble Creek Backcountry **Limit: 10**
Instructors: Michael Bartley & Marla Darby, M.S.

This three-day backpacking trip in Yellowstone is for people who want to learn to travel safely, confidently, and respectfully in grizzly country. The grizzly bear is one of the most magnificent animals in the world and



Photo by Pam Gontz

1999 BACKPACKING SEMINARS (cont.)

backpacking in the land of the "Great Bear" can be a magical experience. However, for your safety and the welfare of the bear it is essential that you learn how to exist with grizzly bears. Adapting the principles of "Leave No Trace" to bear country, you will learn the "hard" skills necessary to reduce the possibility of encountering a bear on trail and in camp. We will include suggestions on how to deal with both daytime and nighttime bear encounters. Furthermore, we will discuss the biological, ecological, political, and social aspects of the threatened bear and its long-term prospects for recovery. Twelve miles in length, this course is designed for the beginning backpacker. Our route is an easy one, but it does include an initial 1,100-foot climb. As with any backpack trip, **you must be in good physical condition.** The course will meet at the Lamar Buffalo Ranch at 9:00 am on the first day and return to the trailhead around 3:00 pm on the last day. *Participants need to secure their own campsite or lodging before and after the course. The nearest campgrounds are Slough Creek or Tower Fall or lodging in the Silver Gate/Cooke City area.*

BACKPACKING—OLD FAITHFUL TO THE BECHLER REGION (1st in the Park series): 816
August 18-23 \$370 (Member's fee \$360) NEW
Location: Old Faithful/Bechler Limit: 10
Instructors: Michael Bartley & Marla Darby, M.S.

This six-day trip will take you from the Old Faithful area up over the Continental Divide and into a beautiful area of Yellowstone known as Cascade Corner. It is a land of dramatic waterfalls and gentle beauty, where the moist climate and relatively low altitude combine to create an exceptionally rich variety of flora and fauna. There will be daily classes on a variety of subjects including backpacking skills, the area's natural history, park management issues, and wilderness ethics. Throughout the trip we will be practicing the principles and skills of "Leave No Trace" camping and travel.

This hike is the first in a series of weeklong backpacking trips to be offered, one each year, within Yellowstone National Park. Each hike will highlight a unique region within the larger ecosystem that is known as Greater Yellowstone. This six-day trip is 30 miles in length with less than a 1,000-foot elevation gain and numerous stream crossings. We will have one layover day for rest, exploration, and a dip into one of the finest hot springs in the world. **All participants must be in good physical condition.** The course will begin at the Bechler Ranger Station at 8:00 am at which time we will be shuttled to the Lone Star trailhead near Old Faithful. *Participants need to secure their own campsite or lodging before and after the course. The nearest campground or lodging would be at the Cave Falls Campground or in Ashton, Idaho.*

BASE CAMP IN THE BEARTOOTH—

A MOUNTAIN JOURNEY: 820 NEW
August 25-28 \$245 (Member's fee \$235)

Location: Beartooth Wilderness Limit: 10
Instructors: Michael Bartley & Marla Darby, M.S.

Immerse yourself in one of the finest wild areas in North America—the Absaroka Beartooth Wilderness. This course is for those who want a true wilderness experience in the Greater Yellowstone ecosystem. We will hike to a backcountry campsite and explore the surrounding mountains without the burden of heavy packs. Around the campfire and on the trail, we'll talk about the meaning of wilderness and learn how to minimize our impact in this fragile alpine environment. And, of course, there will be plenty of time to relax and reflect in this spectacular setting.

This course takes place at elevations above 9,000 feet and includes some steep climbs. On the first and last days, when we are carrying our full backpacks to and from the base camp, we will hike 6 to 7 miles. **All participants must be in good physical condition.** The course will meet at the Top of the World Store between Cooke City and Beartooth Pass at 8:30 am on the first day. *Participants need to secure their own campsite or lodging before and after the course. The nearest campground is the Island Lake Campground, located in the Beartooth Mountains and operated by the Forest Service. The nearest lodging is the Silver Gate/Cooke City area.*

For all backpacking courses: Participants must provide their own backpacking gear and food. Detailed directions to the meeting places and a complete equipment list will be provided in the student packet.



Photo by Pam Gontz

1999 HORSEPACKING SEMINARS

HORSEPACKING SEMINARS

Horsepacking in, for, and about Yellowstone's Backcountry

The Yellowstone Association Institute conducts courses on horsepacking in the backcountry of Yellowstone to immerse you in a true wilderness experience, accompanied by a large animal, the horse. The exploration of wild land, in the companionship of a horse, is a historically significant tradition, creating much of the spirit of the West. As we have become increasingly civilized as a people, we have also distanced ourselves from the learning experience that wildness offers us. The goal of these courses is to bridge that gap, and by accepting wildness on its own terms, return home refreshed, invigorated, and perhaps a bit more mindful.

All of our horse trips emphasize **the low-impact use of pack stock** in the backcountry, along with specific themes relevant to the area of the park visited. Each course is **participatory**, where you learn by doing, not by being catered to. Our horsepack experiences are a time for participants to learn the use and care of pack and riding stock and how to camp and travel in the wilderness without damaging the fragile country. You become the one responsible for the well-being of the horse, its tack, and the backcountry.

Fee includes pack stock, saddle horses, camping equipment, and food. Participants must provide their own sleeping bags and personal effects. Trip locations may change on short notice in response to current backcountry conditions.

June 26-28	Family Horsepacking—Doing Things Together— West Slope of the Tetons: 616
July 1-3	Family Horsepacking—Doing Things Together— Hellroaring: 702
July 12-16	Hellroaring & the Black Canyon— Plants & Animals of Yellowstone: 715
July 25-29	Gustavus C. Doane Memorial Ride— Yellowstone's Snake River Country: 732
July 29-August 3	South Boundary, Fox Park, & the Teton Wilderness— The Wilderness Story: 735
August 3-8	Trapper Trails Through the Thorofare: 805
August 22-26	Trails of Indian People Through Yellowstone: 819
September 3-6	Nez Perce Trail—Alternate Route, Mirror Plateau: 901

Instructor: Richard Clark, Ph.D., Outfitter, Biologist

Family classes (616 & 702) \$295 per person (Member's fee \$285 per person)
 3-day class (901): \$495 per person (Member's fee \$485 per person)
 4-day class (715 & 732): \$695 per person (Member's fee \$685 per person)
 5-day classes (735, 805, & 819): \$745 per person (Member's fee \$735 per person)

FAMILY HORSEPACKING—DOING THINGS TOGETHER—

West Slope of the Tetons: 616 June 26-28 Limit: 12
Hellroaring: 702 July 1-3 Limit: 8

Join us for an unforgettable family adventure. This trip is designed to offer a unique educational experience for the entire family. Working with other course participants in a team environment, each family member will be taught how to saddle, bridle, and hobble their own horse. There will also be an opportunity to learn about horseback riding, wilderness camping, and natural history. Each family will set up its own tents and take turns with camp chores, including assisting the staff with cooking and cleanup for one group meal.

