

22nd Annual

The
Yellowstone
Institute

Phillips / Rees
YI Collection

1997-98 *winter*

Field Courses ♦ Nature Study Vacations



YELLOWSTONE
125 YEARS OF
AMERICA'S BEST IDEA

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

<http://www.nps.gov/yell/yellinst.htm>

Cover photo by Pam Gontz
 Artwork by Peg Steunenberg
 Catalog layout by Pam Gontz

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

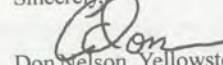
Dear Student,

This year marks the 125th anniversary of Yellowstone Park, the world's first park of its kind: a *national* park. When founded, it was to be a place where we would try to conduct ourselves differently than elsewhere, demonstrating the capacity to care for a place; ultimately being a place left unaltered, carrying on in ways it had throughout time.

This revolutionary philosophy resulted in what we have today: a large, wild landscape with most pieces of the ecological puzzle still in place. Originally set aside for its geological uniqueness, 125 years later the picture in the puzzle is infinitely more complex, containing values unfathomable in those earlier times. As a result of the ecological simplification we've imposed on much of the rest of America, the relative richness and diversity that remains in Yellowstone Park and its surrounding ecosystem has grown enormously in value and importance.

Join us in celebrating the natural diversity of Yellowstone and the proven ability to conduct ourselves differently. It is a hopeful sign.

Sincerely,



Don Nelson, Yellowstone Institute Director

The Yellowstone Association

The Yellowstone 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 of 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 39 of this catalog for information on how you can help Yellowstone as a member of the Yellowstone Association.

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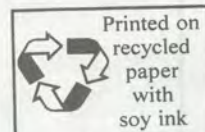
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Calendar of Courses

March 1997

- * Mar 7-9 301 Yellowstone's Wolves
- * Mar 14-16 302 Yellowstone's Wolves

May-June 1997

- May 27-30 601 ✓ Mammal Tracking
- May 27-30 602 Wildlife Observation—Spring
- * May 30-Jun 1 603 Learning Birds by Sound
- * May 31-Jun 1 604 Action in Lamar—Introduction to Field Journals
- * > June 6-8 605 Exploring Yellowstone's Bird Life
- June 6-9 606 Grizzly Bear Ecology & Management
- > June 9-11 607 ✓ Introduction to Yellowstone's Birds
- June 10-12 608 ✓ Bears—Folklore & Biology
- > June 12-14 609 ✓ Moving Nature—Environmental Ethics & Yellowstone
- > June 13-14 610 The Bison of Yellowstone
- > June 15-17 611 Nez Perce of Yellowstone—1877
- June 15-19 612 ✓ Mammals Great & Small
- June 18-20 613 ✓ The Evolution, Ecology & Future of the Wolf Family
- June 20-22 614 ✓ Wild Edible Plants & Medicinal Herbs
- June 20-22 615 The Wolf's Return—Mythology to Recovery
- > June 21-23 616 Family Days in the Lamar—the Wolves Come Home
- > June 22-25 617 ✓ Yellowstone Park & the Fur Trade
- June 23-26 618 ✓ Bears: Bones, Signs, & Stories
- June 23-27 619 Lakes of Yellowstone by Canoe
- > June 23-27 620 Participate in Yellowstone Archeology
- > June 27-28 621 Early Exploration in Yellowstone
- June 27-30 622 A Trail Through Leaves—the Art of the Field Journal
- June 29-30 623 Wars & Words Over Wildlands
- > June 30-Jul 4 624 Participate in Yellowstone Archeology

July 1997

- July 1-3 701 Bats of Yellowstone Park & Vicinity
- July 1-3 702 ✓ Fire, Ice, & Fossil Forests
- July 4-6 703 ✓ Yellowstone Birds of Prey
- > July 5-7 704 Fossils of Yellowstone
- July 7-8 705 ✓ Aquatic Insects of Yellowstone
- July 7-9 706 Family Horsepacking—Doing Things Together
- > July 7-11 707 Participate in Yellowstone Archeology
- July 8-11 708 Photographing Nature in Ylstrn #1
- July 9-11 709 ✓ Butterflies of Greater Yellowstone
- * July 12-13 710 Women & Yellowstone
- July 12-14 711 Exploring the Yellowstone Ecosystem
- July 13-17 712 Photographing Nature in Ylstrn #2
- July 14-17 713 ✓ Mammal Tracking
- July 14-18 714 Horsepacking: Wildland Heritage
- > July 14-18 715 Participate in Yellowstone Archeology
- July 15-17 716 ✓ Headwater Watershed Ecology
- July 18-19 717 Wildflowers of Yellowstone
- July 18-20 718 Yellowstone Place Names
- July 18-20 719 ✓ Geysers, Mudpots, & Hot Springs
- July 20-24 720 ✓ Wildflowers Llama Trek
- July 21-23 721 ✓ Geysers, Mudpots, & Hot Springs

July (cont.) 1997

- > July 21-25 722 Backpacking Yellowstone—The Gallatin Region (3rd of a Series)
- July 22-24 723 Wildflower Art
- > July 23-25 724 Family Days in Yellowstone
- * July 25-27 725 ✓ Alpine Wildflowers
- > July 26-29 726 Folk & the High Alpine (Llama Trek)
- July 26-30 727 Observing Ylstrn with the Artist's Eye
- > July 28-30 728 Yellowstone's Roadside History
- July 28-30 729 Backpacking in Grizzly Country
- July 28-Aug 1 730 Horsepacking: The Nez Perce Trail—Traditional Route, Upper Lamar
- > July 31-Aug 1 731 Simply Stunning Scenic Photography

August 1997

- Aug 1-3 801 Fly Fishing—Less Experienced
- * Aug 2-3 802 ✓ Ecosystem Geology—Land Skills for Survival
- Aug 4-7 803 ✓ Life at the Extremes
- Aug 4-8 804 ✓ Carnivores of the Greater Yellowstone Ecosystem
- Aug 4-8 805 Backpacking the Beartooths—The "Leave No Trace" Way
- > Aug 4-8 806 Horsepacking: Gustavus C. Doane Memorial Ride—Snake River Country
- Aug 5-7 807 Family Days in the Thermal Basins
- Aug 8-10 808 Fly Fishing—More Experienced
- * Aug 9-10 809 ✓ Episodic History of Yellowstone Lake
- Aug 10-14 810 Horsepacking: Trapper Trails
- Aug 10-14 811 Finding Your Own Voice—A Wilderness Writing Experience
- Aug 11-15 812 ✓ Geology of the Yellowstone Country
- Aug 14-18 813 Horsepacking: Washburn Expedition—Yellowstone & Heart Lakes
- > Aug 18-20 814 The Living Stream
- Aug 29-Sept 1 815 Autumn Canoeing in Yellowstone
- > Aug 30-Sept 1 816 ✓ Wild Edible Plants & Medicinal Herbs

September 1997

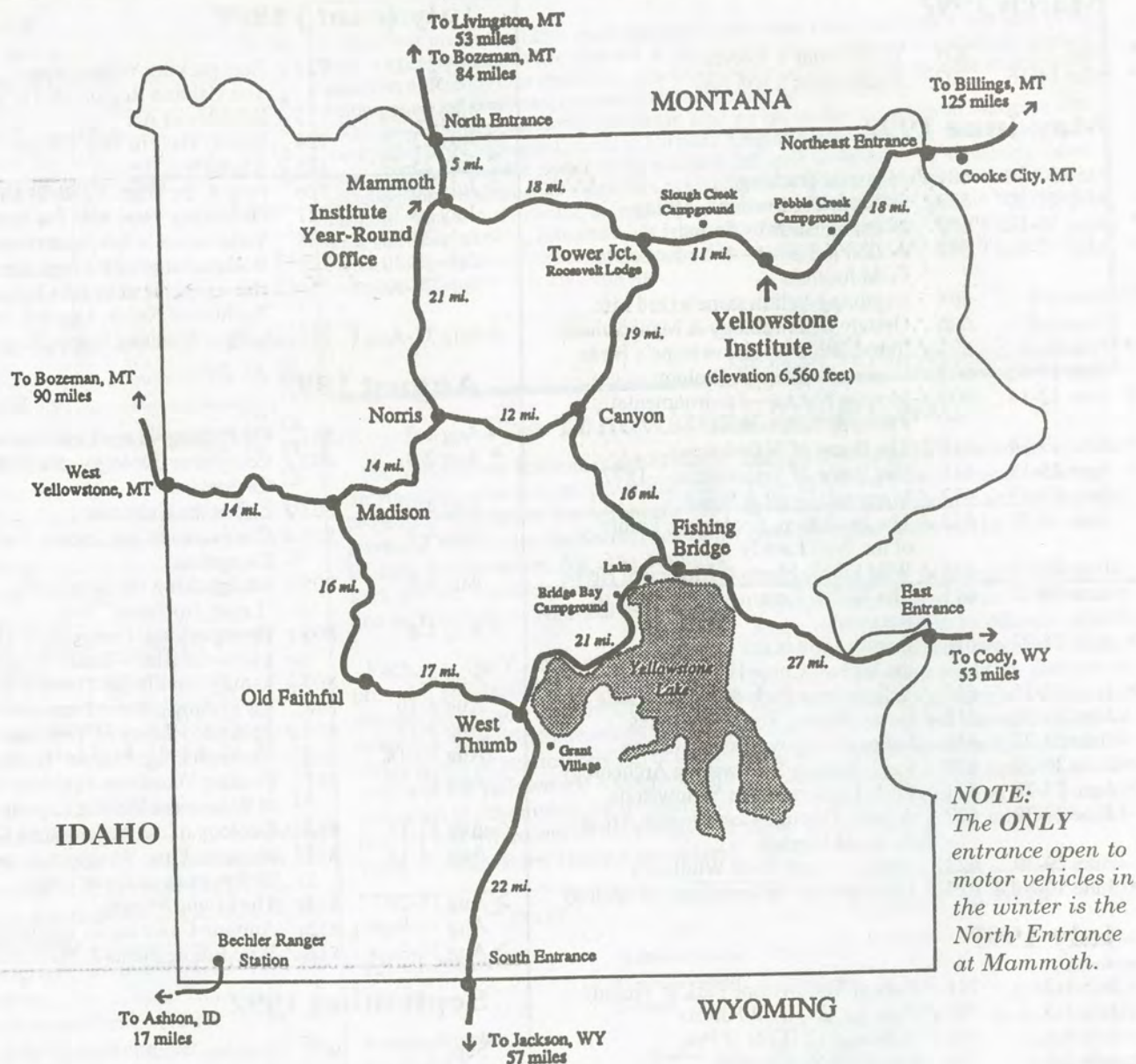
- Sept 8-12 901 Autumn Wildlife Photography
- Sept 10-14 902 Horsepacking: The Nez Perce Trail—Mirror Plateau
- Sept 15-17 903 Angels from Echinus—Exploring the Mysteries of Norris Geyser Basin
- Sept 17-20 904 Wildlife Observation—Fall
- Sept 19-21 905 Fly Fishing in the Fall
- Sept 24-27 906 Grand Teton Photography

Winter 1998

- Jan 9-12 101 Winter Wildlife & Nature Photography
- * Jan 24-25 102 How Mammals Survive Winter
- Jan 30-Feb 1 103 The Tradition of Winter Storytelling
- > Feb 5-8 201 Exploring the Yellowstone Landscape on Skis
- Feb 13-16 202 ✓ Yellowstone's Winter World
- > Feb 20-22 203 Winter Ecology & Survival

- > denotes a *New* class
- * denotes a weekend class (may begin on Friday evening)
- ✓ denotes classes that are available for university credit

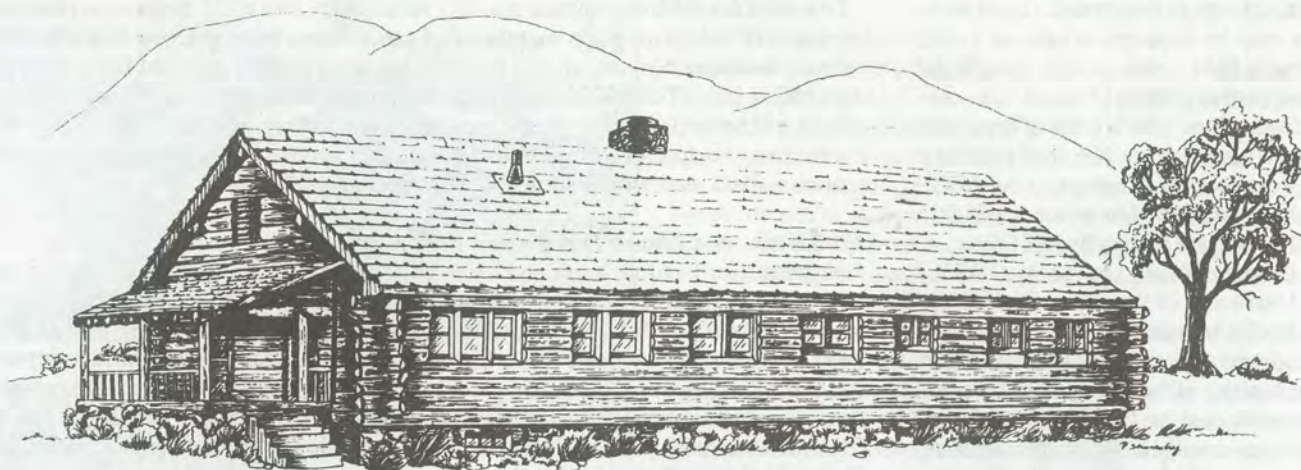
TRAVEL INFORMATION & DIRECTORY



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

Plan on extra driving time in the park. The speed limit is 45 mph.

GENERAL INFORMATION



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

Tuition

Unless otherwise specified, the tuition charge does not include lodging, meals, books, course materials, transportation, or university credit fees.

There is a discount for current members of the Yellowstone Association or those who join when they enroll.

Registration

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

Most courses are limited to 10-15 students. Early registration is advised. Reservations can be made by phone.

Location

Courses are held at various locations within the Yellowstone ecosystem. Most are conducted at the Institute facility known as the Buffalo Ranch. It is a historic Park Service facility located in the Lamar Valley between the Northeast Entrance and Tower Junction. (See map on previous page.) Course locations accompany each description.

Transportation

Students must arrange their own transportation to and from Yellowstone and to the location where class begins. Where appropriate, Institute vehicles will be provided for field trips. Car pooling may be necessary in some cases.

Cabins

There are twelve new and heated multiple-occupancy log cabins at the Institute. Most have two or three single beds. They have no plumbing or electrical outlets, but do have reading lights. Students must bring a pillow and warm sleeping bag. The fee is \$12 per person per night. Cabin rental for family members of students may be allowed if space is available.

Other Lodging and Camping

For those who choose not to stay at the Institute, other nearby sites in the park include summer-use campgrounds at Pebble Creek (9 miles east) and Slough Creek (7 miles west). Lodging within the park may be reserved through AmFac Parks & Resorts, including Mammoth Hotel (29 miles west), Roosevelt Lodge (11 miles west at Tower Junction), and Canyon Lodge (30 miles southwest). Motels are available outside the park in Montana at Silver Gate (19 miles east) and Cooke City (23 miles east).

Pets, RV's, and Camping

Due to health and safety considerations, students are not allowed to bring pets to the Lamar facility. Park Service regulations prohibit camping and recreational vehicle use on the grounds at the Yellowstone Institute facility.

Children

Most courses and the Institute facilities are designed for adults. Therefore, children are not encouraged to attend—with the exception of the children's and family classes.

Classroom and Kitchen Facility

The Institute's log building is heated and has two classrooms, three bathrooms with showers, a fully equipped kitchen where people do their own cooking, and an eating area. There are also picnic tables and a back porch overlooking Lamar Valley.

Food and Preparation

Unless otherwise specified, students provide their own food. There are two stoves and three refrigerators, a microwave and food storage areas. Ample cooking and eating utensils and dishes are provided. Since space is limited and students share the cooking facilities, we ask that meals be kept fairly simple. The camaraderie of the community kitchen is one of the joys of the students.

Student Packet

At least four weeks before class begins, each student will be mailed detailed course information, suggested study materials if appropriate, plus a park entrance fee waiver.

GENERAL INFORMATION (cont.)

Academic Credit

Courses for which academic credit is available are so designated. Credit seekers may be required to take an exam, submit field notes, and/or complete a post-course project.

Institutions which offer undergraduate (U) or graduate (G) credit include: University of Montana, (U of MT), Montana State University (MSU), Idaho State University (ISU), Brigham Young University (BYU), University of Wyoming (U of WY), Rocky Mountain College (RMC).

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 \$70-\$95 per semester hour, payable by check only. Students may enroll through their own university for independent study.

Certification of course completion, listing the course title, hours of instruction and the nature of the course is available upon request at no extra charge.

Physical Condition

Students should be in good general health for Institute courses since most require at least some walking at higher elevations. Classes which involve backpacking, horsepacking, canoeing, or field work will be more demanding. Ask in advance if you have any questions on physical requirements.

Insurance and Liability

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

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 an easy day to "adjust" rather than risk excessive fatigue by beginning with a full, active day immediately. It is important to drink lots of fluids to prevent dehydration.

Weather

Much class time will be spent outdoors. Students should be prepared for a variety of mountain weather conditions and some cold temperatures. Please equip yourself for extremes.

Refund Policy

1997 Refund Policy (for all courses except horse and llama trips)—

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 start of course, unless your space can be filled. If we can fill your space a refund will be made less the course processing fee. Tuition and cancellation processing fees may be applied toward tuition for another course during the current calendar year on a space available basis. Cabin fees are 100% refundable.

1997 Horse and Llama Trip Refund Policy—

Payments for Institute horse and llama courses are fully refundable, less a \$35 per course processing fee (\$20 for Association members), if cancellation takes place **on or before April 1, 1997**. For cancellations made between **April 1, 1997 and May 1, 1997**, a refund will be made less a \$200 per person nonrefundable outfitter deposit and the \$35/\$20 course processing fee, unless your space can be filled. No refunds can be made for cancellations received after **May 1, 1997**, unless your space can be filled. If we can fill your space a refund will be made less the course processing fee. Tuition and cancellation processing fees may be applied toward tuition for another horse/llama trip during the current calendar year on a space available basis. Cabin fees are 100% refundable.

Important:

The Yellowstone 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. Prior to registration, we suggest you check with a travel agent regarding the best time to purchase travel insurance. *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.*

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.

Funding

The Yellowstone Institute is non-profit. Tuition fees cover only a portion of the Institute costs. Other funding comes primarily through membership contributions and other fund-raising activities of the Yellowstone Association, a non-profit, tax-exempt organization.

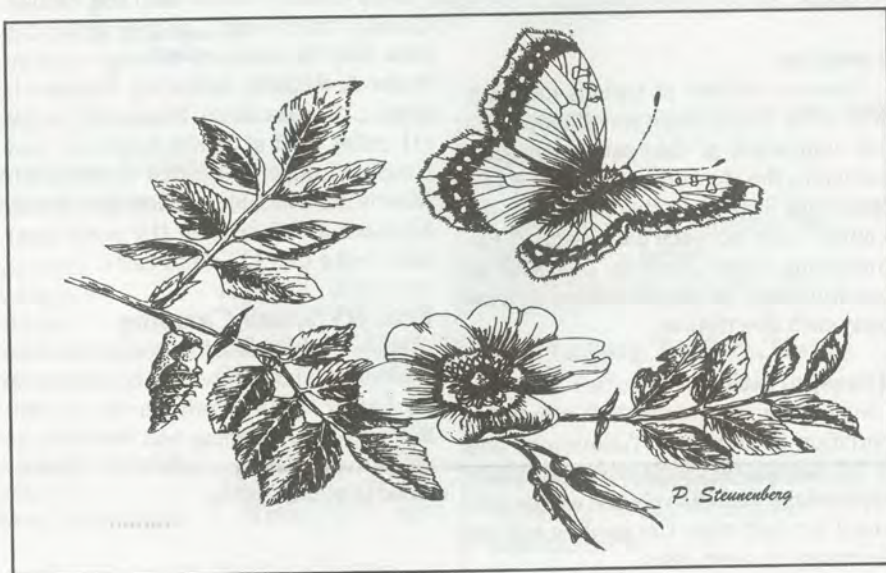




Photo by Pam Gontz

YELLOWSTONE'S WOLVES: 301 & 302

March 7-9, 1997: 301

March 14-16, 1997: 302

\$125 (Member's fee \$115)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: James Halfpenny, Ph.D.

Listen closely ... wolves howl over Lamar Valley! Three packs have been reintroduced, and more may be present by the time this class starts. Wolves have established territories and travel the valley preying on elk and raising their pups. Be part of the latest news. Join us at Lamar for a two-day update of the wolf reintroduction and overview of wolf ecology. Morning and evening lectures will cover basic taxonomy, biology, ecology, and management. Lectures will be supplemented by slides and videos shot during the reintroduction. Using tracking (Jim's favorite) as a conduit to learning, afternoon 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. We'll even try to view wolves from the road, but all this will be done without interfering with the wolves themselves.

Program starts at 7:30 pm, but come early for an informal, potluck, gossipy supper—perhaps a visit by a wolf biologist. There will be evening lectures on Friday and Saturday. Bring field lunches and lots of trail food as we will not waste daylight hours staying inside to eat. March conditions may mean you will need either cross-country skis or snowshoes for field sessions. We may ski a few miles each day over easy, rolling terrain. *Fee includes \$15 for course materials.*



Photo by Pam Gontz

MAMMAL TRACKING: INTERPRETING TRACKS, SCAT, & OTHER SIGN: 601 & 713

May 27-30: 601

July 14-17: 713

\$223 (Member's fee \$213)

Location: Lamar-Buffalo Ranch

Limit: 15

Credit available: U, 1 semester hour, U of MT, or 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 enrollees the joys of interpreting natural history from mammal sign. Emphasis is placed not on track identification, but on tracking as a process for understanding animal behavior.

Course content includes the role of natural history and ecology, keeping field notebooks, taxonomy, anatomy, terminology, measurements, track averaging, relative size, estimating track age, print identification, gait patterns, estimating speed, field techniques, finding clues, following trails, and teaching tracking. Slide lectures will provide access to Dr. Halfpenny's years of 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 meet at the Lamar facility 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 plus other course materials.*



Photo by Pam Gontz

WILDLIFE OBSERVATION—SPRING: 602

May 27-30

\$152 (Member's fee \$142)

Location: Lamar-Buffalo Ranch

Limit: 15

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 pre-summer 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, short midday hikes, and programs on various wildlife topics plus related issues and controversies.

The course will begin at 1:00 pm on May 27 and run to noon on May 30. The opening session will cover selection and use of binoculars, spotting scopes, and tripods for quality wildlife observation.

LEARNING BIRDS BY SOUND: 603

May 30-June 1

\$125 (Member's fee \$115)

Location: Lamar-Buffalo Ranch

Limit: 8

Instructor: Terry McEneaney

One of the most pleasant features of birdlife is the sounds they make. The most noticeable sounds in the spring are the songs of the perching birds; however, 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, students in this class will learn how to identify the sounds of at least 50 species of birds. People will learn sounds to different degrees, depending on their ability to hear high and low pitches. Be aware, this course is not easy and requires tremendous concentration. Field trips will be the major emphasis with a chance for individual skills development. 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. Class will begin on Friday, May 30, at 7:30 pm and run to 5:00 pm on June 1. An optional outdoor barbecue will begin at 6:00 pm on the first day. Sign up early since this class is limited to eight students.

ACTION IN LAMAR—A WEEKEND INTRODUCTION TO FIELD JOURNALS: 604

May 31-June 1

\$106 (Members fee \$96)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Carolyn Duckworth

Field journals can vary with their purpose and keeper—from the strict standards of a scientist's field journal to the colorful and expressive pages of a personal creative journal. In this weekend class, we will sample techniques for keeping these different kinds of field journals as we explore northern areas of the park. We'll be out all day and evening, looking for active animals and early wildflowers, and learning how to capture what we observe with careful notes and quick field sketches. We'll also explore the role of field journals in the history of Yellowstone. The course will begin at 9:00 am on May 31 at the Lamar facility.

For a more in-depth experience of the written and drawn field journal, join us in Lamar Valley for *A Trail Through Leaves—the Art of the Field Journal*, course number 622.



Photo by Pam Gontz

EXPLORING YELLOWSTONE'S BIRD LIFE: 605

June 6-8

\$117 (Member's fee \$107)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Pam Gontz

NEW

This course will explore Yellowstone's bird life and identify them 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, but not strenuous, hiking and will occur in the early morning and evening hours when the weather can be cold and inclement. The class will begin at 7:00 pm on Friday, June 6, with introductions and a beginning look into Yellowstone's birds.

GRIZZLY BEAR ECOLOGY & MANAGEMENT: 606

June 6-9

\$172 (Member's fee \$162)

Location: Lamar-Buffalo Ranch

Limit: 20

Instructor: Sue Consolo Murphy

Conservation of Yellowstone's grizzly bear population involves a long history of controversy, research, and management challenges. This course will examine the ecology of the threatened grizzly bear, its natural history and current status in the Yellowstone ecosystem, and a number of ongoing management issues that affect the population's potential for long-term survival. Participants should be prepared for field trips daily to try to observe bears in the wild. These trips will not involve lengthy or strenuous hiking, but may occur in cold or inclement weather and in early morning and evening hours. Warm-layered clothing is essential. The course will begin on Friday evening, June 6, at 6:00 pm. The course will end by noon on Monday, June 9. Fee includes \$15 for course materials.

INTRODUCTION TO YELLOWSTONE'S BIRDS: 607

June 9-11

\$162 (Member's fee \$152)

Location: Lamar-Buffalo Ranch

Limit: 15

Credit available: U, 1 semester hour, MSU

Instructor: John Martin

NEW

Nondescript "dirty brown birds," other feathered beauties, and unseen singers will all get names, identification characteristics, and a sense of order in this field-oriented course on birding. Ecological roles and functions of various songbirds, birds of prey, and other species within the Yellowstone ecosystem will be explained and explored, along with such topics as distribution and population dynamics. A special boat trip to Frank Island on Yellowstone Lake will be made to see water and shore birds, along with nesting ospreys and bald eagles. The course will meet at 9:00 am on the first day at the Lamar facility. Fee includes \$15 for course materials and the boat trip on Yellowstone Lake.

BEARS—FOLKLORE & BIOLOGY: 608

June 10-12

\$162 (Member's fee \$152)

Location: Lamar-Buffalo Ranch

Limit: 15

Credit available: U, 1 semester hour, MSU

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

This class will combine two disciplines and field observation time to explore the basic aspects of bear biology including reproduction, behavior, food habits, home ranges, habitat use, and population biology; the class will also address the bear's role in folk stories, images of bears in popular culture, bears as cult symbols, and the role of bears in today's world. Comparing and contrasting folk and scientific knowledge, and the importance of both, will be a continuing course theme. The course will begin at the Lamar facility at 9:00 am on June 10 and end late afternoon on June 12.



Photo by Pam Gontz

MOVING NATURE—ENVIRONMENTAL ETHICS & YELLOWSTONE: 609

June 12-14

\$172 (Member's fee \$162)

Location: Lamar-Buffalo Ranch

Limit: 15

Credit available: U, 1 semester hour, RMC

Instructor: David Strong, Ph.D.

NEW

Since the founding of Yellowstone Park, the most extensive transformation of the earth has taken place in all of humankind's history. From the exploitation of Earth's resources to the disposal of our waste, we have been engaged in a project of moving nature. Even immediately outside the park boundaries, this transformation is taking place in the forms of mining, timbering, oil, and gas exploration and drilling as well as with other "developments." On the other hand, Yellowstone, for the most part, has 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 against such transformations.

What are the motives behind our rearrangement of nature? Do wild things and places, like Yellowstone, present a larger challenge to the way we seem to be settling nature, not only in the park but also on this continent and on the earth itself?

This course will address these questions and 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. June weather can be variable. Class meets the first day at the Lamar facility at 9:00 am. *Fee includes \$20 for a copy of the instructor's book plus other course materials.*

THE BISON OF YELLOWSTONE: 610

June 13-14

\$106 (Member's fee \$96)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Jim Garry

NEW

One of the classic, enduring symbols of the American West, the bison or buffalo, survived in the wild in only one place in the United States—Yellowstone Park. Today the bison is still prominent in the Yellowstone country and an enduring figure of controversy and continuity. The class will explore the animal's natural history and its role in the history and folklore of the many Indian cultures that depended on it and the white culture that almost destroyed it before trying to save it. This course is based at the Institute's Buffalo Ranch facility, the historic setting for bison recovery and restoration. The course will begin at the Lamar facility at 9:00 am on the first day of class.

THE NEZ PERCE IN YELLOWSTONE—1877: 611

June 15-17

\$152 (Member's fee \$142)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Jim Garry

NEW

The Nez Perce had befriended Lewis and Clark; they had requested missionaries from the United States government. But they never asked for gold miners to be sent to them and for white settlers to take over their lands. In 1877, torn by internal strife, the "non-treaty" bands finally gave in and began moving to the reservation. But conflict with white settlers flared into war with the army, and many Nez Perce fled to Canada. On their way they became Yellowstone's most unusual tourists and left an indelible mark on its history. The class will focus on their time in the Yellowstone country but will look at the whole war as well as the tribe's history and culture. The course will begin at the Lamar facility at 9:00 am on the first day of class.

MAMMALS GREAT & SMALL: 612

June 15-19

\$245 (Member's fee \$235)

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 meet at the Lamar facility at 8:30 am on June 15, and end late afternoon on June 19.



Photo by Pam Gontz

THE EVOLUTION, ECOLOGY, & FUTURE OF THE WOLF FAMILY: 613**June 18-20****\$177 (Member fee \$167)****Location: Lamar-Buffalo Ranch****Limit: 15****Credit available: U, 1 semester hour, U of MT, or MSU****Instructors: Elaine Anderson, Ph.D., &****James Halfpenny, Ph.D.**

Dire, gray, red, and timber wolves; coyotes, foxes: these canids have all roamed the North American continent. Some still survive in North America 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) tracking wolves as a skill for their detection, identification, and ecological study; 2) wolf reintroduction into Yellowstone; and 3) coyotes and foxes of Yellowstone. The course will meet at the Lamar facility at 9:00 am on the first day of class. *Fee includes \$15 for course materials.*

WILD EDIBLE PLANTS & MEDICINAL HERBS: 614 & 816**June 20-22: 614****August 30-Sept 1: 816-NEW****\$175 (Member's fee \$165)****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**

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 students 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. We'll feast on wild foods and prepare our own botanical preparations. With the help of an ecologist and an herbalist, students 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 begin at 9:00 am in Ashton, Idaho. Expect short, leisurely walks from one-half to two miles with an elevation gain/loss of 300 feet or less. *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. This is one in a series of five wildflower classes including a new fall course.

THE WOLF'S RETURN—MYTHOLOGY TO RECOVERY: 615**June 20-22****\$182 (Member's fee \$172)****Location: Lamar-Buffalo Ranch****Limit: 15****Instructors: Brian Peck & Linda Miller**

The wolves are back! For the first time since 1926, the wolf's song echoes through the Lamar Valley. This year Yellowstone will be home to more than 10 packs and we'll be there. Using slide shows, storytelling, expert speakers, and field trips (three- to five-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 on the first day of class will meet at the Lamar facility at 9:00 am. *Tuition fee includes \$15 for materials and handouts.*

FAMILY DAYS IN THE LAMAR—THE WOLVES COME HOME: 616**June 21-23****Adult-\$142 (Member's fee \$132)****Child-\$79 (Member's fee \$69)****Location: The Lamar Valley****Limit: 20****NEW****Instructors: Sandra Nykerk & Jim Garry**

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. This three-day family experience will explore the many aspects of the Lamar ecosystem, including the role of predators in the system and what happens when a major predator is removed and then restored. Using the Yellowstone wolf as a focus, the instructors and guest speakers will discuss the cultural and biological events that led to the removal and eventual return of the wolf to the Lamar Valley and the expectations and surprises that followed. Field observation and group hikes will integrate information acquired through more formal classroom settings, but all activities and field trips will be paced for a family experience. 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. Field trips will include hikes of up to three miles but the final itinerary will be based on the ages and abilities of class participants.

Class will begin at 9:00 am on June 21 in the Lamar Valley and end around 4:00 pm on June 23. Children in this course should be at least eight years of age. *Participants will caravan for field trips. 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.*



Photo by Pam Gontz

**YELLOWSTONE PARK & THE FUR TRADE—
EXPLORING THE GREAT MOUNTAIN PASSES
OF THE ROCKIES TRAVERSED BY THE
MOUNTAIN MEN: 617**

June 22-25

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

Location: Pinedale, Wyoming

NEW

Credit available: U or G, 2 semester hours, BYU

Instructor: Fred R. Gowans, Ph.D.

Limit: 22

The emphasis of the course will be directed toward the geography and history of the mountain men's wanderings within the park boundaries and an in-depth study of the mountain passes that permitted the entry of the trappers into this isolated area that is today Yellowstone Park.

The class will be conducted at the Museum of the Mountain Men at Pinedale. This beautiful facility will be used for our classroom discussion each day and serve as the departure point for each of our three field trips. The field trips will include a trip to South Pass, the most significant mountain pass in the history of the American West. We will study the discovery and opening of this great passageway across the Continental Divide. The class will also visit one of the most significant canyon passes of the mountain men from the headwaters of the Colorado River Drainage to the waters of the Columbia River, Jackson Hole, and Yellowstone areas. The final trip will take us to the famous Union Pass by way of the headwaters of the Spanish River (Green River) where we will study the Gros Ventre and Green River Lakes routes which brought the mountain men across Union Pass and the Continental Divide.

We will visit the site on the Green River of the 1833, 1835, 1836, 1837, 1839, and 1840 rendezvous, and the site of Captain Bonneville's Fort Nonsense, as well as the route of the overland Astorians. We will also visit the site of the 1830 and 1838 rendezvous on the Wind River and walk along Pacific Creek, as many of the early mountain men did.