Family groups who register should have a least one member under 14 years of age and all children will

need to be with an accompanying adult. Minimum age for participation in this course is 7 years old.

The Teton course will be staged on the west slope of the Tetons and will meet on the first day at 10:00 am near the trailhead at Fox Creek Canyon, about 5 miles south and 2 miles east of Driggs, Idaho. The course will end at the same location around 3:00 pm on the third day.

The Hellroaring course will be staged in the northern section of Yellowstone, the Hellroaring area, and will meet on the first day at 10:00 am at the Hellroaring trailhead 3 miles west of Tower Junction. The course will end at the same location around 3:00 pm on the third day.

1999 HORSEPACKING SEMINARS (cont.)



Photo by Don Nelson

HORSEPACKING: HELLROARING & THE BLACK CANYON—Plants & Animals of Yellowstone: 715

July 12-16

Limit: 8

"It's a hell roarer," Prospector A. H. Hubble reported to his partners in 1867, years before Yellowstone became a national park, of the wide, wild stream running into the Yellowstone River from the Absaroka Mountains to the north. It is Hellroaring Creek and its environs that will be explored as participants in this course learn more about low impact horsepacking in wildlands. The course curriculum will include selected wildflower identification, acquaintance with the tree species of Yellowstone's forests, recognition of wildlife species in the area, and a summary lesson on Yellowstone ecology. The course will meet at the Hellroaring trailhead 3 miles west of Tower Junction at 11:00 am on the first day. On the fifth day of the course we will return in the early afternoon to the same trailhead.

HORSEPACKING: GUSTAVUS C. DOANE MEMORIAL RIDE—Yellowstone's Snake River Country: 732

July 25-29

Limit: 10

Lieutenant Gustavus C. Doane is a prominent, colorful, and ill-fated figure in the history of Yellowstone Country. His name appears in the written accounts of the creation of Yellowstone National Park, the 1877 Nez Perce War, and the battle of Little Bighorn. He is also remembered for his attempt to navigate the icy waters of the Snake River with members of his command in November 1876—part of a disastrous expedition to explore the drainage of the Columbia River.

This course is a memorial to Lieutenant Doane and his life on the western frontier. Using his story as an example, we will take a closer look at the frontier era in Yellowstone. Our horseback ride down the Snake River will include readings, campfire presentations, and group discussions centered on this theme. The course will meet at the Heart Lake trailhead in the southern part of the park at 10:00 am on the first day and end around 3:00 pm on the last day.

HORSEPACKING: SOUTH BOUNDARY, FOX PARK, & THE TETON WILDERNESS—The Wilderness Story: 735

July 29-August 3

Limit: 10

Yellowstone is a "wilderness" national park, and the adjoining Teton Wilderness was one of the earliest forest areas to be designated as "Wilderness." Bob Marshall, an early advocate of the Wilderness Act was influential in this designation. Course curriculum will explore the concept of "designated wilderness" while practicing skills commensurate with low impact horse camping in such areas. Events, personalities, and ethics that led to the passage by Congress of the Wilderness Act will be surveyed. The physically demanding itinerary includes several particularly long days in the saddle and no planned layover days. **THIS COURSE IS RECOMMENDED FOR EXPERIENCED BACK-COUNTRY HORSE PEOPLE ONLY.** Consult with the instructor if there are questions regarding the experience required. The course will meet at the South Entrance trailhead at 1:00 pm on the first day. **NOTE:** The first and last days are short additions to this course in order to make five complete days of wilderness travel.

HORSEPACKING: TRAPPER TRAILS THROUGH THE THOROFARE: 805

August 3-8

Limit: 10

Jim Bridger and Osbourne Russell were two of the mountain men that passed through Two Ocean Pass as they entered the beaver-rich waters of Yellowstone. Trappers traveled along the east shore of Yellowstone Lake en route to the interior of the Yellowstone plateau in search of fur and fortune. This course will present the stories of those who came to obtain the fur wealth from Yellowstone's streams and rivers. The route begins outside the park in the Teton Wilderness, follows the Yellowstone River north to Yellowstone Lake terminating at the Nine-Mile trailhead on the northeast corner of the lake. Participants will rendezvous on the first day of the course at the Nine-Mile trailhead, leaving their vehicles there. A shuttle will be provided down to Turpin Meadows trailhead in the Teton Wilderness with expected arrival there at approximately 1:00 pm that day.

HORSEPACKING: TRAILS OF INDIAN PEOPLE THROUGH YELLOWSTONE: 819

NEW

August 22-26

Limit: 10

Experience the country through which Bannock, Nez Perce, Shoshone, Crow, Blackfoot, and many others passed as Indian people migrated between the mountains and the buffalo country. Share the path of those who rode the Bannock Trail up the Lamar River. Relive the events of the Nez Perce as they outran and outfought the U.S. Army in 1877 in Yellowstone National Park. This course is about horse travel in wild

1999 HORSEPACKING (cont.)

country, about people travel in wild country, and about the wildness of Yellowstone. The trip does follow the traditional Ne Me Poo Trail (National Historic Trail) in reverse order from Soda Butte trailhead to Pelican Creek trailhead. The course will meet at the Soda Butte stock trailhead in the northern part of the park at 11:00 am on the first day and end at the Pelican Creek trailhead around 3:00 pm on the last day. A shuttle will be provided back to the Soda Butte trailhead.

HORSEPACKING: NEZ PERCE TRAIL— ALTERNATE ROUTE, MIRROR PLATEAU: 901 September 3-6 Limit: 10

Retrace a route that might have been used by the Nez Perce Indians as they made their way through Yellowstone National Park in 1877. They were being pursued by General Oliver Otis Howard of the U.S. Army and no one knows where they went once they left the north shore of Yellowstone Lake. This course will take you along one possible route that might have been taken by the Indians as they made their way out of the park. Relive the place, the conditions, and the horse experience of those who crossed this land over one hundred years ago. The course will meet at the Pelican Creek

trailhead, north of Yellowstone Lake, at 10:00 am on the first day and return to the same trailhead around 3:00 pm on the last day.

***For all horsepacking trips:** Detailed directions to meeting places and an equipment list will be provided in the student packet. Participants need to secure their own campsite or lodging before and after the course.*

ALL YELLOWSTONE ASSOCIATION INSTITUTE BACKCOUNTRY COURSES PRACTICE LEAVE NO TRACE



2000 WINTER FIELD COURSES

JANUARY

WILDERNESS FIRST AID: 1201 NEW December 4-5 (see description on pg 32)

WILDERNESS FIRST RESPONDER: 1001 January 2-11, 2000 \$450 (Member's fee \$440) Location: Lamar Buffalo Ranch Limit: 24 Instructor: Wilderness Medicine Institute Staff

This 80-hour course is required by many outdoor employers and recommended for anyone who works or plays in the backcountry. Through a combination of classroom sessions and field exercises, participants will learn how to deal with emergencies in remote settings. Some of the topics to be covered are wilderness wound management, improvised splinting techniques, environmental emergencies, patient monitoring and long-term care. Emphasis is placed on principles of medical care rather than memorization of information. Certifications upon successful completion include Stonehearth Open Learning Opportunities (SOLO) Wilderness First Responder and American Heart Association CPR. Participants must be 18 years old and physically and mentally able to participate in classes that occur in all types of weather and terrain. The course will begin at 8:00 am on the first day and end at 5:00 pm on the last day.

SNOWSHOEING IN YELLOWSTONE: 1002 January 14-17, 2000 \$175 (Member's fee \$165) Location: Lamar Buffalo Ranch Limit: 13 Instructor: Scott Wood

This course offers the best of both worlds. During the day, we will strap on snowshoes and explore the winter wilderness in and around the Lamar Valley. At night, we will meet in a warm classroom and then retire to the snug Institute cabins. Through this combination of daylong tours and classroom sessions, we will learn how to safely enjoy the winter environment on snowshoes. Snowshoeing in deep snow can be strenuous and participants should be in good physical condition. The course will begin at 7:00 pm on the first day and end at 3:00 pm on the last day.



Photo by Pam Gontz



Photo by Pam Gontz

SNOW TRACKING: 1003**January 21-23, 2000 \$145 (Member's fee \$135)****Location: Lamar Buffalo Ranch Limit: 15****Instructor: James Halfpenny, Ph.D.**

For winter enthusiasts, this program is designed to study detailed information snow can provide. The white slate records nearly every movement by animals, allowing for extended sections of trail interpretation. This course emphasizes reading trails for behavioral information, habitat preference, and travel suitability. Topics include snow properties, snow tracking basics, melted-out footprints, snow load, snow pillars, snow casting, travel suitability, snow tracking index, measuring, gait pattern recognition, trail interpretation, and ethograms. Morning inside lectures will be supplemented by afternoon field trips. Field trips will be on skis. The course will begin at 6:00 pm with an optional potluck followed by a lecture at 7:30 pm and end around 5:00 pm on the last day. *Participants need to provide their own ski equipment—see pg 7. Fee includes \$15 for course materials.*

HOW MAMMALS SURVIVE WINTER: 1004**January 29-30, 2000 \$115 (Member's fee \$105)****Location: Lamar Buffalo Ranch Limit: 15****Instructor: James Halfpenny, Ph.D.**

The snows of Yellowstone make winter a beautiful season. For the mammals, however, it is a time of harsh reality, with scarce food, deep snow, and raging blizzards. In this class you will learn how mammals survive winter. We will explore the subnivean (below snow) world of mice, voles, and weasels and study the scavenger food web supporting coyotes and mountain lions. We will analyze the nutritional needs and energy balance of antelope, deer, elk, and eagles. Morning lectures will be followed by afternoon laboratories to observe animals in winter. Short field exercises to explore the subnivean and track mammals will necessitate warm clothes. No skiing or snowshoeing will be necessary for this program. The course will begin at 8:30 am on the first day and end around 5:00 pm on the last day.

EXPLORING THE YELLOWSTONE LANDSCAPE ON SKIS: 2001**February 3-6, 2000 \$225 (Member's fee \$215)****Location: Lamar Buffalo Ranch Limit: 13****Instructor: Bill Hopkins**

The plateaus and river valleys of Yellowstone are ideal terrain for the cross-country skier. This course is aimed at, but not limited to, those who have some experience with alpine or cross-country skiing. In addition to kicking and gliding our way through the backcountry, we will learn about winter ecology, avalanches (dynamics, avoidance, and rescue), coping with the cold, day tour preparation, and emergency and non-emergency shelter construction.

We will base out of the Lamar Buffalo Ranch, skiing most of each day, and devoting one day to a ski in the park's interior. Short morning classes will be presented before each day's tour. The course will begin at 9:00 am on the first day. Our final tour will end around 2:00 pm, allowing participants time for travel. *Participants need to provide their own ski and/or snowshoe equipment—see pg 7. Fee includes \$15 for a snowcoach shuttle into the interior.*

WEATHER CYCLES IN THE BIG SKY: 2002 NEW**February 12-14, 2000 \$160 (Member's fee \$150)****Location: Lamar Buffalo Ranch Limit: 13****Instructor: Dave Thurlow**

The cyclical behavior of the atmosphere, from day to day, season to season, and year to year instills a sense of wonder, respect and curiosity in those who choose to take notice. This three-day course will allow you to notice the sky in ways you've never dreamed of and take the observations made, and lessons learned, back to your home town, under your own piece of sky. Through slides, video, and direct observations, the focus will be on the winter weather patterns of Yellowstone. Some of our time will be spent in the field on skies or snowshoes, so bring plenty of warm clothing.

You will come away with a basic understanding of how weather works—from micro-scale to global scale. Simple observational parameters and cloud types will be discussed, giving you the language to describe the atmosphere and the knowledge to make your own forecasts—Yellowstone offers prime weather viewing opportunities, and we will be flexible enough to enjoy and learn from anything that pops up. The course will begin at 9:00 am on the first day and end at 3:00 pm on the last day.