The course will begin at the Pinedale museum on June 22 at 7:00 pm and end around 5:00 pm on June 25. *The class fee will include course materials and van transportation for the field trips. The fee does not include lodging.* Students will need to make reservations at Pinedale, Wyoming, for the evenings of the June 22-24 (Sunday through Tuesday). If you do not want to drive home on the evening of June 25, our last day of class, you should make reservations for that date. Special rates have been given to the Institute—contact the registrar for motel names and numbers. Room reservations should be made as early as possible.

BEARS: BONES, SIGNS, & STORIES: 618

June 23-26

\$220 (Member's fee \$210)

Location: Lamar-Buffalo Ranch

Limit: 15

Credit available: U, 1 semester hour, MSU or U of MT

Instructors: Elaine Anderson, Ph.D.,

James Halfpenny, Ph.D., & Jim Garry

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 world-wide perspective. The course will begin at the Lamar facility on June 23 at 9:00 am. *Tuition fee includes \$15 for materials and handouts.*

LAKES OF YELLOWSTONE BY CANOE: 619

June 23-27

\$407 (Member's fee \$397)

Location: Shoshone Lake, Yellowstone Backcountry

Instructor: Scott Wood

Limit: 12

This five-day canoe trip across Lewis Lake and into magnificent Shoshone Lake, the largest wilderness lake in the lower 48, will provide interpretation of the lake environment and instruction on low-impact backcountry camping techniques. Canoeing skills such as strokes, portaging, safety, and tripping (how to pack a canoe) will be covered and an American Red Cross canoeing certification may be earned if desired. This trip is designed for beginners and is of moderate physical difficulty, including a two-mile upstream pull of the canoes on the Lewis River and travel in moderate winds. Class will start from the Lewis Lake campground boat dock on the morning of June 23 at 9:00 am. *Fee includes all canoeing equipment, group camping gear, and food.*

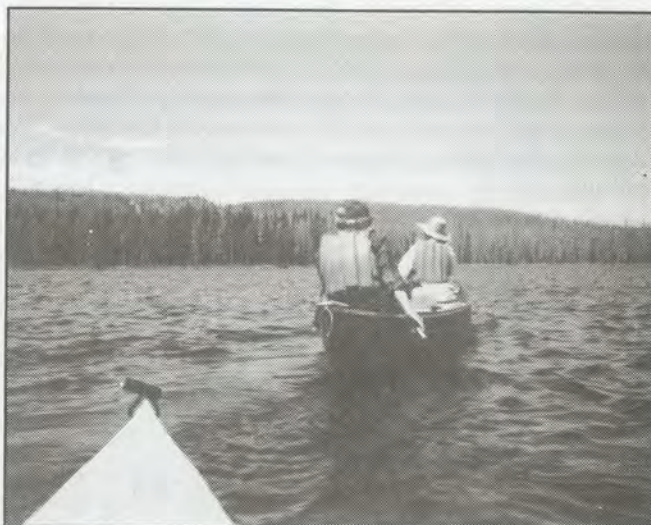


Photo by Don Nelson

**PARTICIPATE IN YELLOWSTONE
ARCHAEOLOGY: 620, 624, 707, & 715**

June 23-27: 620 Limit: 6 to 8
 Location: Mammoth Hot Springs
 June 30-July 4: 624 Limit: 6 to 8
 Location: Mammoth Hot Springs
 July 7-11: 707 Limit: 2
 Location: Yellowstone Backcountry
 July 14-18: 715 Limit: 2
 Location: Yellowstone Backcountry
 \$255 (Member's fee \$245)

Instructors: Ann Johnson, Ph.D. & Mack Shortt NEW

Help professional archeologists excavate prehistoric sites in both the backcountry and front country. Teams of one or two participants will be assigned to an archaeologist, and the teams will excavate at prehistoric sites that contain stone tools, hearths, and animal bones about 1,000 years old. You will participate in all phases of the excavation from digging, screening, and sorting artifacts, to site documentation. In case of inclement weather, excavated materials will be processed in our lab. Through this project, participants learn about research and management of Yellowstone archaeology. This project will provide a hands-on opportunity to learn about Yellowstone's prehistory.

No previous archaeology training is required, although you need to be physically fit. The two sessions at Mammoth are less strenuous than those in the backcountry, and you can stay in local motels or campgrounds. The backcountry sessions, limited to only two students, require a four-mile hike in and out of our base camp where we will set up tents and hike daily to sites. You need to carry your personal gear, food, and camping equipment. The first day of the course meets at 8:00 am at the Branch of Cultural Resources office in Mammoth.

**EARLY EXPLORATION IN
YELLOWSTONE: 621**

June 27-28 \$106 (Member's fee \$96)
 Location: Lamar-Buffalo Ranch Limit: 15
 Instructor: Bill Lang, Ph.D. **NEW**

This course will review the earliest attempts to map and chart the Yellowstone wilderness, from James Stuart's trip in the 1860's to the famous Hayden Survey of 1871-1872. It will focus on the explorations of 1869-71 which led to the creation of the park. Readings, maps, historic photographs, and on-site visits to areas visited by explorers will be included in the course. The course on the first day of class will meet at the Lamar facility at 9:00 am.



Photo by Pam Gontz



Photo by Pam Gontz

**A TRAIL THROUGH LEAVES—THE ART OF
THE FIELD JOURNAL: 622**

June 27-30 \$198 (Member's fee \$188)
 Location: Lamar-Buffalo Ranch Limit: 15
 Instructor: Hannah Hinchman

A field journal is one of the best bridges between a person and the land. This four-day course at the Buffalo Ranch will introduce a kind of journal keeping that mixes visual and verbal, exploration and introspection, to create a new way of entering the world of nature. The pattern of our days includes early morning rambles, as well as watercolor sessions at dusk; classroom instruction in drawing and writing skills, as well as field excursions into some of Yellowstone's extraordinary habitats. We map the sky and the ground, meet creatures, plants, and land forms, and learn to transcribe their (and our) stories in new ways. 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 on the first day of class will meet at the Lamar facility at 10:00 am.

WARS & WORDS OVER WILDLANDS: 623

June 29-30 \$106 (Member's fee \$96)
 Location: Lamar-Buffalo Ranch Limit: 15
 Instructor: Bill Lang, Ph.D.

The national "battle" over preservation versus resource development has raged in America for over a century and has generated a rich and enormous literature. It is a literature of controversy punctuated by scientific arguments, passionate appeals, bureaucratic explanations, heroic episodes, and bizarre twists. This course will examine that literature through lectures, discussions, instructor synopses, group readings of articles and short essays, and field visits to sites in Yellowstone which are particularly relevant to conservation, wilderness, and national park themes. Participants will be expected to complete some reading prior to the beginning of the course. Several reading items will be sent to each participant upon registration. The course on the first day of class will meet at the Lamar facility at 9:00 am.

**PARTICIPATE IN YELLOWSTONE
ARCHAEOLOGY: 624**

(see description on this pg)

June 30-July 4
NEW

BATS OF YELLOWSTONE PARK**& VICINITY: 701****\$172 (Member's fee \$162)****July 1-3 Location: Lamar-Buffalo Ranch Limit: 15****Instructor: Tom Butts**

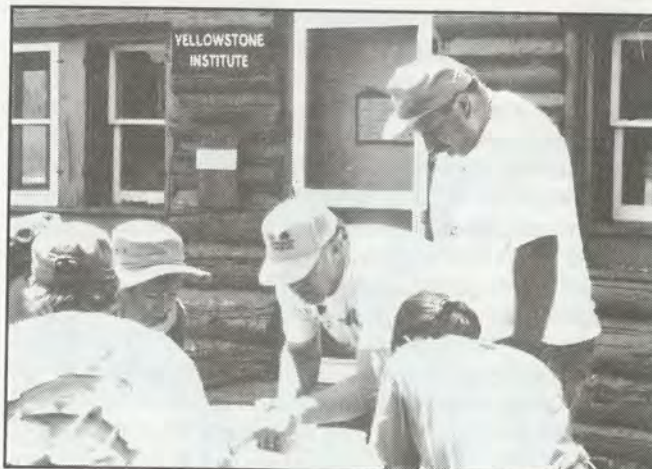
We will begin this course by learning about the bats that live in the Yellowstone Park vicinity and how to identify them. We will also learn how bats are studied. Once the sun sets, on two consecutive evenings, we will listen for bats using special electronic equipment, and we will try to capture a few using mist nets (bats will be released unharmed after they are identified, weighed, and measured). We will also learn about bat habitat use and conservation, and we will each build a bat house to take home. The course on the first day of class will meet at the Lamar facility at 1:00 pm. *Fee includes \$20 for materials.*

FIRE, ICE, & FOSSIL FORESTS: 702**July 1-3****\$152 (Member's fee \$142)****Location: Lamar-Buffalo Ranch****Limit: 15****Credit available: U, 1 semester hour, MSU****Instructor: John Good**

This course will introduce participants to the unique petrified forests of Yellowstone and to the Ice Age history of the park which profoundly influenced today's landscapes, flora, and fauna. There will be a discussion of the theory that repeated episodes of volcanic activity buried living forests in ash and mudflows to be slowly petrified by mineral-bearing hot water. Moving to the last 2 million years, discussion will focus on glacial ice and volcanic explosions. The course will involve field trips to observe evidence of glaciation and discuss the volcanic history of Yellowstone and the Absaroka and Beartooth Mountains, an all-day hike on Specimen Ridge, and a hike up Mt. Washburn where glacial and volcanic phenomena are visually united. Hikes are at a relaxed pace but at times in steep terrain. Specimen Ridge is an 800-foot climb in 1 1/2 miles. Mt. Washburn climbs 1,400 feet over a 3 mile distance to the 10,000-foot summit. The course on the first day of class will meet at the Lamar facility at 9:30 am.

YELLOWSTONE BIRDS OF PREY: 703**July 4-6****\$178 (Member's fee \$168)****Location: Lamar-Buffalo Ranch****Limit: 15****Credit available: U, 1 semester hour, MSU****Instructor: John Martin**

This course features Yellowstone's hawks, eagles, falcons, and owls, collectively known as raptors, in their natural habitats. Identification will be emphasized along with the role of predation in biological communities, predator-prey relationships, breeding strategies, and habitat influences. Conservation measures and management problems unique to raptors will also be examined. A special boat trip to Frank Island on Yellowstone Lake will be made to see nesting ospreys and bald eagles. The course will meet at 9:00 am on the first day at the Lamar facility. *Fee includes \$15 for course materials and the boat trip on Yellowstone Lake.*

*Photo by Pam Gontz**Photo by Pam Gontz***FOSSILS OF YELLOWSTONE: 704****July 5-7****\$152 (Member's fee \$142)****Location: Lamar-Buffalo Ranch****Limit: 15****Instructor: Vincent L. Santucci****NEW**

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 twenty 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 uncover new sites and fossils. The course will meet at the Lamar facility at 8:00 am on the first day of class.

AQUATIC INSECTS OF YELLOWSTONE: 705**July 7-8****\$121 (Member's fee \$111)****Location: Lamar-Buffalo Ranch****Limit: 15****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 meet on the first day of class at the Lamar facility at 9:00 am. *Fee includes \$15 for course materials.*

FAMILY HORSEPACKING—DOING THINGS TOGETHER: 706**July 7-9****(see description on pg 30)****PARTICIPATE IN YELLOWSTONE ARCHAEOLOGY: 707****(see description on pg 12)****July 7-11****NEW**

**PHOTOGRAPHING NATURE IN
YELLOWSTONE COUNTRY #1: 708****July 8-11****\$211 (Member's fee \$201)****Location: Lamar-Buffalo Ranch****Limit: 15****Instructor: Sandra Nykerk**

This four-day workshop will begin with the basics of photographic principles including the ethics of nature photography, creative visualization, 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! On the first day of class the course will meet at the Lamar facility at 9:00 am. *Lab film processing will take place; student will be responsible for paying for processing. Fee includes \$5 for course materials.* If you are looking for an intermediate photography course, see *Photographing Nature in Yellowstone Country #2*, course number 712, page 15.

**BUTTERFLIES OF GREATER
YELLOWSTONE: 709****July 9-11****\$168 (Member's fee \$158)****Location: Lamar-Buffalo Ranch****Limit: 15****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. On the first day of class the course will meet at the Lamar facility at 9:00 am. *Fee includes \$15 for course materials.*



Photo by Pam Gontz

**WOMEN & YELLOWSTONE—A HISTORICAL
PERSPECTIVE: 710****July 12-13****\$113 (Member's fee \$103)****Location: Lamar-Buffalo Ranch****Limit: 15****Instructor: Karen Krieger**

This course examines 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 exploring old tourist sites, cemeteries, and natural features which encourage an understanding of how women interacted with Yellowstone. Short hikes of up to a mile can be expected. On the first day of class the course will meet at the Lamar facility at 8:30 am. *Fee includes a stagecoach ride from Roosevelt Lodge.*



Photo by Pam Gontz

**EXPLORING THE YELLOWSTONE
ECOSYSTEM: 711****July 12-14****\$152 (Member's fee \$142)****Location: Lamar-Buffalo Ranch****Limit: 15****Instructor: Tom Watson**

Based out of Lamar, this course will look at park geology, wildlife, botany, and history in the context of an ecosystem. It will examine Yellowstone's fiery birth, its frozen past and how these events prepared the stage upon which plants and animals act out their interdependent roles. This class will look at geysers and hot springs and many wildlife species and will consider what they are, why they are present in Yellowstone, and the threats they face. An abiding interest in nature, not scientific training, is the only requirement. The class will start at from 9:00 am on July 12, and end early afternoon on July 14.

**PHOTOGRAPHING NATURE IN
YELLOWSTONE COUNTRY #2: 712**

July 13-17

\$222 (Member's fee \$212)

Location: Yellowstone Area

Limit: 15

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 14) by focusing on gaining shooting experience in the field. We will base at three different locations in the park and each day will be spent abroad in photographing Yellowstone; all of our learning will be through hands-on experience and in-field informal discussions. 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 dealing 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 begin at 7:00 pm on July 13 in Mammoth and end around 4:00 pm on July 17. *We recommend the following dates and areas for camping or lodging as follows: July 13 and 14—the Mammoth area; July 15—the Yellowstone Lake area; July 16—Old Faithful area. Rooms have been blocked in the Lake and Old Faithful areas only—contact registrar for reservation information. Reservations should be made as early as possible. Fee includes \$5 for course materials.*

MAMMAL TRACKING: 713

(see description on pg 7)

July 14-17

**HORSEPACKING: WILDLAND HERITAGE—
HELLROARING & THE BLACK CANYON: 714**

July 14-18 (see description on pg 30)

**PARTICIPATE IN YELLOWSTONE
ARCHAEOLOGY: 715**

(see description on pg 12)

July 14-18

NEW



Photo by Pam Gontz



Photo by Pam Gontz

HEADWATER WATERSHED ECOLOGY: 716

July 15-17

\$152 (Member's fee \$142)

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 which 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. Much of our past environmental management strategies have been oriented toward managing a specific resource (such as timber) or species (such as trout) without regard to how that specific entity interacts within the total system. The watershed approach takes into account how each aspect of the ecosystem interrelates with every other. Students will study several Yellowstone drainages and look at hydrology and stream ecology in order to understand the relationship of various aspects of the watershed. The relationship of several smaller watersheds making one large watershed will also be investigated. You will learn 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. On the first day of class the course will meet at the Lamar facility at 9:00 am. *Fee includes \$5 for course materials.*

WILDFLOWERS OF YELLOWSTONE: 717

July 18-19

\$122 (Member's fee \$112)

Location: Lamar-Buffalo Ranch

Limit: 15

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. On the first day of class the course will meet at the Lamar facility at 9:00 am. This is one in a series of five wildflower classes including a new fall course, see pages 10, 16, and 17.

YELLOWSTONE PLACE NAMES—THE NOMENCLATURE OF WONDERLAND: 718

July 18-20 \$152 (Member's fee \$142)
 Location: Lamar-Buffalo Ranch Limit: 15
 Instructor: Lee H. Whittlesey

This three-day class will acquaint you with the origins and history of some of the 2,000 active and 2,000 obsolete place names of natural features in Yellowstone National Park. One of the best things about this class is its tour of the park, conducted by a twenty-five-year expert on Yellowstone features. On three separate field trips, the instructor will point out the mountain peaks and other natural features and explain to you how they got their names. The morning of the first day is spent in class, and the other two and one-half days are spent touring the park. Included will be biographical information on the historic persons for whom natural features are named; history of who gave the names, when, and why; and discussions on the rules for place names worldwide. Learn how Greek and Roman mythology affected Yellowstone's place names and how American politics and world literature, including the Bible, influenced their naming. The course will meet at the Lamar facility at 8:30 am on the first day of class.