Visit our website at:
www.YellowstoneAssociation.org

EXPLORING YELLOWSTONE FOR THE GRAVITY PHOBIC: 2003
February 15-17, 2000 **\$160 (Member's fee \$150)** **NEW**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Dale Sexton

For those who do not ski, snowshoeing provides an excellent, low impact, yet rigorous mode of travel for exploring a snow-covered Yellowstone. Course discussion will include, but is not limited to, winter ecology, preparation for winter excursions, avalanche awareness, map reading/route finding, and quite simply enjoying the experience that only winter in Yellowstone can provide. Depending on conditions, participants can expect 2 to 8 miles of snowshoe travel a day. Short morning presentations will be given before each day's excursion. The course will begin at 9:00 am on the first day and end at 3:00 pm the last day.

EXPLORING YELLOWSTONE'S NORTHERN RANGE—WINTER ECOLOGY & SURVIVAL: 2004
February 18-20, 2000 **\$170 (Member's fee \$160)**
Location: Lamar Buffalo Ranch **Limit: 15**
Instructors: Wayne Phillips & Leslie Stoltz

This class will strive to improve your skiing and survival skills, while exploring the Northern Range Ecosystem. Skiing both on- and off-trail routes, we will study winter ecology, focusing on the interactions between herbivores and their winter habitat. Participants will learn to identify, in winter condition, the shrubs and trees used for browse by deer, elk, bison, and antelope.

Winter survival skills will be honed with review of the basics of orienteering (finding your way with map and compass); route finding in the snow-clad terrain; snow metamorphosis; how to recognize avalanche hazards; and search and rescue of an avalanche victim.

Cross-country ski proficiency and experience at the intermediate level is required. We will ski from 5 to 7 miles a day as we explore Yellowstone's beautiful Northern Range. Participants need to provide their own ski equipment, daypack, compass, shovel, and rescue transceiver (457 kHz). The course will begin at 9:00 am on the first day. *Participants need to provide their own ski equipment—see pg 7.*

COYOTE & RAVEN—FACT & FOLKLORE: 3001
March 8-10, 2000 **\$160 (Member's fee \$150)** **NEW**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Jim Garry, M.S.

Winter is the ideal time to examine the natural history and folklore of coyotes and ravens. For now, deep in the midst of our coldest season, coyotes and ravens are active. And now, with the world in a deep sleep, it is time to tell tales of Coyote and of Raven, the tricksters.

We'll explore the Lamar Valley on snowshoes, moving slowly to watch for critters. The cocked head of a coyote hunts for mice beneath the snow; the raven's

arrow flight plunges to a carcass. As we watch, we'll delve into Coyote and Raven, blending reality with myth to better see the world. Coyote and Raven are tricksters, creators and destroyers, representing the best and the worst in human, animal, and divine nature. Through folktales and myths, we'll try to better understand them and the cultures that know them so well. The course will begin at 9:00 am on the first day and end mid-afternoon on the last day. *Participants need to provide their own snowshoe equipment—see page 7.*

YELLOWSTONE'S WOLVES: 3002
March 10-12, 2000 **\$145 (Member's fee \$135)**
Location: Lamar Buffalo Ranch **Limit: 15**
Instructor: James Halfpenny, Ph.D.

Listen closely ... wolves howl over Lamar Valley. Wolves have established territories and travel the valley preying on elk and raising their pups. Be part of the latest news. Join us for an update of wolf reintroduction and overview of wolf ecology. Lectures will cover basic taxonomy, biology, ecology, and management. Field sessions will cover identifying wolf tracks (versus dog, fox, and coyote), understanding wolf gaits, reading stories in their trails, and interpreting wolf ecology in the field. With luck we may explore a kill site. Early mornings, we'll even try to view wolves from the road, but all this will be done without interfering with the wolves themselves.

The course will begin at 7:30 pm on the first day, but come early for an informal potluck supper—perhaps a visit by a wolf biologist. We will enjoy evening lectures on Friday and Saturday. Bring field lunches and lots of trail food. *Fee includes \$15 for course materials.*

WILDLIFE OBSERVATION—WINTER: 3003
March 17-20, 2000 **\$160 (Member's fee \$150)**
Location: Lamar Buffalo Ranch **Limit: 15**
Instructor: Gene Ball

The end of winter offers its own set of wildlife viewing opportunities. Field observation will be the major goal and activity of this introduction to the snow-covered park. Methods of unobtrusive observation and the ethics of interaction with wildlife will be central themes. The schedule will be flexible to conform to that of the wildlife to be observed. Participants can expect morning and evening field trips, optional hiking or cross-country ski outings, and discussions of various wildlife topics, issues, and controversies. The opening session will cover selection and use of binoculars, spotting scopes, and tripods for quality wildlife observation. The course will begin at 1:00 pm on the first day and end at 1:00 pm on the last day.

Instructor Profiles

Elaine Anderson, Ph.D., (*The Evolution, Ecology, & Future of the Wolf Family; Bears: Bones, Signs, & Stories*) is a research associate in earth sciences at the Denver Museum of Natural History and co-author of *Pleistocene Mammals of North America*. She teaches comparative mammalian osteology at the museum and is writing a book on osteology. Research interests include fossil and recent carnivores, Pleistocene faunas, osteology, and biogeography.

Robert Anderson, Ph.D., (*Aquatic Insects of Yellowstone; Butterflies of Greater Yellowstone*) is an entomologist and professor of biological sciences at Idaho State University. He teaches courses in entomology, invertebrates, parasitology, and general zoology. He has published works on applied ecology and medical entomology and produced videos on crickets, insect collecting, and butterflies of Yellowstone and Grand Teton National Parks.

Gene Ball (*Wildlife Watching in Grizzly Country; Wildlife Observation-Spring; Wildlife Observation-Fall; Wildlife Observation-Winter*) was director of the Yellowstone Association and Institute from 1985-88. He now lives in Meeteetse, Wyoming, does free-lance projects for a variety of organizations throughout the West, and serves on the advisory council for the Yellowstone Grizzly Foundation.

Michael Bartley (*Day Hiking Yellowstone; Backpacking Seminars*) is a former field manager of the Yellowstone Institute. He is certified as a Master of the National Leave No Trace (LNT) program and has previously taught both summer and winter backcountry courses for the Institute. A graduate of the National Outdoor Leadership School, he has led numerous hikes in the Grand Canyon and Rocky Mountains. He combines a passion for wilderness with practical know-how in sharing his knowledge of the Yellowstone region.

Bob Berman (*Exploring the New Universe*) has authored over a thousand articles on popular astronomy. His full page *Night Watchman* column has appeared in every issue of *Discover* magazine since 1990, his articles are published regularly in *Astronomy Magazine*, and he writes the astronomy section for the *Old Farmers Almanac*. Berman is director of two observatories, author of *Secrets of the Night Sky* (Harper Collins 1995), *Cosmic Adventure* (Morrow, 1998), and writer/host of *SkyWindow* on Northeast Public Radio. In the past year he has appeared as a guest on the David Letterman Show, the Today Show, and CBS This Morning.

Norman A. Bishop (*Wolf Watching in Yellowstone*) retired from Yellowstone in 1997. From 1985 to 1997,

he gave 400 talks on wolves and their recovery. He assisted and led wolf seminars for the Yellowstone Association Institute and for Teton Science School. For his wolf work, Norm received the National Parks and Conservation Association's 1988 Stephen T. Mather Award, the Greater Yellowstone Coalition's 1991 Stewardship Award, the Wolf Education and Research Center's 1996 Alpha Award, and a Department of Interior Meritorious Service Award.

Rich Bloom, M.A., (*Shoshone Lake Sea Kayaking*) is a 20 year resident of the Greater Yellowstone Region. He has degrees in ecology and experiential environmental education and serves as administrator at Teton Science School. During the past 25 years he has instructed over 6,000 students in field natural science and outdoor skills in the United States, Canada, Mexico, Chile, India, Nepal, and Tibet. He has directed programs for Teton Science School, Keystone Science School, National Outdoor Leadership School (NOLS), Yosemite Institute and Outward Bound.

Deborah Milton Bond, Ph.D., (*Responding to the Elements-Painting*) left her psychotherapy practice in 1990 to devote more time to teaching creativity in outdoor settings and becoming a writer. In 1992, it became clear that she was really meant to be a water-color painter. She's had several one-woman shows, been published in a number of magazines and was juried into a national landscape exhibition last spring. Together, she and Dorothy Hinshaw Patent, Ph.D., have taught a writing course, *Finding Your Own Voice*, at the Yellowstone Association Institute for six years.

Thomas D. Brock, Ph.D., (*Life at High Temperatures*) is E. B. Fred Professor of Natural Sciences Emeritus at the University of Wisconsin-Madison. He has studied Yellowstone thermal organisms for over 30 years and has written over 300 research papers, as well as numerous books. His interests include microbial ecology, geomicrobiology, biotechnology, and the history of science.

Richard Clark, Ph.D., (*Horsepacking Seminars*) is a native of the Yellowstone country who has outfitted and guided professionally for over 37 years in the Yellowstone area. He is currently director of the Professional Guide Institute (PGI) at Western Montana College at Dillon. The PGI offers natural and cultural history instruction to professional guides. Dick's formal training is in botany, natural history, and ecology. He owns and manages Bleu Sky Pack Station, Inc., a concession of Yellowstone National Park.

Marla Darby, M.S., (*Day Hiking Yellowstone; Backpacking Seminars*) works as a personal trainer in Boise.

Instructor Profiles

Marla is certified as a Master of the National LNT program and as an Emergency Medical Technician. She is an instructor for the National Outdoor Leadership School and has previously taught backcountry courses for the Outdoor Adventure Program at Colorado State University and for the Yellowstone Association Institute. Marla's love and knowledge of the mountain environment make her an effective outdoor educator.

Jeanne M. Eder, M.A., (*Smoking Mountains-Indians & Yellowstone Park*) is an enrolled member of the Dakota Sioux tribe from the Fort Peck Reservation in Montana. She has a master's degree in history from Montana State University and is a Ph.D. candidate at Washington State University. She works as multicultural coordinator at Western Montana College in Dillon.

William C. Edwards, Ph.D., (*Pronghorn Antelope in the Greater Yellowstone Ecosystem*) is a retired professor who lives in the Yellowstone area north of Gardiner, Montana. He has worked as a seasonal ranger-naturalist in Grand Teton and Rocky Mountain National Parks, served ten years in the Wyoming State Legislature, and taught extensively at the high school, junior college, and university levels. He has degrees in biology, conservation and wildlife, and plant ecology. He currently serves as an instructor at the Teton Science School and a volunteer in Yellowstone.

Terry Enk, Ph.D., (*Plant Eaters of Yellowstone*) teaches biology, ecology, anatomy, and physiology at Montana State University in Bozeman, Montana. His interests lie in conducting research and improving our understanding of the biology of rare wildlife species. He recently completed a research project on bighorn sheep and mountain lions that was featured in a National Geographic documentary.

Duncan Foley, Ph.D., (*Geysers, Mudpots, & Hot Springs*) is chair of the Department of Geosciences at Pacific Lutheran University in Tacoma, Washington. He has worked throughout the western United States and Guatemala on volcanoes and geothermal systems and has taught Institute classes for the past 20 years.

David Fountain, Ph.D., (*Geology of the Yellowstone Country; Fire & Ice-Yellowstone's Last Two Million Years*) is a professor of geology and geophysics at the University of Wyoming. He has taught field courses in Yellowstone and Glacier National Parks, served as co-instructor in a National Science Foundation course for science teachers, and was editor of the journal *Geology* for the Geological Society of America. His research interests are crustal evolution and structure, which he has studied in Europe, Canada, the northwest Pacific Ocean, and the Rockies.

Jim Garry, M.S., (*Yellowstone Geyser Gazing; Hot Springs, History, & Habitat-A Closer Look at Mammoth; Spring Returns to Yellowstone; Bears-Folklore & Biology; Bears: Bones, Signs, & Stories; Family Days in the Lamar-the Wolves Come Home; Along the Yellowstone River with Lewis & Clark; Mountain Folklore-A Llama Trek; The Bison of Yellowstone; Family Days in the Thermal Basins; Coyote & Raven-Fact & Folklore*) is both a naturalist and a folklorist, with degrees in natural history and environmental communications from University of Michigan. Originally from Texas, Jim has spent a good part of the last 30 years in the Yellowstone Ecosystem. Since 1980 he has directed the Great Plains Lore and Natural History, Inc. His research and teaching focus on the overlap of natural history, history, folklore, and myth. Jim is the author of *This Ol' Drought Ain't Broke Us Yet* and *The First Liar Never Has a Chance*.