GEYSERS, MUDPOTS, & HOT SPRINGS: 719 & 721

July 18-20: 719 July 21-23: 721
 \$177 (Member's fee \$167) Location: Old Faithful
 Credit available: U, 1 semester hour, MSU
 Instructor: Duncan Foley, Ph.D. Limit: 15

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 noon on the first day of class 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 early afternoon. No background in geology is required. Fee does not include lodging. This class will headquarter at Old Faithful. *Rooms have been blocked in the Old Faithful area—contact registrar for reservation information. Reservations should be made as early as possible. Fee includes \$15 for course book and materials.*



Photo by Pam Gontz

WILDFLOWERS OF THE HIGH COUNTRY (LLAMA TREK): 720 \$404 (Member's fee \$394)

July 20-24 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 and food will be transported by llama to a campsite near the high country lakes of the Beartooth Mountains. Participants should be prepared for 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. This is one in a series of five wildflower classes including a new fall course. The hikes each day will vary from 4-6 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 begin at 3:00 pm on July 20 at the Lamar facility. *Enrollees must bring tent, sleeping bag, pad, and pack. Fee includes group equipment, food, and llama packing. A camp cook will prepare meals.*

GEYSERS, MUDOTS, & HOT SPRINGS: 721

July 21-23 (see description on this pg)

BACKPACKING YELLOWSTONE—THE GALLATIN REGION (3rd of a series): 722

July 21-25 \$315 (Member's fee \$305)
 Location: Gallatin Region Limit: 10
 Instructors: Michael Bartley & Marla Darby **NEW**

This five-day backpack will take you into the rugged northwest corner of Yellowstone Park. The Gallatin Range is a land of long valleys leading to magnificent high country lakes and some of the finest views in all of Yellowstone. Elk, deer, moose, and bighorn, are abundant in the region. There will be daily classes on subjects including backpacking skills, the area's natural history, park management issues, and wilderness ethics. Throughout the trip we will be practicing the principles of "Leave No Trace" camping and travel.

This hike is the third of a series of week-long backpacks offered each year within Yellowstone National Park. Each stage highlights a unique ecotype within the larger ecosystem known as Greater Yellowstone. The series goal is to take you on a journey of discovery—a discovery of the land ranging from high mountains to broad valleys, from lodgepole forest to backcountry geyser basins, to a seldom visited land known as "waterfalls country." And, due to the uniqueness of this land and of backcountry travel, we may discover something new about ourselves. This loop hike will be around 25-30 miles in length (depending on park permits) and will include some strenuous climbs with a total elevation gain of 1,500 feet. Join us on one or for the entire series and see what few have seen in Yellowstone National Park. *Participants provide their own backpacking gear and food. A complete equipment list will be provided in the student packet. Participants need to secure their own campsite or lodging before and after the course. Institute cabins will not be available for this course.*

**WILDFLOWER ART: 723****July 22-24****\$162 (Member's fee \$152)****Location: Lamar-Buffalo Ranch****Limit: 15****Instructor: Peg Steunenberg**

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 on the first day of class will meet at the Lamar facility at 9:00 am. *Fee includes \$5 for course materials.*

FAMILY DAYS IN YELLOWSTONE: 724**July 23-25 Location: Mammoth Hot Springs Limit: 20****Adult-\$142 (Member's fee \$132)****Child-\$79 (Member's fee \$69)****Instructors: Sandra Nykerk & Jim Garry****NEW**

This three-day family experience will be based in the Mammoth Hot Springs area of Yellowstone National Park. From there, we will explore Yellowstone's spectacular landscapes and unique natural history. Through hikes, group discussions and additional activities, participants will have an opportunity to learn about the geology and hydrothermal features, wildlife, botany, and history of this very special area. We will also spend time looking at the effects of the 1988 fires and address the role of fire in a natural ecosystem. All activities and field trips will be paced for a family experience. Critter 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. Field trips will include hikes of up to three miles but the final itinerary will be based on the ages and abilities of class participants.

Class will begin at 9:00 am on July 23 in Mammoth Hot Springs. Children in this course should be at least six years of age. *Participants will caravan for field trips. 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.*

ALPINE WILDFLOWER WALKS: 725**July 25-27****\$125 (Member's fee \$115)****Location: Lamar-Buffalo Ranch****Limit: 15****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 4-6 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. The course on the first day of class will meet at the Lamar facility at 4:00 pm. This is one in a series of five wildflower classes including a new fall course. *Fee includes \$10 for course materials.*

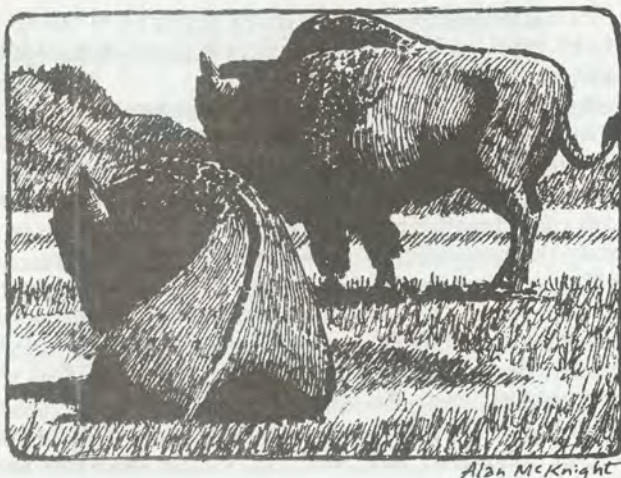
THE FOLK & THE HIGH ALPINE (LLAMA TREK): 726**July 26-29****\$404 (Member's fee \$394)****Location: Beartooth Backcountry****Limit: 10****Instructor: Jim Garry****NEW**

Beartooth country is the land-of-never-summer, where spring gives way to fall, and winter is an almost permanent resident. Just as plants and animals have adapted to the high alpine, so have the people who, for at least part of the year, live there. The trek will be one to look at the "folk natural history," and at how often the traditional wisdom comes very close to the scientific views of today's researchers. For this class you will need your eyes, your imagination, your wonder, as well as your hiking boots.

The class will begin at 8:00 am on July 26 at the Island Park campground in the Beartooth mountains (details provided in the student packet). The hikes each day will vary from 4-6 miles, or more, with elevation gains of 500 to 2,000 feet. Some 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. *Enrollees must bring tent, sleeping bag, pad, and pack. Fee includes group equipment, food, and llama packing. A camp cook will prepare meals. Institute cabins will not be available for this course.*



Photo by Don Nelson



OBSERVING YELLOWSTONE WITH THE ARTIST'S EYE: 727

July 26-30

\$245 (Member's fee \$235)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Alan McKnight

In this course we will strive for freshness in drawing and painting outdoors in Yellowstone. We will search for original motifs and work on form, composition, values, and color. The goal will be to communicate through our art our own unique relationship to the land, to its plant and animal life, and even to its other visitors. We will use sketchbooks to collect our ideas and organize them. Then we will work on our final drawings or paintings on site, continuing to gather observations as the picture develops. When we return to the Institute headquarters, there will be space and time for further critiques and final touches on our work. Choice of medium is up to the student, but remember that portability is crucial as we will attempt to work a good way from the roads. Suggestions on what to bring will be sent to each person who registers. The course on the first day of class will meet at the Lamar facility at 9:00 am.

YELLOWSTONE'S ROADSIDE HISTORY: 728

July 28-30

\$152 (Member's fee \$142)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Lee H. Whittlesey

NEW

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 day-long 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 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 meet at the Lamar facility at 8:30 am on the first day of class.

BACKPACKING IN GRIZZLY COUNTRY: 729

July 28-30

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

Location: Pebble Creek Backcountry

Limit: 10

Instructors: Michael Bartley & Marla Darby

This three-day backpack 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. Hiking and camping 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 earn 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. The terrain and pace of the course will allow the inexperienced hiker plenty of time to absorb the many backcountry lessons to be learned. Remember: For some this hike can still be difficult. There is an initial 1,100 foot climb en route to the beautiful Pebble Creek Valley. As with any backpack trip, you must be in good physical condition. Regardless of your level of experience if you are new to hiking in grizzly country or simply "bearphobic," we recommend that you take this course. The first day of class will meet at the Lamar-Buffalo Ranch at 8:00 am and on the last day of class will return to the trailhead around 3:00 pm. *Participants provide their own backpacking gear and food. A complete equipment list will be provided in the student packet. Participants need to secure their own campsite at Slough Creek or Tower Fall or lodging in the Silver Gate/Cooke City, Montana, area. Institute cabins will not be available for this course.*

HORSEPACKING: THE NEZ PERCE TRAIL—TRADITIONAL ROUTE, UPPER LAMAR: 730

July 28-August 1 (see description on pg 31)

SIMPLY STUNNING SCENIC PHOTOGRAPHY: 731

July 31-August 1

\$113 (Member's fee 103)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Pete Houdeshel

NEW

Presenting easy solutions to the mysteries of making great nature photographs will be the key emphasis of this workshop. Whether you come equipped with a simple "point and shoot" camera wanting to take better snapshots, or are an ambitious new photographer seeking to be immersed in the challenges of more advanced 35mm photography, this course in composition is designed for you. Combining instructive slide presentations with field trips that explore the grandeur of the Yellowstone landscape, anyone interested in learning how to record their visit with beautiful and more skillfully composed photos is welcome. On the first day of class the course will meet at the Lamar facility at 9:00 am.

FLY FISHING THE CATCH-AND-RELEASE WAY: 801 & 808

\$192 (Member's fee \$182)

August 1-3 Less Experienced: 801

Limit: 8

August 8-10 More Experienced: 808

Limit: 9

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 which 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. Students 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 meet the first day at 8:30 am at the Lamar facility. *A Yellowstone Park fishing permit, available at most park visitor centers, is required.*



Photo by Pam Gontz

ECOSYSTEM GEOLOGY—LAND SKILLS FOR SURVIVAL: 802

August 2-3

\$106 (Member's fee \$96)

Location: Lamar-Buffalo Ranch

Limit: 15

Credit available: U, 1 semester hour, MSU

Instructor: Wayne Hamilton, Ph.D.

A geological look at the fossil record and history of land-

scape in Yellowstone becomes a time-lapse "movie" of flora and fauna and the terrain they inhabit. One surprise in such an observation is that over thousands of years, while the surface of the land has been changed by geologic processes, the species composition of inhabitants has remained much the same. One gets the impression that life has been quite resilient here, despite earthquakes, flood, drought, and fire. A diverse flora and fauna have been able to find habitat niches and benefit from behaviors that ensure long-term survival of diversity.

Quite recently, however, a new force has been introduced. A time-lapse view of the last 150 years would show disruption of the previous dynamic equilibrium by various human actions, such as the introduction and extirpation of wildlife species, construction of roads, visitation by millions of people, control of natural fire, inadvertent introduction of exotic flora and fauna, loss of native species, and alteration of wildlife migration routes. In this brief interval, the flora and fauna variable has become much more dynamic in relation to the landscape. Visits to selected field sites and published data will be used to illustrate some of these important examples.

The general questions asked by the course are: 1) Are we willing to accept such changes in protected, natural areas? 2) What changes in land management and human behavior are needed to reverse this trend? 3) What are the implications for us? The course will begin at 9:00 am on August 2 at the Lamar facility.

LIFE AT THE EXTREMES: 803

August 4-7

\$214 (Member's fee \$204)

Location: Lamar-Buffalo Ranch

Limit: 15

Credit available: U, 1 semester hour, MSU

Instructors: Harold Picton, Ph.D. & Don White, Jr., Ph.D.

Life in and around Yellowstone National Park takes place within a wide range of environmental extremes. The demands placed on life from heat, cold, pressure, and altitude, each result in unique adaptations in living organisms. This course, expanded to four days this year, is designed specifically to bridge the gap between physiology and ecology. It is intended to provide you with an introduction to the major morphological, physiological, and behavioral adaptations exhibited by some of the plants and animals of Yellowstone Park. For example, you will learn about the primary adaptations of alpine plants that allow them to live in an extreme and variable environment characterized by low temperatures, a short growing season, lack of nutrients, and general instability. You will learn about how some animals tolerate low temperatures and low oxygen pressure, including how their blood responds to increasing altitude and why hibernation is a strategy used to survive the winter by some animals but not others. You will learn how some plants can bathe their roots in near-boiling water that would kill most any other plant. Our goal is that you will begin to appreciate that understanding an organism's physiology is the key to understanding its ecology. The first day of class will meet at the Lamar facility at 9:00 am.

[course descriptions continue on page 27]

The Institute Store

These items are available at the Yellowstone Institute Store
located at our facility in Lamar Valley,
and by mail through the Yellowstone Institute.

Yellowstone Association members receive a 15% discount on all purchases.
All proceeds contribute importantly to supporting Yellowstone Institute programs.

Short-Sleeved Apparel

DesertWash Weathered Short-Sleeved Polos—
100% heavyweight cotton pique sport shirt, full, true
sizing, two-button placket, woodtone buttons dyed to
match, drop tail with side vents. **Colors:** Moss Green,
Brick, Blue Granite. **Sizes:** M, L, XL.
#130002 \$34.00

Anvil Short-Sleeved T-Shirts—
100% heavyweight preshrunk cotton, pigment-dyed,
garment-washed tee, generously cut. **Colors:** West-
ern Sky (blue), Willow (green), Mocha (brown). **Sizes:**
L, XL. #130000 \$16.00

Long-Sleeved Apparel

Crystal Springs Long-Sleeved Denim Shirt—
100% laundered cotton denim, banded collar with 1/4"
top-stitch, double back yoke, left-chest pocket, shirt
tail hem, clean-finish placket with 6 woodtone buttons,
button cuff, single-needle edge stitching on shoulder
and cuffs. (See photo on page 22.) **Colors:** Black, Blue,
Green. **Sizes:** M, L, XL. #130003 \$44.00

Thermal Three-Button Henley—
100% cotton, pigment-dyed, three-button styling, long-
sleeved. **Colors:** Claret (burgundy), Meadow (green),
Nearly Navy. **Sizes:** L, XL. #130008 \$28.00

Jerzees 9 oz. Long-Sleeved Sweatshirt—
50% cotton, 50% polyester, ribbed collar, cuffs and
waistband, fully overseamed, set-in sleeves. **Colors:**
Sea Teal, Winestone, Weathered Denim. **Sizes:** M, L,
XL. #130006 \$26.00



All apparel is beautifully
embroidered with the
attractive Yellowstone
Institute logo, including
our golden-brown
bison emblem.



Polartec Vest, T-shirt, &
Polartec Pullover

Photo by Pam Gontz

Outerwear

Polartec Vest—
Keeping your arms free, this plush Polartec 200 vest
keeps you warm without restriction. **Colors:** Navy,
Forest, Black. **Sizes:** M, L, XL. #130004 \$52.00

Polartec Pullover—
This long-sleeved pullover, in 13 oz. non-piling plush
Polartec 200, will move easily with every swing. Con-
trasting supplex wind flap and zippered pockets. The
drop shoulders offer full mobility. **Colors:** Plum, For-
est, Black. **Sizes:** M, L, XL. #130005 \$70.00

Racer Windbreaker Coat—
Great for breezy afternoons, this good looking, com-
fortable Supplex jacket has a longer cut and is over-
sized for easy movement. Elastic at the waist and cuffs
is comfortable and nonbinding. Two convenient pock-
ets. **Two-tone colors:** Hunter/Navy, Maroon/Black,
Teal/Navy, Purple/Black. **Sizes:** M, L, XL.
#130010 \$55.00

Jerzees 9 oz. Side Pocket Fleece Sweat Pant—
50% cotton, 50% polyester, covered elastic waist, in-
side drawcord, side entry bag pockets, wide elastic
cuffs. **Color:** Forest, Black. **Sizes:** M, L, XL.
#130023 \$20.00

New Items



Long-sleeved t-shirt, neck warmer, ear band, low profile cap, Pajaro field bag Photo by Pam Gontz

Polartec Neck Warmer—

Quality full shape neck warmer. Advanced construction velour fleece fabric. Easy care. Superior thermal insulation with less weight. Made in U.S.A. **Colors:** Navy, Black, Teal, Plum, Olive, Brick. **Sizes:** One size fits all. #130042 \$12.50

Polartec Earband—

100% polyester fleece for superior thermal insulation. Earband is three inches wide and made in the U.S.A. **Colors:** Blue, Black, Gray, Forest. #130043 ... \$10.50

Oneita Long-Sleeved T-shirt—

This 5.5 oz. heavyweight long-sleeved t-shirt is 100% cotton, garment-dyed, with a seamless collar. **Colors:** Eggplant, Ink (dark blue), Flax (tan). **Sizes:** M, L, XL. #130041 \$20.00

Pajaro Field Bag—

This attractive waist pack, made of durable Cordura, is designed for the active outdoor enthusiast. It has seven handy pockets so you can tailor the field bag to your own needs. Pockets are large enough to hold binoculars, a camera, field guides, maps, etc. It also has a fully adjustable waist band so that the pack can be worn on the front, side, or back. Use it for birdwatching, hiking, traveling or a day in the park! (6 1/2" x 9" x 2 1/2") **Colors:** Forest Green/Black, Navy/Black. #130046 \$29.95

Hats

Adams Pigment Dyed Low Profile Cap—

100% cotton, heavy duty leather strap with disappearing tail, and solid antique brass closure. **Colors:** Forest Green, Mud (brown), two-tone Khaki/Forest Green, Khaki/Midnight Blue. #130026 \$12.00

Brushed Canvas Hat—

Low crown baseball shape in brushed canvas. Crown and undervisor is tan with dark green visor and button. Sewn eyelets and plastic tab adjustable back. #130024 \$12.00

New—Children's Clothing

Children's T-Shirt—

Hanes Beefy-T, 100% cotton 5.6 oz. shirt. **Colors:** Red, Royal Blue, Forest Green. **Youth Sizes:** S (6-8), M (10-12), L (14-16). #130044 \$12.50

Children's Sweatshirt—

Hanes Activewear, 50/50 poly/cotton, 7.75 oz. sweatshirt. **Colors:** Denim Blue, Cardinal, Jade. **Youth Sizes:** S (6-8), M (10-12), L (14-16).

#130045 \$17.00



Children's sweatshirt and t-shirt

Photo by Pam Gontz

Wolf Items

Limited Edition Wolf Etching—

The Yellowstone Institute is offering this limited edition etching featuring the gray wolf. Only 150 prints will be made, and they will be signed and numbered by the artist, Lawrence Ormsby. Each etching will be an original, and no two will be exactly alike. This 19-inch by 26-inch limited edition print sells for \$185 each, plus shipping costs and the cost of insuring the print. Net proceeds from the sale of the print will benefit the Yellowstone Institute.

#130040 \$185.00



Limited Edition Wolf Etching

Photo by Pam Gontz

Yellowstone Institute Wolf Book Bag—

This off-white with black handle bag is made of heavy, durable 100% cotton. An image of a gray wolf (see photo on page 22) is printed on the front with the Yellowstone Institute logo. On the back is a brief message about the gray wolf and the Yellowstone Institute.

#130039 \$12.50

Useful gifts for yourself and others

Vinyl Clip Folder—

Folder features an expanded pocket design and includes a pad of paper. Brown vinyl with gold imprinting featuring the Lamar-Buffalo Ranch bunkhouse as shown on page 5. #130032 \$6.95

Sport Bottle—

Handy push-pull cap with screw on lid. White with black Yellowstone Institute and Yellowstone Association logos imprinted on opposite sides.

#130034 \$2.40

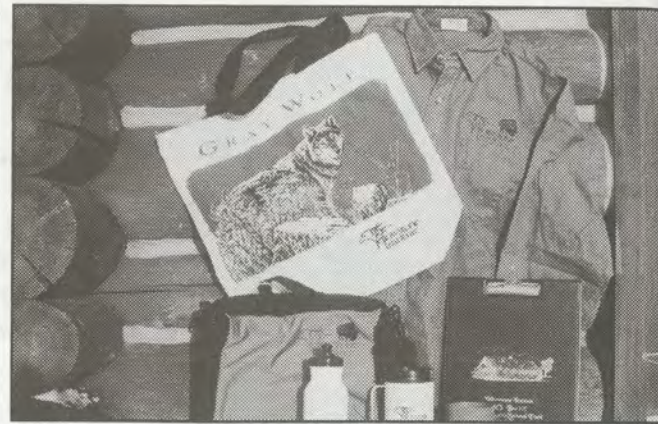
Deluxe Auto Travel Mug—

Foam-insulated 12 oz. mug keeps beverage hot/cold longer and fits most built-in vehicle cup holders. Features a closable lid with locking mechanism that will resist spills. Granite with black Yellowstone Institute and Yellowstone Association logos imprinted on opposite sides. #130035 \$6.00

Plastic Thermal Coffee Mug—

This 12 oz. mug is made of durable yet lightweight plastic and is shatterproof. Thermal feature provides four times the insulative qualities found in ceramic mugs, and is microwavable. Teal green with tan imprint of a Lamar-Buffalo Ranch log cabin on one side and the Yellowstone Institute logo on the other.

#130036 \$3.50



Book bag, denim shirt, vinyl clip folder, thermal coffee mug, sport bottle, and field notebook

Photo by Pam Gontz

Field Notebooks—

A Cordura case covering an 8.5" x 11" 3-ring binder. There are pockets for pens, business cards, calculator, and more; secured with a large zipper. It keeps those notes in order and in a protected easy to find place. Features a full size zippered pouch pocket on the outside and a detachable shoulder strap. Case is made with luggage quality Cordura which is waterproofed and extremely durable. **Colors:** Teal, Burgundy, Forest Green, and Royal Blue, all with black trim. Imprinted with Yellowstone Institute logo.

#130014 \$50.00

Yellowstone Institute Clothing and Gift Item Order Form — YI/C97

Item #	Description	Size	Color	Alternate Color Choice	Qty	Price	Total

Returns—If you aren't satisfied, merchandise can be returned for exchange or refund within two weeks of its receipt. Shipping fees are not refundable. **Substitutions**—To serve you better, we reserve the right to substitute goods of equal or better value, as necessary.

Amount of Order	US Postage and Handling
from \$ 0.00 to 24.00	\$3.75
from \$25.00 to 34.99	\$4.25
from \$35.00 or more	\$5.00

Subtotal _____
☐ Check here if entitled to a 15% Member's discount _____
 Wyoming residents only: add 4% sales tax _____
 Postage and Handling _____
TOTAL _____

For Foreign Orders we suggest you use your MasterCard or Visa, specify surface or air delivery, and we will add the postage as needed. Please be aware foreign postage is significantly higher than domestic. For example, a 2 pound package airmail to Europe would cost \$12.00; surface \$5.08.

Name _____
 Address _____
 City _____
 State _____
 Zip _____
 Daytime phone _____

Payment by: ☐ Check ☐ Visa ☐ MasterCard ☐ Discover

Credit Card Number _____

Expiration Date ____ / ____

Signature _____

Books, Maps, and Pamphlets



about Yellowstone National Park

These titles and many more are available at the
Yellowstone Institute store located at our facility in Lamar Valley,
at Visitor Centers throughout the Park,
and by mail through the Yellowstone Association.
Yellowstone Association members receive a 15% discount on all purchases.

Books by Institute Instructors

A Life in Hand, Hinchman. This illustrated handbook will let you discover yourself through writing and drawing, includes a blank journal for your writing and illustrations. 160 pages. #10121 \$19.95

Death in Yellowstone—Accidents and Foolhardiness in the First National Park, Whittlesey. Yellowstone's historical archivist details 300 deaths caused by everything from earthquakes, bears, and poison gas, to lightning. 276 pages. #10441 \$16.95

Field Guide to Mammal Tracking, Halfpenny. Given an outstanding review by the *New York Times*, this is more than just a field guide. You can learn to understand tracks, interpret clues, and read the trails that animals have left behind. 163 pages. #10254 \$14.95

Interpreting the Landscape of Grand Teton and Yellowstone National Parks: Recent and Ongoing Geology, Good and Pierce. This book describes the creation of the mountain ranges of the Greater Yellowstone Ecosystem by glacial ice and volcanic fires. The text, photography, and graphics demonstrate the product of volcanic eruptions, glaciation, and earth movements. 58 pages. #10466 \$12.95

Lost in Yellowstone—Truman Evert's "Thirty-Seven Days of Peril," Whittlesey. The high adventure of Evert's separation from an 1870 Yellowstone expedition; a tale of hardship, survival, and rescue. Augmented with biographical and background material. 62 pages. #10428 \$10.95

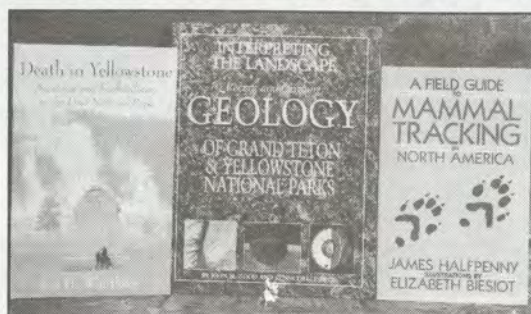


Photo by Pam Gontz

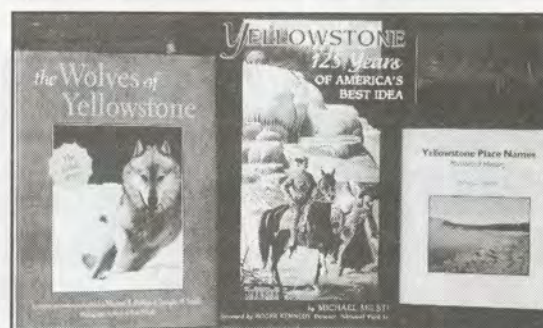


Photo by Pam Gontz

New Releases

Buffalo Nation, Geist. Tells how millions of buffalo were killed in the nineteenth century, followed by their amazing comeback. Also examines the natural history of the buffalo, underscoring its importance in North America. Hardcover, 144 pages. #10474 \$35.00

The Wolves of Yellowstone, Phillips and Smith. Written by Wolf Restoration Project leaders Michael K. Phillips and Douglas W. Smith, this book tells the inside story of the restoration of wolves to Yellowstone. It contains the biologists' personal accounts, as well as previously unpublished photographs, field notes, and historical documents. Hardcover, 128 pages. #10476 \$24.95

Yellowstone: 125 Years of America's Best Idea, Milstein. From the rarely-seen archives of Yellowstone National Park, the story of early experiences unfolds. One hundred thirty-five photographs in color and black and white—including photographs of an assortment of antique souvenirs and postcards. 112 pages. #10479 \$19.95

Yellowstone Place Names—Mirrors of History, Haines. This book devotes chapters to the place names drawn from Native Americans, fur trappers, prospectors, explorers, modern visitors, park concessionaires, and employees. Each chapter is preceded by a brief review of the historic period and its relationship to the park area. 318 pages. Hardcover, #10461 \$32.50
Softcover, #10447 \$17.50

Wolves

Society of Wolves, McIntyre. This publication offers up-to-date information on wolves and insights on political issues surrounding this much-talked about animal as well as the history of human attitudes toward the wolf. 127 pages. #10120 \$29.95

War Against the Wolf, McIntyre. Historic documents, journal entries, essays, profiles, and letters put into context North America's obsession with exterminating its wolf population. Historic photos, maps, index, and resource list. 495 pages. #10418 \$24.95

WOLF: Return to Yellowstone, Milstein. This book takes you along on the ruthless campaign of decades ago to exterminate wolves from the American West and, finally, the decision to bring them back. 96 pages. #10414 \$14.95

Wolf Wars, Fischer. The intriguing story of how the Yellowstone wolf was hated into extinction, the struggle with Congress, and, finally, the master predator's welcome return. 183 pages. #10015 \$12.95



Photo by Pam Gontz

Mammals

Large Mammals, Craighead. This booklet contains color photographs of Yellowstone's common large mammals. Included are descriptions of the animals along with information on habitat, tracks, food habits, enemies, and reproductive biology. 31 pages. #10247 \$1.95

Track of the Coyote, Wilkinson. This informative text covers social structure within a pack, life cycle information, and behavioral patterns. 138 pages. #10361 \$14.95

Yellowstone Wildlife: A Watcher's Guide, Wilkinson. With beautiful color photographs, this is a great guide for wildlife fans. The author reveals over 45 animals, preferred habitats, best places to be found, feeding habits, and more. 95 pages. #10262 \$11.95

The Yellowstone Wolves, The First Year, Ferguson. This is the story of the wolves' first year in Yellowstone. The wolves tell their own story, revealing the adventure, tragedy, survival, and hope of their reintroduction to Yellowstone National Park. 174 pages. #10460 \$12.95

Pronghorn, Turbak. This book is a tribute to the pronghorn's tenacity, featuring habitat and behavior. 138 pages. #10457 \$15.95



Photo by Pam Gontz

Birds

Audubon Field Guide to North American Birds—Western Region, Udvardy. This field guide is fully revised with all new color photographs. Detailed descriptions of 544 western species have been brought up-to-date with the most recent American Ornithologists' Union listing. Illustrated with 676 full-color, high-quality nature photographs. 822 pages. #10034 \$18.50

Birds of North America: A Guide to Field Identification, Robbins, Bruun, Zim, and Singer. In this guide you will see exactly what you see in nature. Each bird is captured in full color with descriptive text on the facing page. 360 pages. #10035 \$11.95

National Geographic Field Guide to Birds of North America. This completely updated second edition guide includes all species known to breed in North America. The index in this guide includes a checkoff box beside the common-name entry for each species. Includes range maps and 220 plates. 464 pages. #10038 \$21.00

Peterson Field Guide to Hawks, Clark and Wheeler. This guide includes 39 species of North American hawks and other diurnal raptors, including eagles, falcons, and vultures. Color paintings and photos with detailed description of each species are included along with range maps showing where each species can be found. 198 pages. #10039 \$15.95

Peterson Field Guide to Western Birds, Peterson. This third edition with new paintings, 441 new maps, and new facing page format includes 165 full-color paintings showing over 1,000 birds from 700 species. The text has been updated and revised. 432 pages. #10040 \$16.95

Peterson First Guide to Birds, Peterson. This guide contains 188 common and conspicuous birds of North America in full color illustrations and clear descriptions of each bird. 128 pages. #10041 \$4.95

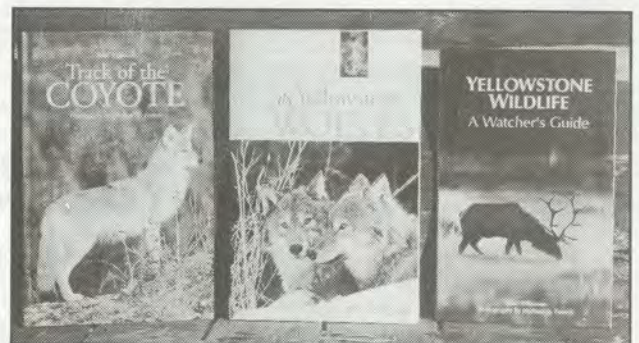


Photo by Pam Gontz

Hiking

Day Hiking Yellowstone, Carter. Complete descriptions of 20 great short hikes, including history, geology, and wild-life facts, some maps. 80 pages. #10196 \$3.95

Yellowstone Trails: A Hiking Guide, Marschall. This backcountry guide covers over 1,000 miles of park trails. Contains useful information on backcountry rules and how to hike through bear country. Updated edition. 176 pages. #10199 softcover \$5.95
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Day Hiking Grand Teton, Carter. Complete descriptions of 15 great hikes, including history, geology, plant, and wild-life facts, some maps. 87 pages. #10200 \$3.95

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History

The Discovery of Yellowstone Park, Langford. A journal of the Washburn Expedition to the Yellowstone and Firehole Rivers in the year 1870. This book brings back into print one of the principal sources of information on the exploration of the Yellowstone region and its establishment as America's first national park. #10211 \$8.95

The Life of Ferdinand Vandeveer Hayden, Foster. A look into the legendary explorer who is said to have "put Yellowstone on the map." This is an engrossing story in which the author vividly portrays the personal hostilities and professional jealousies in which Hayden was embroiled. 443 pages. #10391 \$29.95

Time Exposure: The Autobiography of William Henry Jackson. This third edition will ensure the name William H. Jackson—soldier, bullwhacker, pioneer Yellowstone photographer, and sketch artist, will long be remembered. 374 pages. #10431 \$16.95

Yellowstone Ski Pioneers—Perils and Heroism on the Winter Trail, Schullery. This book is a collection of stories and comments from Yellowstone's ski pioneers and contains many extended quotations from those early Yellowstone travelers, administrators, and others. 158 pages.

#10412 softcover \$8.95
#10413 hardcover \$17.50

The Yellowstone Story, Haines. Comprehensive in its scope and entertaining in its detail, these two volumes are vital reading for all visitors and historians interested in the colorful history Yellowstone National Park.