Pam Gontz (*Exploring Yellowstone's Bird Life*) is the manager of the Yellowstone Association Institute and has spent the last 12 summers studying plant and animal life in the Greater Yellowstone Ecosystem. She has participated in breeding bird surveys, breeding bird census plots, and Christmas bird counts. She has taught beginning and intermediate bird courses at the Clark Fork Field Institute and has given talks on birds at local colleges and Audubon societies.

James Halfpenny, Ph.D., (*Mammal Tracking: Interpreting Tracks, Scat, & Other Sign; The Evolution, Ecology, & Future of the Wolf Family; Bears: Bones, Signs, & Stories; Map, Compass, & Stars Across Yellowstone; Snow Tracking; How Mammals Survive Winter; Yellowstone's Wolves*) is an ecologist and educator. Most recently he was coordinator of the Long-Term Ecological and Alpine Research at the University of Colorado. He travels North America studying bears, wolves, and animal sign. He has taught since 1961 and wrote *A Field Guide to Tracking in North America, Winter: An Ecological Handbook*, and *Discovering Yellowstone Wolves*.

Michael J. Halverson, M.A., (*Watercolor Painting-Visions Past & Present*) has a degree in art education from Brigham Young University. He has been coming to Yellowstone and the Tetons for more than 20 years to gather research material for his artwork. He works in oil, watercolor, acrylic as well as etching and photography. In recent years he has focused mostly on watercolor in field applications. Michael has taught art and photography in Utah since 1985 on the secondary level along with private instruction. His work has been included in various local and national exhibits including The National Audubon Exhibit of Alaskan Wildlife,

Instructor Profiles

The Pacific Rim Wildlife Exhibition, and The Yellowstone Ultima Symposium Exhibit.

Hannah Hinchman (*A Trail Through Leaves-The Art of the Field Journal*) lives in Augusta, Montana, with four cats, two horses, and a meadow vole. She's been keeping illuminated journals for 28 years, and is the author of 2 books on the subject: *A Trail Through Leaves: the Journal as a Path to Place* and *A Life in Hand: Creating the Illuminated Journal* (new edition available in January 1999). She's at work on a new book about her land along the Rocky Mountain Front.

Bill Hopkins (*Exploring the Yellowstone Landscape on Skis*) works for the National Park Service in Yellowstone, coordinating cooperative work groups for backcountry trail work. He is an avid cross-country skier, enjoying the full range of the sport from racing to ski mountaineering. He has completed major ski traverses and descents throughout North America, including extensive winter exploration of the Yellowstone plateau. In addition he has taught, guided, and coached skiing in Washington State, Montana, Wyoming, and New Zealand.

Robyn Klein, Herbalist A.H.G., (*Wild Edible Plants & Medicinal Herbs*) is a graduate of both Dominion Herbal College and the Southwest School of Botanical Medicine. She has taught herbalism classes since 1982. Robyn is the editor of *Robyn's Recommended Reading* and director of the Sweetgrass School of Herbalism in Bozeman, Montana. She is a member of the American Herbalists Guild, the American Herb Association, the Herb Research Foundation, the Great Northern Botanical Association, and the Montana Native Plant Society.

Edward D. Koch, M.S., (*Amphibians & Reptiles of the Greater Yellowstone Ecosystem*) is an endangered species biologist with the U.S. Fish and Wildlife Service in Boise, Idaho. Ted has worked in the Greater Yellowstone Ecosystem for more than ten years.

Karen Krieger (*Women & Yellowstone-A Historical Perspective*) has a degree in American studies and works for the Utah Department of Natural Resources directing cultural programs in Utah's state parks. She has worked in museums (including the Buffalo Bill Historical Center in Cody, Wyoming) and historical sites, published articles on women in wilderness, led outdoor trips for women, and conducted nature hikes for children and adults.

Rick LoBello, M.S., (*Discovering the Wonders of Yellowstone's Geyser Basins*) has a degree in biology and worked as a Yellowstone Park Naturalist during the

late 1970s. Currently he is the executive director of the Carlsbad Caverns Guadalupe Mountains Association. He is the former director of the Big Bend Natural History Association and co-founder of the Mexican Wolf Coalition of Texas. Over the past ten years, as a member of Rotary International, Rick has helped to rekindle the dream of an International Peace Park with Mexico in the Big Bend region of Texas.

Clare Long, M.S., (*Family Adventures in Yellowstone*) is the head naturalist for the Appalachian Mountain Club. She holds a master's degree in environmental science from Antioch University and has been leading family workshops, Elderhostel courses, and other environmental education programs for more than 15 years. Clare is a regional board member for the National Association for Interpretation and the White Mountains Interpretive Association. She has hiked throughout the Yellowstone region and looks forward to spending more time sharing the wonders of the area with other visitors.

Dan Mahony, M.S. (*Yellowstone's Fisheries Beyond Angling*) is the senior fishery biologist for the National Park Service (NPS) in Yellowstone. This year will be his fifteenth year in the park, the first dozen of which were spent managing the park fisheries with the U.S. Fish & Wildlife Service. Long-term studies have included aquatic habitat inventories, population assessments, aquatic invertebrate distributions, and potential solutions to some of the park's existing aquatic habitat deficiencies. Much additional expertise will be contributed by the NPS Aquatic Resources Unit: **Jim Ruzyski, Ph.D.**, student and lake trout biologist; **Jeff Lutch, M.S.**, lead biologist technician and stream ecology expert; and **Brian Ertel, B.A.**, biological technician (gill netting and electrofishing).

John Martin, M.S., (*Yellowstone Birds of Prey; Introduction to Yellowstone's Birds*) is the supervisory ecologist and chief of natural and cultural resources at U.S. Army Dugway Proving Ground, Utah. His degree in wildlife and range resources focused on northern harrier ecology and habitat use. He is involved in the long-term monitoring of Neotropical migratory songbird and raptor populations, including satellite tracking of Swainson's and ferruginous hawks. He has authored numerous articles on raptors and recently wrote about sparrows for the *Birds of North America*. John is assisted by his wife, Marsha.