#10235 Volume I, 408 pages. \$19.95
#10236 Volume II, 568 pages. \$19.95

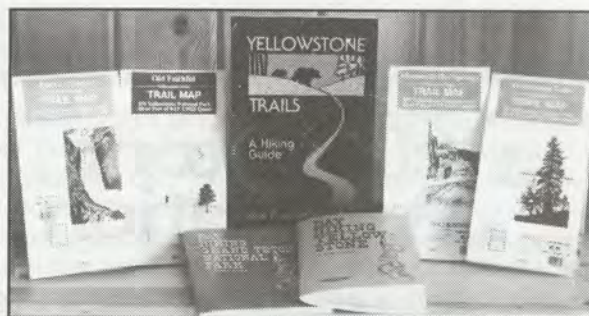


Photo by Pam Gontz

Geology

Agents of Chaos, Harris. This book explains where and why Americans can expect their lives to be disrupted by natural disasters and what they can do to mitigate their effects. Discover the Earth in geologic terms—look at gigantic earthquakes, volcanic eruptions, meteorite impacts, and other cataclysmic events affecting millions of lives. 260 pages. #10168 \$12.95

The Geysers of Yellowstone, Bryan. This completely revised guide describes in detail each of the more than three hundred geysers in Yellowstone National Park. 463 pages. #10179 \$19.95

Roadside Geology of Montana, Alt & Hyndman. This book provides new interpretations of the Rocky Mountains based on modern theories. Illustrated with maps, cross-sections, diagrams, and photographs. 149 pages. #10185 \$14.95

Roadside Geology of the Yellowstone Country, Fritz. Covers geologic formations along all roads in Yellowstone and all major roads leading to the North, East, and West Entrances of the park. 149 pages. #10186 \$12.00

Roadside Geology of Wyoming, Lageson and Spearing. This book, a story of how Wyoming came to be, describes Wyoming's rocks and landscapes from its endless plains, to mountains that challenge the sky, to badlands as colorful as any painting. 271 pages. #10195 \$15.00

Geology of the National Parks—Fourth Edition, Harris and Tuttle. This book was developed for those who use it to get right into the parks and learn about geology as they go along. Explanations of rocks and landscapes in the park offer to beginners in geology vivid examples of geologic processes. Illustrated by black and white photographs, maps, and diagrams. 652 pages. #10174 \$39.95



Photo by Pam Gontz

The Yellowstone Association

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Videos

Canis Lupus Returns, University of Wyoming, 58 minutes. This documentary shows how the wolf recovery plan is implemented—from capture to release, to monitoring and enforcement activities by government officials. #20049 \$24.95

The Complete Yellowstone, Finley-Holiday Films, 60 minutes. Enjoy Yellowstone's unrivalled scenic and thermal features in full color and sound—spectacular geyser eruptions, roaring rivers, thundering waterfalls, and the park's astounding menagerie of roaming wildlife. #20055 \$24.95

Realm of the Coyote, National Geographic, 60 minutes. Cain's yearlong adventure of hardship and triumph is set against the beauty of Yellowstone's changing seasons. #20047 \$24.95

Yellowstone—The Legacy of a Park, 4-Best (USA) Corp. This video is an informative guide to the natural wonders and human history of Yellowstone including the reintroduction of gray wolves in 1995. #20052 \$24.95

Wildflowers of Yellowstone, Jensen/Schenck Productions, 53 minutes. This video features 71 species of wildflowers plus many other scenic shots of wildlife and natural features. Featured with the flower identifications are many uses for the plants favored by the Native Americans and early settlers. A checklist of flowers is provided. #20021 \$24.95

Screensaver

Yellowstone Magic, Terra Productions. This popular new item is available on CD-ROM and will work on either Macintosh or Windows platforms. It features 25 beautiful images of Yellowstone, as well as an option to view educational text about the park and the Yellowstone Association. #100013 \$14.95

Calendar

Yellowstone National Park, Golden Turtle Press. This 14-inch by 10-inch calendar contains numerous photographs portraying Yellowstone National Park. #60972 \$11.95



Photo by Pam Gontz

CARNIVORES OF THE GREATER YELLOWSTONE ECOSYSTEM: 804

August 4-8 **\$245 (Member's fee \$235)**
Location: Lamar-Buffalo Ranch **Limit: 15**
Credit available: U or G, 2 semester hours, ISU
Instructor: Tim Clark, Ph.D.

This class provides an introduction to the carnivores of the Greater Yellowstone Ecosystem and their management. Grizzly bears, black bears, wolves, coyotes, foxes, mountain lions, lynx, bobcats, wolverines, otters, fisher, badgers, marten, black-footed ferrets, weasels, and related carnivore species reside in the Greater Yellowstone Ecosystem. These species are generally secretive and occur at low densities, so it is unlikely we will see many of them, except for coyotes, badgers, and a few others. Some species are listed as threatened or endangered under the Endangered Species Act. The history, scientific research, and relationships of carnivores to humans will be examined. Small population biology and management (for example, population viability assessment) will be reviewed. The conservation and management of grizzly bears and wolves are currently the focus of much attention, and this will be reflected in the class. Also, current and historic agency management and regional and national policy will be examined. It is only from this larger historic and policy context that current management and future trends can be understood.

The course will feature guest speakers, lectures, readings, videos, extensive discussion, and field trips to the habitats used by many of these species. This course is designed for beginners and advanced students. The course on the first day of class will meet at the Lamar facility at 9:00 am. *Fee includes \$15 for course materials.*

BACKPACKING THE BEARTOOTH—THE "LEAVE NO TRACE" WAY: 805

August 4-8 **\$295 (Member's fee \$285)**
Location: Beartooth Wilderness **Limit: 10**
Instructors: Michael Bartley & Marla Darby

This five-day course is for intermediate backpackers who wish to explore some of the most spectacular and rugged backcountry in the Greater Yellowstone Ecosystem. Besides the sheer joy of being immersed in wilderness, the main goal of this journey will be to provide the student with the principles, theories, and skills of Leave No Trace (LNT). We will build upon the

minimum impact techniques developed by the National Outdoor Leadership School in conjunction with the federal land use agencies' LNT program. Upon successful completion of this course, the participants will receive certification as "Trainer" of Leave No Trace. It is our hope that you will share your LNT knowledge and skills with other backcountry users in both formal and informal settings. Other ways in which you can participate in the Leave No Trace program will be discussed during the trip. In addition to LNT, there will be ample time to augment your back-country skills and learn more about the region's natural history. You can expect hikes, with a full pack, of 5-7 miles with elevation gains up to 1,500 feet. Much of the terrain is boulder strewn with small stream crossings and at elevations of 9,000 to 11,000 feet. If you have minimal experience but are interested in taking this course, please contact the Institute office for more detailed information on the physical requirements of this course. On the first day of class the course will meet at the Lamar facility at 8:00 am. *Participants provide their own backpacking gear and food. A complete equipment list will be provided in the student packet. Participants need to secure their own campsite or lodging before and after the course. The nearest lodging is the Silver Gate/Cooke City, Montana, area. Institute cabins will not be available for this course.*

HORSEPACKING: GUSTAVUS C. DOANE MEMORIAL RIDE—SNAKE RIVER COUNTRY: 806 **August 4-8 (see description on pg 31)** **NEW**

FAMILY DAYS IN THE THERMAL BASINS: 807 **August 5-7** **Location:** Madison Campground **Limit: 20** **Adult-\$142 (Member's fee \$132)** **Child-\$79 (Member's fee \$69)**

Instructors: Sandra Nykerk & Jim Garry

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 which 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. Field trips will include hikes of up to three miles but the final itinerary will be based on the ages and abilities of class participants. Critter 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.

Class begins at 9:00 am on August 5 and is based at the Madison Campground. Children in this course should be at least six years of age. *Participants will caravan for field trips. 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.*

FLY FISHING—MORE EXPERIENCED: 808 **August 8-10 (see description on pg 19)**

EPISODIC HISTORY OF YELLOWSTONE LAKE: 809

August 9-10 \$106 (Member's fee \$96) Limit: 15

Location: Yellowstone Lake Area

Credit available: U, 1 semester hour, MSU

Instructor: Wayne Hamilton, Ph.D.

Since the melting of glacial ice at Yellowstone Lake about 15,000 years ago, the level of the lake has been dominantly controlled by bedrock at LeHardy Rapids—the effective outlet located at the midline of the Yellowstone caldera. Abandoned shorelines of the lake, like bathtub rings, are found as much as 30 meters above and below the present shore. These elevated and submerged shorelines reveal the complex history of caldera unrest atop the largest active volcano in the Western Hemisphere.

By visiting several lake shore localities each day and evaluating the sedimentary record in detail, you will see and come to understand evidence of early ice margins, stream deltas, abandoned beaches, deepwater deposits, 13,000 year old shoreline vegetation, buried soils, recent volcanic ash, breccias from steam explosions, and much more. You will be joining an ongoing investigation, so you will be personally involved in making new discoveries. Day hikes include off-trail scrambles. The course on the first day of class will meet at the Fishing Bridge Visitor Center at 9:00 am. *Participants need to secure their own campsite or lodging. The nearest lodging is the Lake or Canyon area. The Institute cabins are not available for this course.*

HORSEPACKING: TRAPPER TRAILS THROUGH THE THOROUGHFARE: 810

August 10-14 (see description on pg 31)

FINDING YOUR OWN VOICE—A WILDERNESS WRITING EXPERIENCE: 811

August 10-14

\$213 (Member's fee \$203)

Limit: 15

Location: Lamar-Buffalo Ranch

Instructor: Dorothy Hinshaw Patent, Ph.D.

This four-day adventure is for anyone who loves nature and likes to write. The course goals are to increase powers of observation, improve descriptive writing skills, deepen personal trust and confidence, and stimulate creativity. Designed to expand our awareness of the natural world in Yellowstone as well as deepen our appreciation of the wildness within ourselves, this class will combine writing and experiential exercises, both indoors and outside, with group interaction and guided field trips. We will spend time at a variety of special spots not often found by the average visitor. There will be ample time to write and encouragement to share and learn from each other. This course begins at 7:00 pm, Sunday, August 10, at the Lamar facility.

GEOLOGY OF THE YELLOWSTONE COUNTRY: 812

August 11-15

\$245 (Member's fee \$235)

Limit: 15

Location: Lamar-Buffalo Ranch

Credit available: U or G, 1 semester hour, U of WY or U of MT

Instructor: David Fountain, Ph.D.

This course, conducted in the natural field laboratory of Yellowstone Park, will concentrate on the geological evolution of the area. Daily travel 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. Completion of an introductory geology course is preferable but not required. This course includes a 1½-2 mile day hike up to Specimen Ridge, with an elevation gain of 800 feet. On the first day of class the course will meet at the Lamar facility at 8:00 am.

lowstone Park, will concentrate on the geological evolution of the area. Daily travel 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. Completion of an introductory geology course is preferable but not required. This course includes a 1½-2 mile day hike up to Specimen Ridge, with an elevation gain of 800 feet. On the first day of class the course will meet at the Lamar facility at 8:00 am.

HORSEPACKING: WASHBURN EXPEDITION—YELLOWSTONE & HEART LAKES, THE ORIGIN OF A NATIONAL PARK: 813

August 14-18 (see description on pg 31)

THE LIVING STREAM: 814

August 18-20

\$152 (Member's fee \$142) Location: Lamar-Buffalo Ranch

Credit available: Credit Pending

Limit: 15

Instructor: Bert Cushing, Ph.D.

NEW

This course will explore the functioning of streams as entire ecosystems. It will explain how the various biological communities found in different size streams are dependent upon the physical, chemical, and biological characteristics of the entire watershed, and, most importantly, how they are linked in a continuum from the headwater reaches to the river's mouth. A slide-illustrated lecture will set the stage for the field and laboratory work. We will then visit different sized streams where we will discuss the information presented in the lecture, collect aquatic insects, learn how to identify the insects in the lab, and determine how well the information we gather fits into the current popular concepts of stream ecosystems in use today. The information learned in this class permits an enhanced appreciation of how all aspects of the environment work together to produce the stream and its organisms; a truly holistic view of the function of these ecosystems. If you fish, it might not help you catch more fish, but should make the total experience more enjoyable. On the first day of class the course will meet at the Lamar facility at 8:30 am.

AUTUMN CANOEING IN YELLOWSTONE: 815

August 29-September 1

\$326 (Member's fee \$316)

Location: Shoshone Lake, Yellowstone Backcountry

Instructor: Scott Wood

Limit: 12

This four-day canoe trip across Lewis Lake and into magnificent Shoshone Lake, the largest wilderness lake in the lower 48, will provide interpretation of the lake environment and instruction on low-impact backcountry camping techniques. Canoeing skills such as strokes, portaging, safety, and tripping (how to pack a canoe) will be studied and an American Red Cross canoeing certification may be earned if desired. This trip is designed for beginners, and is of moderate physical difficulty, including a two-mile upstream pull of the canoes on the Lewis River, and travel in moderate winds. Class will start from the Lewis Lake campground boat dock on the morning of August 29 at 9:00 am. *Fee includes all canoeing equipment, group camping gear, and food. The Institute cabins are not available for this course.*

WILD EDIBLE PLANTS & MEDICINAL HERBS: 816August 30-Sept 1
NEW

(see description on pg 10)

AUTUMN WILDLIFE PHOTOGRAPHY: 901

September 8-12

\$295 (Member's fee \$285)

Location: Mammoth Hot Springs**Limit:** 15**Instructor:** Linda DeLay-Joseph

In this five-day class, you will have a chance to photograph Yellowstone's abundant wildlife. Based out of Mammoth and scheduled during the height of the elk rut, students will have the opportunity to observe and photograph bugling and breeding behavior. Different photographic techniques will be utilized during this course through daily assignments. Wildlife ethics and sensitivity to the environment will be discussed and put into practice as we photograph. The basic thrust of the course, however, is towards developing a more "creative eye"; to not just photograph an animal, but to make a statement with your image, whether dramatic or subtle. Composition, lighting, filters, and equipment will be addressed through individual critiques and slide presentations. Class will begin at 9:00 am on September 8 at Mammoth Hot Springs. *Participants need to secure their own campsite or lodging in Mammoth or in Gardiner. Institute cabins are not available for this course. Fee includes \$15 for course materials.*

HORSEPACKING: THE NEZ PERCE TRAIL—MIRROR PLATEAU: 902

September 10-14 (see description on pg 31)

ANGELS FROM ECHINUS—EXPLORING THE MYSTERIES OF NORRIS GEYSER BASIN: 903

September 15-17

\$152 (Member's fee \$142)

Location: Mammoth Hot Springs**Instructor:** Carolyn Duckworth**Limit:** 15

Timed to coincide with the harvest moon, we'll experience one of the world's most unique thermal areas as few people do. We'll begin the afternoon of September 15 with a daylight tour of the basin, then remain at Norris for sunset and the rising of the moon, and a moonlit walk through the steamy, sizzling basin that can change character with just a shift in the wind. During the next two days, we'll continue exploring the history and hot waters of Norris—including another moonlit walk the night of the September 16. We'll also spend time observing the thermal features and taking notes about their behavior and rhythm. On the first day of class the course will meet at the Mammoth Hot Springs Visitor Center at noon. *Participants need to secure their own campsite or lodging in Mammoth or in Gardiner. Institute cabins are not available for this course.*

WILDLIFE OBSERVATION—FALL: 904

September 17-20

\$167 (Member's fee \$157)

Location: Mammoth Hot Springs**Limit:** 15**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 sched-

ule will feature early morning and evening field trips, short mid-day hikes, and programs on various wildlife topics plus related issues and controversies. 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 begin at 1:00 pm on September 17 at Mammoth Hot Springs, and run until 2:00 pm on September 20. *Participants need to secure their own campsite or lodging in Mammoth or in Gardiner. Institute cabins are not available for this course.*

FLY FISHING IN THE FALL: 905

September 19-21

\$192 (Member's fee \$182)

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. Students 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 on the first day of class will meet at Mammoth Hot Springs at 8:30 am. *Participants need to secure their own campsite or lodging in Mammoth or in Gardiner. Institute cabins are not available for this course. A Yellowstone Park fishing permit, available at most park visitor centers, is required.*

GRAND TETON PHOTOGRAPHY: 906

September 24-27

\$212 (Member's fee \$202)

Location: Grand Teton National Park**Limit:** 15**Instructor:** Pete Houdeshel

Lodged in rustic cabins along the shores of Jackson Lake at the base of the Grand Tetons, this course will focus on some of the West's most dramatic scenes nestled in the Yellowstone ecosystem. September in the Tetons means bugling elk, uncrowded trails, and rich fall colors highlighted by fresh dustings of snow on the 14,000 foot peaks. Though most class time will be spent in the field, lively slide presentations will provide guidance for producing great photography. Special emphasis will be spent on composition, lens selection, and enjoying the outdoors with a camera. Class will begin at 2:00 pm on September 24 at the Signal Mountain Lodge and end around 1:00 pm on September 27. *Participants need to secure their own lodging. Class will base out of the Signal Mountain Lodge in Grand Teton National Park. Information on lodging can be requested from the registrar.*



Photo by Pam Gontz

1997 HORSEPACKING SEMINARS

HORSEPACKING SEMINARS Horsepacking in, for, and about Yellowstone's Backcountry

The Yellowstone 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 soul 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 students 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. Due to park management policies, trip locations may change on short notice due to backcountry conditions.

July 7-9	Family Horsepacking—Doing Things Together: 706
July 14-18	Wildland Heritage—Hellroaring & the Black Canyon: 714
July 28-August 1	The Nez Perce Trail—Traditional Route, Upper Lamar: 730
August 4-8	Gustavus C. Doane Memorial Ride—Yellowstone's Snake River Country: 806
August 10-14	Trapper Trails Through the Thoroughfare: 810
August 14-18	Washburn Expedition—Yellowstone & Heart Lakes, The Origin of a National Park: 813
September 10-14	The Nez Perce Trail—Mirror Plateau: 902

Instructors: Richard Clark, Ph.D., Outfitter, Biologist (all but course number 714)
Ruth Rudner, Writer, Journalist (course number 714)

Limit: 8 or 10 depending on trip

Family class (706): \$600 per person (Member's fee \$590 per person)

5-day class (all others): \$695 per person (Member's fee \$685 per person)

FAMILY HORSEPACKING—DOING THINGS TOGETHER: 706

July 7-9

An unforgettable shared adventure for members of a family. Instruction will be available in horseback riding, basic camping, and in nature study. Several mini-lessons will also be presented to assist parents in being more effective family leaders. With instruction, participants will saddle, bridle, and hobble their own horse. Each family will set up their own tents and take turns with camp chores. Each family will cook and clean up one meal for the group. This is a participatory course and is not catered. The course is staged in the northern section of Yellowstone in the Hellroaring area. Class will begin on the first day at 10:00 am at the Hellroaring trail head in the northern part of the park and end around 3:00 pm on the last day.