Terry McEneaney (*Learning Birds by Sound*) is the staff ornithologist for Yellowstone National Park. He has taught field ornithology courses for the Nature Conservancy in Montana and is the author of *Birds of*

Instructor Profiles

Winter Ecology & Survival) works as a naturalist guide and educator at Lone Mountain Guest Ranch in Big Sky, Montana. Before coming to Big Sky in 1985, Leslie worked with the National Park Service in Yellowstone and Glacier. She is a Professional Ski Instructors of America (PSIA) level III guide and instructor. Leslie has attended numerous Yellowstone Association Institute courses and enjoys introducing people to the wonders of life beyond the pavement.

Don Streubel, D.A., (*Mammals Great & Small*) holds a doctor of arts degree in biology and is a professor of biology at Idaho State University. He is the author of *Small Mammals of the Yellowstone Ecosystem* and was director of the Yellowstone Institute from 1989-1991.

David Strong, Ph.D., (*Moving Nature-Environmental Ethics & Yellowstone*) is a professor of philosophy at Rocky Mountain College, where he teaches environmental ethics and the philosophy of technology and culture. A native of Livingston, Montana, he has worked on trail crews in Yellowstone, has hiked nearly the length of the Absaroka Mountains, and has been a lifelong activist with regional environmental issues. He uses philosophy to examine local and global environmental issues, as illustrated in his book, *Crazy Mountains: Learning from Wilderness to Weigh Technology*.

Dave Thurlow (*Weather Cycles in the Big Sky*) is the director of the Mount Washington Observatory's Weather Discovery Center in North Conway, New Hampshire. He is also a writer, host, and executive producer for The Weather Notebook, heard nationwide on public radio stations. Trained as a meteorologist, Dave has also spent many years as a naturalist for the Massachusetts Audubon Society and the Appalachian Mountain Club. Dave has written articles for several outdoor publications, including *Weatherwise* magazine.

Tom Watson (*Day Hiking in Wonderland; Hiking Through Time-Day Hikes into the Geological Past*) has spent the last 19 summers studying geology and ecology in the Greater Yellowstone Ecosystem, as a Yellowstone Association Institute instructor, as presenter for the National Wildlife Federation Summit programs, and as guide for Off the Beaten Path. During the school year he teaches biology and geology.

Jennifer Whipple, M.A., (*Plants of Yellowstone*) has lived in Yellowstone for 20 years and is currently the botanist for Yellowstone National Park. While pursuing a master's degree, she taught both plant taxonomy and grass identification labs at Humboldt State University. She is former president of the Wyoming Native Plant Society and co-author of the *Wyoming Rare Plant Field Guide*.

Don White, Ph.D., (*Carnivores of the Greater Yellowstone Ecosystem*) is an assistant professor in the Department of Biology at Drury College, Springfield, Missouri. He is currently conducting research in wildlife disease and grizzly bear reproductive physiology, and is developing non-intrusive methods to monitor carnivore populations. He publishes technical articles regularly in peer-reviewed research journals. He has also written several popular articles on wildlife-related topics and a teacher's manual for a bear video.

Lee H. Whittlesey, J.D., (*Yellowstone's Northern Roadside History; Yellowstone's Southern Roadside History*) is historical archivist and acting historian for Yellowstone National Park. He spent 15 years writing *Wonderland Nomenclature: A History of the Place Names of Yellowstone National Park*, and its sister version, *Yellowstone Place Names*. Whittlesey is also the author of *Death in Yellowstone: Accidents and Foolhardiness in the World's First National Park* and *Everts: Lost in Yellowstone*. He is widely published in the early history of interpretation and transportation in the park and has a law degree from the University of Oklahoma.

Wilderness Medicine Institute (*Wilderness First Aid; Wilderness First Responder*) Wilderness Medicine Institute (WMI) and its sister school, Stonehearth Open Learning Opportunities (SOLO), have been leaders in wilderness medicine education since 1976. The WMI staff comes from a wide range of medical and professional backgrounds; many have worked as nurses or EMTs, some have served on mountain rescue teams, and others have instructed for National Outdoor Leadership School (NOLS) and Outward Bound. WMI provides all levels of wilderness medicine training for state and federal agencies, colleges, and outdoor programs throughout the West.

Eleanor Williams, M.L.A., (*Historical Field Journals*) the chief landscape architect for Yellowstone Park, has kept journals of landscape projects, filled with observations for 13 years. Her work involves the landscape architectural coordination for the park, including standards for design and construction. Landscape design involves ecological, sculptural aspects of landscape, and the influence of artistic endeavors that shape our connections to the land. Art is often the foundation of early landscape ideas and developments.

Scott Wood (*Snowshoeing in Yellowstone*) has 23 years' experience in outdoor education and is an instructor at Ricks College. He is a certified Red Cross canoeing instructor, a certified backcountry ski guide and has extensive avalanche experience.

Would you like to help the Yellowstone Association Institute?

Each year, we ask friends of the Institute to show their support by providing donations for a special project at the Lamar Buffalo Ranch field campus. This added financial assistance allows us to improve the facility while maintaining reasonable rates for courses.

In 1999, we are seeking donations to upgrade our resource library for students and instructors. The current library is an informal collection that has not been maintained or expanded in recent years. We intend to add a full range of books and audio-visual materials that relate to the natural and cultural history of the Yellowstone ecosystem and can be used for classes. We will also install new shelving to accommodate the expanded collection. Materials will be selected by the Institute Manager and purchased by our bookstore staff to obtain the best discounts. We anticipate spending a total of \$3,000 for books, audio-visual materials, and shelving.

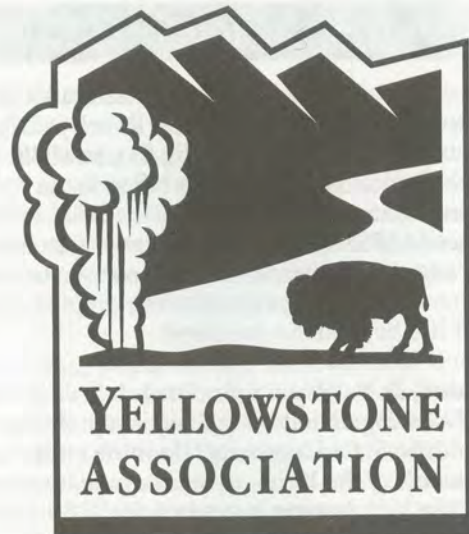
Donations to this fund may be sent to the Institute Manager at:

Yellowstone Association
P.O. Box 117
Yellowstone National Park, WY 82190

Please make your check payable to the "Yellowstone Association" and let us know that this is a contribution for the Institute library. Your tax-deductible gift will be gratefully received and immediately acknowledged. *Your support is very much appreciated.*

Unrestricted Program Support and Other Donations

Unrestricted donations will be credited to the Yellowstone Association Institute budget and used to support educational programs at Yellowstone. Donations for any other specific purpose are always welcome, and we will be glad to talk with you about current needs.



The Yellowstone Association

The Yellowstone Association Institute is one of many outstanding educational programs and projects sponsored by the non-profit Yellowstone Association for Natural Science, History & Education, Inc., the National Park Service's primary partner for education in Yellowstone National Park.

Each year, the Yellowstone Association provides substantial funding for in-park wayside and museum exhibits, interpretive programs, scientific conferences, research, and educational publications. All the activities of the Yellowstone Association are dedicated to developing public appreciation for and awareness of the beauty and value of Yellowstone's unique natural and cultural treasures. This appreciation of the value of natural areas is critical to the preservation of Yellowstone and wilderness areas throughout the world.

Would you like to join us? Thousands of people are now part of the Yellowstone Association's efforts to educate others about the value of Yellowstone in an increasingly crowded world. In addition to helping Yellowstone, members receive an informative newsletter throughout the year and discounts on Institute classes and Association products. See page 47 of this catalog for information on how you can help Yellowstone as a member of the Yellowstone Association.

Are you getting the benefits of membership in the Yellowstone Association?

The Yellowstone Association, sponsor of the Yellowstone Association Institute, was founded to serve Yellowstone National Park and its visitors through support of educational, scientific, and historic programs. When you become a member of the Yellowstone Association you will have a role in a non-profit, educational project which began in 1933. For more information on projects sponsored by the Association see page 46 of this catalog.

To acknowledge your interest and support as a member, you will be entitled to the following benefits:

- A **family membership** (covering donor, spouse, and children through age 20)
- **Discounts** on Yellowstone Association Institute field courses and products
- The opportunity to register for Yellowstone Association Institute courses **one week before** non-members
- A **15% discount** on items sold by the Yellowstone Association (in visitor centers or by mail)
- Informative **quarterly newsletters** and the National Park Service's **quarterly Yellowstone newspaper**
- Invitations to special **members' activities**
- Credit for a **tax-deductible** gift (to the extent allowable by law)
- **Discounts** at many association bookstores in visitor centers at other national parks

You may be assured that your membership gift will be gratefully received, immediately acknowledged, and efficiently used.

To learn more or join/renew online:
www.YellowstoneAssociation.org



Yes!

**I want to help to educate people
about the natural wonders of
Yellowstone.**

To receive all the benefits of membership, complete and mail this form with your dues to: The Yellowstone Association, P.O. Box 117, Yellowstone National Park, WY 82190 (or leave at any visitor center sales desk in Yellowstone).

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Give name as you prefer for Association records:

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(We will not sell or otherwise distribute your phone number, mailing address or e-mail address.)

Memberships are family memberships, including your spouse and children through age 20. Please identify those for whom membership cards are desired:

Annual Dues:

Associate \$ 25 ☐

Patron \$250 ☐

Contributing \$ 50 ☐

Sponsor \$500 ☐

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YI-99

Clip and mail to the address listed above today!



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Institute office: 307-344-2294
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The next catalog of courses will be
available in mid-January, 2000.

Duplicate this form for multiple registrations if necessary

'99/00 REGISTRATION FORM

[Note: Refund Policy on page 4]

Name(s) _____ ☐ Male ☐ Female ☐ Check here if you're *new* to the Institute
Address _____ Please list names & ages of children for family classes
City _____ State _____ Wk Phone _____ Hm Phone _____
Zip _____ E-mail _____
Where can you be reached one month prior to the course? Address _____ Phone _____
How did you find out about the Yellowstone Association Institute? _____
☐ Check here if you are a current member of the Yellowstone Association or are joining now. (See pg 47)

Course Title and Number	Dates	Tuition
_____	_____	_____
_____	_____	_____

Lodging:

- ☐ I want to stay at the Institute cabins at Lamar the following nights at \$15/night. Dates _____
☐ My class does not meet at the Lamar facility. See course descriptions for recommended lodging or contact the registrar.
☐ I will make my own lodging or camping arrangements.

Total tuition fee(s) _____
Cabin fee(s) at \$15 _____
per person per night _____

Membership (optional) _____
☐ joining now
☐ renewal

Total Enclosed _____

Payment by: ☐ Check ☐ MasterCard
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Number _____

Expiration Date _____

Signature _____

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P.O. Box 117
Yellowstone Park, WY 82190

Release and Assumption of Risk

(Please return original, signed Release)

I am aware that during the courses or activities that I am participating in under the arrangements of the YELLOWSTONE ASSOCIATION and its agents or associates, certain risks and dangers may occur, including but not limited to the hazards of traveling in rough terrain, water, and thermal areas; accident or illness in areas remote from medical facilities; the forces of nature; and travel by automobile, bus, air or other conveyance. In consideration of and as part payment for the right to participate in such courses or other activities, I have and do hereby assume the risks and all legal responsibility for injury to myself or loss of my property resulting from participation in these courses or other activities, and do hereby hold the YELLOWSTONE ASSOCIATION harmless from any and all liability, actions, causes of action, debts, claims, and demands which I now have or which may arise in connection with my participation in these courses or other activities. The terms hereof shall serve as release and assumption of risk for my heirs, personal representatives, executors, administrators, and for all members of my family. I affirm that my general health is good and that I am not under a doctor's care for any condition which will endanger my health or the health of other participants. In case of injury and/or illness, I will bear the cost of any evacuation procedures such as ambulance, helicopter, rescue team, and professional medical care. I understand that I must provide my own health and accident insurance. My participation in the Yellowstone Association Institute course(s) and attendant activities, including photographs for future publicity in which I may appear, is entirely voluntary.

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Date _____ Signature _____

(SIGNATURES FOR ALL PARTICIPANTS REQUIRED)

If under 21 years of age, parent or guardian must sign—give age(s).