HORSEPACKING: WILDLAND HERITAGE—HELLROARING & THE BLACK CANYON: 714

July 14-18 Instructor: Ruth Rudner, Writer, Journalist

"It's a hell roarer," Prospector A. H. Hubble reported to his partners in 1867, after discovering the wide, wild creek running into the Yellowstone River from the Absaroka Mountains to the north. Although a few trappers had been in Yellowstone before them, Hubble and his partners were among those prospectors whose dreams of gold led them early enough into the region to name things. Making use of the Bannock Trail and its branches to get there, Hubble's party explored the region east

and west of Hellroaring Creek, the area of this course. The Bannock Trail—ultimately the Cooke City road—passes south of the Hellroaring region, then heads north along its eastern boundary. Long used by Indian people, it is responsible for much human history in the Park. Prospectors, explorers, ranchers, miners, poachers, and tourists all followed the route. Tourists still do, but those who step off the traveled way enter a diverse wildland of river, ancient rock, high meadow, forest, and sagebrush desert. The Black Canyon of the Yellowstone, which cannot be seen from any road, cuts magnificently along the region's southwestern edge.

Using the Hellroaring region as the model for wildland, the course intent is to explore our human connectedness to wildland and the ethic we bring to it or take from it. Because the more intimate we are with the "pieces" of wildland, the easier it is to see the "whole" of it, we will spend time familiarizing ourselves with the region's plants, trees, rocks, wildlife, and wildlife habitat. Through the arts of observation (with all the senses) and language, we will try to establish an intimacy with the place that, ultimately, translates to all wild places. We will learn the human story of this region and explore its place in wildness. Activities will include short nature walks, plant and animal identification, writing, reading, and group discussions. Class will begin on the first day at 10:00 am at the Hellroaring trail head in the northern part of the park and end around 3:00 pm on the last day.

Horsepacking in, for, and about Yellowstone's Backcountry

HORSEPACKING: THE NEZ PERCE TRAIL—TRADITIONAL ROUTE, UPPER LAMAR: 730 July 28-August 1

In August of 1877 several hundred Nez Perce American Indians entered Yellowstone in flight from the United States Army. To this day their exact route is not known. In this course the traditional route through Pelican Valley and into the upper Lamar River will be explored. The pros and cons of this route being, in fact, the route taken by the Nez Perce will be looked at, discussed, and shared. The course begins on the north shore of Yellowstone Lake and ends at the Soda Butte trailhead near the Yellowstone Institute facility at the Buffalo Ranch. Activities include readings, campfire presentations, and group discussions along the horsepack along the Ne Mee Po Trail. Class will begin on the first day at 10:00 am at the Turbid Lake trail head near the north end of Yellowstone Lake and end around 3:00 pm on the last day.

HORSEPACKING: GUSTAVUS C. DOANE MEMORIAL RIDE—YELLOWSTONE'S SNAKE RIVER COUNTRY: 806 August 4-8

In November of 1876 Lieutenant Gustavus C. Doane and soldiers from his command out of Fort Ellis, Montana, launched a small boat, carried in by horses, into the icy waters of Yellowstone's Snake River to continue an ill-fated expedition to explore the drainage of the Columbia River, an expedition that Doane had sent himself on. Doane is a prominent and colorful figure in Western Americana, and mountains in both Yellowstone and the Tetons are named for him. His name appears on the pages of history describing the creation of Yellowstone National Park, the events of the 1877 Nez Perce War, and the battle and cleanup at Little Bighorn.

G.C. Doane was challenged numbers of times during his military career. He applied for and wanted very badly to be assigned command at Yellowstone National Park, an event that just never happened. And there was his ill-fated trip down the Snake River. This course is a memorial to Lieutenant Doane and his life on the western frontier. But it is also a memorial to all who have explored the wildlands of western America including those of us who will ride this trail. The horsepack down the Snake River will be supplemented with readings, campfire presentations, and group discussions centered on the American frontier era in Yellowstone. Class will begin on the first day at 10:00 am at the Heart Lake trail head in the southern part of the park and end around 3:00 pm on the last day.



Photo by Don Nelson

HORSEPACKING: TRAPPER TRAILS THROUGH THE THOROUGHFARE: 810

August 10-14

Names like Jim Bridger, Tom Fitzpatrick, Hugh Glass, and Osbourne Russell were attached to those who used Two Ocean Pass and the east shore of Yellowstone Lake to migrate into the interior of the Yellowstone plateau to trap the coveted mountain beaver. 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 where the group will be picked up at Columbine Meadows by boat and ferried across the lake to Bridge Bay. Class will begin on the first day at 10:00 am at the Turpin Meadows trail head south of the park and end around 3:00 pm on the last day.

HORSEPACKING: WASHBURN EXPEDITION—YELLOWSTONE & HEART LAKES, THE ORIGIN OF A NATIONAL PARK: 813 August 14-18

Discussion will center on the birth of an idea, an idea of a "national park," that blossomed out of the 1870 travels of nine citizens of Helena, Montana, through the Yellowstone country. While the experiences and adventures of this party are recounted, the country that inspired them to want to share those experiences and adventures with their posterity and fellow citizens to follow will be visited. The course begins at Bridge Bay where a boat will transfer participants to Columbine Meadows. Participants will ride horseback along the east and south shores of Yellowstone Lake, cross the Continental Divide, and then traverse the Heart Lake area. Class will meet at the Heart Lake trail head at 10:00 am and from there will be shuttled by Yellowstone Institute van to the Bridge Bay Marina on Yellowstone Lake. The course will end around 3:00 pm on the last day.

HORSEPACKING: THE NEZ PERCE TRAIL—MIRROR PLATEAU: 902 September 10-14

In August 1877, several hundred Nez Perce American Indians entered Yellowstone in flight from the United States Army. To this day their exact route is not known. In this course one possible alternative will be examined that follows Pelican Creek up to its origins on the Mirror Plateau. Evidence supporting this route will be reviewed. Discussions will consider topography and logistics that might contribute to decisions to follow this route by the Nez Perce. The trip through the area will include a loop through Broad Creek as well as Pelican Creek, and back to the Turbid Lake trailhead. Class will begin on the first day at 10:00 am at the Turbid Lake trail head on the northern end of Yellowstone Lake and end around 3:00 pm on the last day.

An equipment list will be provided in a student packet which will be mailed out for each course. Participants need to secure their own campsite or lodging before and after the course. Institute cabins will not be available for these courses.

A Winter Welcome

As the seasons change and winter moves in, Yellowstone country is transformed into a beautiful snowscape, offering the visitor rewarding experiences available to relatively few people. Deep, dry powder snow smoothes the terrain into a gently rolling world of nearly perfect cross-country skiing. Elk and bison congregate for easy viewing, and thermal basins come alive with billowing steam and ghost trees. This fresh, invigorating winter world creates a whole new place and time for nature study, photography, and backcountry adventure. The Yellowstone Institute conducts courses this time of year so that you can learn about this wonderful season and all it has to offer. We have several courses designed to meet a variety of interests and experience levels, all based out of the heated cabins at our Lamar-Buffalo Ranch facility.

Institute winter courses provide you with an opportunity to learn about this special place in a stimulating, fun, and safe environment, full of the camaraderie that comes so easily this time of year.

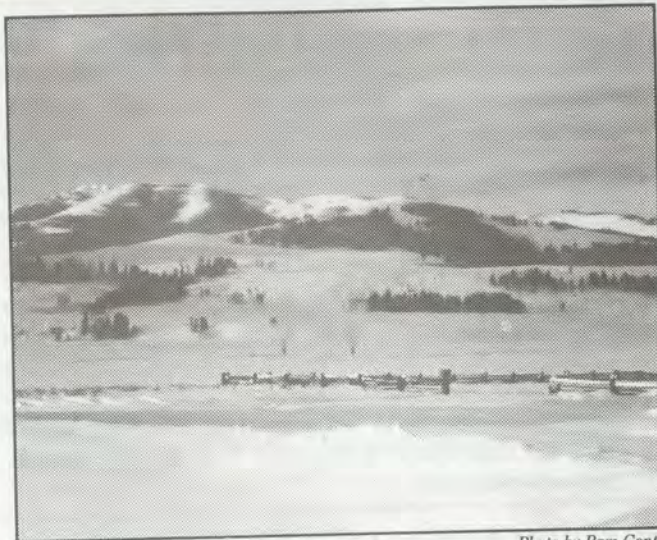


Photo by Pam Gontz

WINTER WILDLIFE & NATURE PHOTOGRAPHY: 101

January 9-12, 1998

\$295 (Member's fee \$285)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Linda DeLay-Joseph

While based out of the heated cabins at the Lamar Buffalo Ranch, students will have four days to photograph and explore the dramatic, subtle, and mysterious moods of Yellowstone's snowscapes, as well as the wildlife that abound in the northern part of the park. Bighorn sheep, elk, bison, and waterfowl congregate in the area, making observation and photography accessible to all. Learning winter photographic techniques and exploring new ways of thinking and seeing will be the emphasis of this course as we shoot specific daily assignments. This will be accomplished through slide presentations, individual critiques, and field work. Students will travel by van or snowcoach to various locations but will also ski short distances on relatively flat terrain of up to one mile. A snowcoach trip to the Norris Geyser Basin is included in the tuition fee where spectacular landscapes and macro photography are the main focus of the day. The course on the first day of class will meet at the Lamar facility at 9:00 am and end during the afternoon on the last day. *Participants may stay at the Lamar cabins—see information on cabins on pg 34. Closest accommodations other than Lamar would be the Silver Gate/Cooke City, Montana, area—23 miles to the east. Fee includes \$15 for course materials. Participants need to provide their own ski equipment—see pg 34.*

HOW MAMMALS SURVIVE WINTER: 102

January 24-25, 1998

\$120 (Member's fee \$110)

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 moun-

tain 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 on the first day of class will meet at the Lamar facility at 8:30 am. *Participants may stay at the Lamar cabins—see information on cabins on pg 34. Closest accommodations other than Lamar would be the Silver Gate/Cooke City, Montana, area—23 miles to the east. Fee includes \$5 for course materials.*

THE TRADITION OF WINTER STORYTELLING: 103

January 30-February 1, 1998 \$160 (Member's fee \$150)

Location: Lamar-Buffalo Ranch

Limit: 15

Instructor: Jim Garry

"There is a season unto everything under heaven," so says one of our oldest written collections of traditional stories. Winter is the season for storytelling. Coyote tales, and many other like them around the world, are traditionally told only during the winter. Now, with "the white land locked tight as a drum," the nights stretch long and cold, and our pace slows enough to give time for reflection. This is the season for the stories that require time to tell and stillness to think on. It is the obvious time for a storytelling class. A time not only to tell stories but to figure out what to tell and how to tell them. The Lamar Valley and the whole of the Yellowstone country are the sort of places where stories evolve. Bring your stories and/or your imagination to the Buffalo Ranch for a session of stories, of discussions about stories, and analysis of stories. On the first day of class the course will meet at the Lamar facility at 9:00 am. *Participants may stay at the Lamar cabins—see information on cabins on pg 34. Closest accommodations other than Lamar would be the Silver Gate/Cooke City, Montana, area—23 miles to the east. Participants need to provide their own ski and/or snowshoe equipment—see page 34.*

**EXPLORING THE YELLOWSTONE
LANDSCAPE ON SKIS: 201****February 5-8, 1998****\$215 (Member's fee \$205)****Location: Lamar-Buffalo Ranch****Limit: 15****Instructor: Bill Hopkins****NEW**

For the outdoor enthusiast, cross country skiing the Yellowstone backcountry can be a fabulous experience. The plateaus and river valleys of Yellowstone are ideal terrain for the nordic skier.

This course is aimed at, but not limited to, those who have some experience with alpine or nordic skiing. In addition to experiencing a range of cross country skiing skills, participants can expect to learn about winter ecology, avalanches (dynamics, avoidance, and rescue), dealing 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. On the first day of class the course will meet at the Lamar facility at 9:00 am. *Participants may stay at the Lamar cabins—see information on cabins on pg 34. Closest accommodations other than Lamar would be the Silver Gate/Cooke City, Montana, area—23 miles to the east. Participants need to provide their own ski and/or snowshoe equipment—see page 34. Fee includes \$10 for a snowcoach shuttle into the interior.*

YELLOWSTONE'S WINTER WORLD: 202**February 13-16, 1998****\$280 (Member's fee \$270)****Location: Lamar-Buffalo Ranch****Limit: 15****Credit available: U, 1 semester hour; MSU****Instructor: Don Nelson**

Immersed in the winter world of Yellowstone, this course is a detailed introduction to the field of snow ecology. Through classroom discussion and interpretive ski tours, you will learn about winter and how it affects the lives of animals and plants, how and where snow develops and why it changes over time, how avalanches influence backcountry travel, and how to maintain human comfort in winter climates. Much of every day will be spent on skis in the field analyzing snowpits, building a quinzhee snow shelter, and interpreting changes in plants and animals. We will spend one day with a snowcoach ride at the Canyon area where we will ski and observe Yellowstone's Lower



Photo by Pam Gontz



Photo by Pam Gontz

Falls in its beautiful winter splendor. You can expect a maximum of three to seven miles of skiing per day over gentle rolling terrain.

It is helpful, but not necessary, for participants to have introductory level cross-country ski experience. Informal lessons will be provided as necessary. On the first day of class the course will meet at the Lamar facility at 8:30 am. *Participants may stay at the Lamar cabins—see information on cabins on pg 34. Closest accommodations other than Lamar would be the Silver Gate/Cooke City, Montana, area—23 miles to the east. Participants need to provide their own ski equipment—see pg 34.*

**EXPLORING YELLOWSTONE'S NORTHERN
RANGE: WINTER ECOLOGY & SURVIVAL: 203****February 20-22, 1998****\$170 (Member's fee \$160)****Location: Lamar-Buffalo Ranch****Limit: 15****Instructor: Wayne Phillips****NEW**

This class will strive to improve your skiing and survival skills, while exploring the Northern Range Ecosystem. Skiing both on- and off-trail routes, this class 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 five to seven miles a day as we explore Yellowstone's beautiful Northern Range. Participants need to provide their own ski equipment, day pack, compass, shovel, and rescue transceiver (457 kHz) (optional). On the first day of class the course will meet at the Lamar facility at 9:00 am. *Participants may stay at the Lamar cabins—see information on pg 34. Closest accommodations, other than Lamar, would be the Silver Gate/Cooke City, Montana, area 23 miles to the east. Participants need to provide their own ski equipment—see pg 34.*

WINTER GENERAL INFORMATION



Photo by Pam Gontz

The Buffalo Ranch-Lamar Valley

For over 20 years the historic Buffalo Ranch, in the pristine northeast section of the park, has been the summer home of the Yellowstone Institute. Since the completion of our new, log sleeping cabins in 1994, the facility is now used for our winter courses, too.

Located amidst the beautiful elk and bison wintering grounds of the Lamar Valley, the ranch's heated, log sleeping cabins provide a cozy rest after a day in the field, made even cozier by the yipping of coyotes and maybe even the howling of wolves. An evening gathering around the woodstove in the director's cabin, along with the fully equipped kitchen and classroom building, create a relaxed, retreat-like setting in which to learn about Yellowstone in winter.

The road from Mammoth to Cooke City is open throughout the winter to wheeled vehicles, providing easy access to our facility, located 11 miles east of Tower Junction. With snowmobiles being restricted to other areas of the park, the Lamar area remains pristine and quiet in its solitude.

The sleeping cabins are new, 12' x 14' cabins with beds for 2-3 students. The cabins are kept warm and comfortable with efficient propane heaters, storm windows, and the natural insulation inherent in logs. Top it off with a warm sleeping bag and you're in for a comfortable night's rest. Each bed is equipped with a reading light, but there are no outlets for appliances. There are two pit toilets located near the cabins, and full bath facilities in the classroom building.

The historic bunkhouse, the center of our activities and located a short walk from the sleeping cabins, is heated and has three rest rooms with showers, a fully equipped kitchen, and two classrooms; one of which is used as a "mud room" during the winter. The classroom has chairs, tables, AV equipment, and a large TV with video player.

The kitchen is equipped for student use with two gas stoves, a microwave, a toaster, a blender and mixer, and all the pots and pans, dishes, and cooking and eating utensils you'll need. There are three medium-sized refrigerators for your use and lots of storage space for non-perishables. We provide coffee, tea, and cocoa; a big pot of coffee is ready each morning. There is an array of seasonings on hand, too. All you need to bring are simple, easy to prepare meals.

Silver Gate/Cooke City Area

You can buy gas, simple food supplies, and toiletries at the small villages of Silver Gate and Cooke City, Montana, located about 23 miles east of the Buffalo Ranch. They have motels, a couple of gas stations, restaurants, bars, and a convenience store.

Winter Weather in Yellowstone

Yellowstone is "real winter," often holding the nation's records for cold temperatures; but Yellowstone is a big place with great variation in temperature and snowfall. Depending upon where you are in the park, snow begins to pile up in November, and at most locations it doesn't begin to melt until late spring, except in the lower elevation valleys in the northern portion of the park. Snow depths of two to four feet or more are common in the areas where most of our ski trips take place. Even in a place with enough moisture to create great snow depths the air remains quite dry throughout the winter.

In November temperatures will drop below 20 degrees F almost every night. The deep winter period of December through February brings below zero readings frequently and, while rarely occurring park-wide, temperatures of 40 degrees below zero or colder occur almost every winter somewhere in the park.

During any given Institute winter course you can usually expect excellent snow conditions with temperatures ranging from above freezing to below zero, and heavy clouds to bright sunshine. Because winter weather in Yellowstone can vary from quite mild to extreme, it is wise to pay close attention to the clothing and equipment you select.

Winter Equipment

Having the proper equipment for spending a full winter day in the outdoors can make the difference between success and failure, comfort and pain. The layered use of synthetics and wool, with protection from the wind, is the goal of your clothing choices. Several loose fitting layers help you maintain a comfortable and dry body by having the flexibility necessary to preserve body heat in cold and windy conditions, while also preventing overheating and heavy moisture output during times of increased exertion. The layering principle is this: a layer next to the skin for wicking away perspiration; an insulation layer(s) for warmth; an outer layer for wind protection. Because of its moisture absorbing qualities, wearing cotton is not recommended, especially next to the skin. It can become a "death cloth" in certain situations. For the same reason, however, keeping a cotton bandanna handy for wiping sweat from the brow and fog from your glasses can be very useful.

Ski Rental

Cross-country ski rentals can be obtained from AmFac Parks & Resorts at 307-344-7311 or Park's Fly Shop in Gardiner, Montana, at 406-848-7314.

Mammoth Hot Springs/Gardiner Area

Before or after your class, you may wish to stay at the historic Mammoth Hotel, with its adjacent dining room and lounge. It is a full-service facility with cross-country ski rental, an ice skating area, hot tubs, snowcoach tours, gift shop, and a general store. Lodging reservations should be made as soon as possible. Call AmFac Parks & Resorts at 307-344-7311 for reservations. The town of Gardiner, Montana, is located five miles north of Mammoth. There are a number of restaurants, gas stations, gift stores, laundromat, and a grocery store available. A list of accommodations is available from the registrar. Camping is available in Gardiner and at the Park Service campground in Mammoth.

Instructor Profiles

Elaine Anderson, Ph.D., (*The Evolution, Ecology, and Future of the Wolf Family; Bears, Bones, Signs, & Stories*) is a research associate in zoology 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. In addition to general and medical entomology, he teaches courses in general and invertebrate zoology, and parasitology. He has published works in applied ecology and medical entomology, and most recently completed research on the biology and ecology of the Idaho said dunes tiger beetle, and a video on *The Chirping Crickets*.

Gene Ball (*Wildlife Observation—Spring; Wildlife Observation—Fall*) 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 (*Backpacking Yellowstone: The Gallatin Region; Backpacking in Grizzly Country; Backpacking the Beartooths: The "Leave No Trace" Way*) 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. A historian, naturalist, ursophile, and long time backpacker, he combines a passion for wilderness with practical know-how in sharing his knowledge of the Yellowstone region.

Tom Butts (*Bats of Yellowstone Park & Vicinity*) is a consultant wildlife biologist, writer, and educator. After receiving his M.S. in wildlife biology and management from the University of Montana, he worked nearly 10 years as a field biologist and a program director for the State of Montana before starting his own business. He has conducted bat studies for state and federal agencies and private corporations in Montana, Wyoming, and Nevada, and loves to introduce others to these fascinating creatures of the night.

Richard Clark, Ph.D., (*Horsepacking Seminars*) is a native of the Yellowstone country and has spent a good share of his life acquainting himself with the wildlands of Yellowstone. Dick has outfitted and guided professionally for over 35 years in the area. He is currently director of the Professional Guide Institute 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.

Tim Clark, Ph.D., (*Carnivores of the Greater Yellowstone Ecosystem*) is professor adjunct, Yale University, and on the board of directors of the Northern Rockies Conservation cooperative, Jackson, Wyoming. He has taught and carried out ecological and policy research for over 25 years in the Greater Yellowstone Ecosystem and internationally. He is interested in holistic, interdisciplinary problem solving in the conservation of species and ecosystems. He has published over 225 papers and several books and monographs. He is a former director of the Yellowstone Institute and has taught there since 1976.

Bert Cushing, Ph.D., (*The Living Stream*) now retired, was a Senior Research Scientist at the Pacific Northwest Laboratories and adjunct professor at Washington State University-Tri Cities. He has over 30 years of experience in studying streams and has published widely on this subject. He edited the book *River and Stream Ecosystems of the World*, and is past-president of the North American Benthological Society.

Marla Darby (*Backpacking Yellowstone: The Gallatin Region; Backpacking in Grizzly Country; Backpacking the Beartooths: The "Leave No Trace" Way*) is a graduate student in nutrition, exercise, and sport science at Colorado State University. She is an instructor for the National Outdoor Leadership School, for the outdoor adventures program of CSU, and has previously taught backcountry courses for the Yellowstone Institute. She is certified as a Master of the National Leave No Trace (LNT) program and as an Emergency Medical Technician. Marla's love and knowledge of the mountain environment make her an effective outdoor educator.

Linda DeLay-Joseph (*Autumn Wildlife Photography; Winter Wildlife & Nature Photography*) teaches for the California Museum of Science and Industry, and also teaches wildlife photography for the Santa Fe Workshops in New Mexico and for the Glacier Institute in Montana. She teaches photography to Girl Scouts in Southern California and has previously taught for the Palos Verdes Art Center and Cerritos College. She is a published photographer/writer with work in *Chelsea House*, *The Territory Ahead*, *SRF*, *The Explorer*, *Wyoming Wildlife*, and a photographer's guide, *Photographing the Ghost Town of Bodie*. Her limited edition images are represented by galleries in Montana and California.

Carolyn Duckworth (*Action in Lamar—A Weekend Introduction to Field Journals; Angels from Echinus—Exploring the Mysteries of Norris Geyser Basin*) has taught field journal and writing workshops for the National Wildlife Federation, the Nature Conservancy, the Montana Conservation Corps, and the University of Montana. She has also written about science and the environment for the Smithsonian, *Northern Lights*, *Ranger Rick*, the multi-media *Earth Explorer Encyclopedia*, and Project WILD. After completing a M.S. in environmental studies, she moved to the northern edge of Yellowstone to be close to the geysers and wild country that inspire her.

Duncan Foley, Ph.D., (*Geysers, Mudpots, & Hot Springs*) teaches geology 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 18 years.

Instructor Profiles

David Fountain, Ph.D., (*Geology of the Yellowstone Country*) 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 (*Bears—Folklore & Biology; The Bison of Yellowstone; The Nez Perce in Yellowstone—1877; Family Days in Lamar—the Wolves Come Home; Bears, Bones, Signs, & Stories; Family Days in Yellowstone; The Folk & the High Alpine (Llama Trek); Family Days in the Thermal Basins; The Tradition of Winter Storytelling*) is both a naturalist and a folklorist. His degree as a naturalist is from the University of Michigan as is his M.S. in environmental communications. He has worked on numerous wildlife research projects, primarily for Texas Parks and Wildlife. He is the founding director of Great Plains Lore and Natural History, Inc. and is the author of *This Ol' Drought Ain't Broke Us Yet (But We're All Bent Pretty Bad)* and *The First Liar Never Has a Chance*.

Pam Gontz (*Exploring Yellowstone's Bird Life*) is the assistant director of the Yellowstone Institute and has spent the last 10 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 to local colleges and Audubon societies.

John Good (*Fire, Ice, & Fossil Forests*) was chief naturalist of Yellowstone National Park for six years. During his distinguished career in the National Park Service he served as superintendent of Acadia and Everglades National Parks and assistant superintendent of Yosemite. He holds a master's degree in geology.

Fred R. Gowans, Ph.D., (*Yellowstone Park & the Fur Trade*) is a professor of Western American history and is the director of the Native American Studies program at Brigham Young University. He has been a consultant for historical films on mountain men, recently appeared on the PBS historical series *The West*, and is the author of *Rocky Mountain Rendezvous*, *Mountain Man and Grizzly*, and *A Fur Trade History of Yellowstone Park: Notes, Document, Maps*.

James Halfpenny, Ph.D., (*Yellowstone's Wolves; Mammal Tracking: Interpreting Tracks, Scat, & Other Sign; The Evolution, Ecology, & Future of the Wolf Family; Bears: Bones, Signs, & Stories; How Mammals Survive Winter*) is an ecologist and educator. Most recently he was coordinator of the Long-Term Ecological and Alpine Research at the University of Colorado. Annually he travels North America studying bears and wolves and their sign. He has tracked wolves in 14 locations across North America and also in Red China. Jim has taught since 1966 in the Greater Yellowstone Ecosystem and is author of *A Field Guide to Tracking in North America and Winter: An Ecological Handbook*. His research has included expeditions to Antarctica, Canada, China, Greenland, Kenya, and Tanzania.

Wayne Hamilton, Ph.D., (*Ecosystem Geology—Land Skills for Survival; Episodic History of Yellowstone Lake*) is a retired research geologist formerly with the National Park Service and National Biological Service in Yellowstone National Park and adjunct assistant professor at Montana State University. His research has involved measuring and mapping the subsurface geothermal systems in boundary areas subject to nearby geothermal development. He has also been active in research at Yellowstone Lake, using geologic evidence of changing lake levels to reconstruct a caldera deformation history. Presently he is mapping Quaternary lake and river sediments in Zion National Park.

Hannah Hinchman (*A Trail Through Leaves—The Art of the Field Journal*) has kept an illustrated journal for 27 years. She has a B.F.A. from the Maine College of Art and shows her watercolor "illuminated journal" pages at various galleries. She has written for a number of publications, including *Sierra* magazine, *High Country News* and *Orion* magazine. Her first book, *A Life in Hand, Creating the Illuminated Journal*, (Peregrine Smith) is in its fourth printing, and her second book, *A Trail Through Leaves: The Journal as a Path to Place* has just been published by W. W. Norton.

Bill Hopkins (*Exploring the Yellowstone Landscape on Skis*) is an avid nordic skier. He enjoys the full range of the sport from racing to ski mountaineering. Currently, he coaches junior racers for the Bridger Ski Foundation in Bozeman, Montana. He has taught and guided in Washington state, Wyoming, Montana, and New Zealand. During the non-winter months he works on backcountry trails for the National Park Service in Yellowstone.

Pete Houdeshel (*Simply Stunning Scenic Photography; Grand Teton Photography*) is a veteran photography workshop and Yellowstone Institute instructor. His award winning photo career spans over 25 years and includes publication in major books and magazines. He enjoys sharing his concepts of making pictures with all levels of photographers.

Ann Johnson, Ph.D., (*Participate in Yellowstone Archaeology*) has a Ph.D. in anthropology from the University of Missouri-Columbia. She has worked for the National Park Service as an archaeologist for 19 years and has been involved for many years with the Montana and Colorado Archaeological Societies and with the Museum of the Rockies. She is interested geographically in the North American Great Plains and adjacent areas, and plains environments world-wide; topically, her interest is in prehistoric cultures with ceramics; and temporally in the last 3,000 years.

Robyn Klein (*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 and has been a consultant to the departments of chemistry and entomology at Montana State University. Robyn is the editor of *The Herbalist*, the newsletter of the American Herbalists Guild, and is a professional member. She is also a member of the American Herb Association, the Northeast Herb Association, Herb Research Foundation, Great Northern Botanical Association and the Montana Native Plant Society.

Instructor Profiles

Karen Krieger (*Women & Yellowstone—A Historical Perspective*) has her master's degree in American studies from Utah State University 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.

Bill Lang, Ph.D., (*Early Exploration in Yellowstone; Wars & Words Over Wildlands*) is director of Center for Columbia River History in Vancouver, Washington. He is professor of history at Portland University. He has written many articles on Yellowstone history and is co-author of *Montana: Our Land and People* and editor of *The Centennial West, A Columbia River Reader*, and *Stories From An Open Country: Essays On The Yellowstone River Valley*.

John Martin (*Introduction to Yellowstone's Birds; Yellowstone Birds of Prey*) is currently Supervisory Ecologist and Chief of Natural and Cultural Resources at U.S. Army Dugway Proving Ground, Utah. His M.S. in wildlife and range resources focused on raptor ecology and habitat use. He is currently involved in long-term monitoring of Neotropical migratory songbird and raptor populations and habitat use, including satellite tracking of Swainson's and ferruginous hawks.

Terry McEneaney (*Learning Birds by Sound*) is currently the staff ornithologist for Yellowstone National Park. Prior to his 10 years' employment with the National Park Service, he was a wildlife biologist at Red Rock National Wildlife Refuge. He worked for the U.S. Fish & Wildlife Service for 12 years, gaining experience in the western United States, Mexico, Canada, and Greenland. He has taught field ornithology courses for the Nature Conservancy in Montana and is the author of *Birds of Yellowstone*, *The Uncommon Loon*, and *The Birder's Guide to Montana*.

Alan McKnight (*Observing Yellowstone with the Artist's Eye*) is an alumnus of the Woodstock School of Art in Woodstock, New York, now living in Teton County, Idaho, where he paints, illustrates, and teaches. He has traveled extensively in the Rocky Mountain West, sketching and painting in wilderness settings. The most recent publication of his illustrations is in Bob Berman's *The Secrets of the Night*, William Morrow, 1995.

Linda Miller (*The Wolf's Return—Mythology to Recovery*) has been working on wolf recovery issues and education for the past five years. Her background includes interpretive naturalist work for the Aspen Center for Environmental Studies, Boulder County Parks and Open Space, and the U.S. Forest Service. She is presently using her degree in occupational therapy as a wildlife rehabilitator, and volunteering in wildlife observation and interpretation in Glacier National Park. She also co-teaches wildlife education classes with Brian Peck at Glacier Institute and Flathead Valley Community College.

Roy Mink, Ph.D., (*Headwater Watershed Ecology*) presently serves as director of the Idaho Water Resource Research Institute with the University of Idaho. Dr. Mink has been working in water quality aspects of several Idaho watersheds, and through his position with the Idaho Water Resource Research

Institute supports multiple watershed studies throughout Idaho. He also has extensive experience in geothermal systems, was formerly chief of the geothermal energy branch of the U.S. Department of Energy at Idaho Falls and has worked on national and international geothermal projects.

Sue Consolo Murphy (*Grizzly Bear Ecology & Management*) is a resource naturalist for Yellowstone Park. Since 1982 she has worked as a ranger-naturalist and resource manager, specializing in bear management, park planning, and resource interpretation. She works closely with scientists from the Inter-agency Grizzly Bear Study Team and with the Yellowstone Grizzly Bear Management Subcommittee. She has a B.S. in recreation and park administration from the University of Wyoming and an M.S. in resource conservation from the University of Montana.

Don Nelson (*Yellowstone's Winter World*) was the director of the Yellowstone Institute from 1991-1997. He first began taking groups into the backcountry in 1970. He has taught cross-country skiing, snow physics, and winter ecology for 25 years for schools and organizations, including the Audubon Society, where he worked for 9 years as a regional representative, adult camp director, and instructor.

Sandra Nykerk (*Family Days in Lamar—the Wolves Come Home; Photographing Nature in Yellowstone Country #1; Photographing Nature in Yellowstone Country #2; Family Days in Yellowstone; Family Days in the Thermal Basins*), is a naturalist and photographer now living in Gardiner, Montana, on the northern border of Yellowstone. Sandy has been teaching photography and natural history workshops throughout the country for over fifteen years. Her images have been published in many calendars, books, and journals. Active in environmental issues, she was a member of the board of directors of the Greater Yellowstone Coalition for seven years. Currently, Sandy is working on a book celebrating the unique biology and beauty of the Yellowstone hydrothermal features and on a project investigating the cultural perceptions of visitors to Yellowstone National Park.

Richard Parks (*Fly Fishing: Less Experienced; Fly Fishing: More Experienced; Fly Fishing in the Fall*) is the manager of Parks' Fly Shop, a family business that has been in Montana for over 30 years. Richard is highly respected as a fly tier, a teacher and a river guide, and is intimately familiar with Yellowstone's waters. He is also deeply involved in regional resource issues.

Dorothy Hinshaw Patent, Ph.D., (*Finding Your Own Voice—A Wilderness Writing Experience*) is the author of two gardening books and more than 90 science and nature books for children. She is a recipient of the Eva Gordon Award (American Nature Study Society), Golden Kite Award (Society for Children's Book Writers), and Children's Choice Award. Recently, she has expanded the range of her writing, with the natural world always providing inspiration. Her first fiction was published in spring, 1995.

Brian Peck (*The Wolf's Return—Mythology to Recovery*) is the Grizzly Recovery Coordinator for the Great Bear Foundation and was the Endangered Species Coordinator for National Audubon's Rocky Mountain office for the previous four years,

Instructor Profiles

focusing on wolf and grizzly bear recovery programs. Before coming to Audubon he was a park ranger and natural resource/education coordinator for Boulder, Colorado's, Mountain Park system for 21 years. He also spent the winter of 1986-87 tracking and studying wolves around Glacier National Park for the Wolf Ecology project. Brian has a B.S. in wildlife biology from the University of Massachusetts and master's degree work in natural resource administration from Colorado State University. He also conducts natural history programs for the Glacier Institute, World Wildlife Fund and Montana's Flathead Valley Community College (Elderhostel).

Wayne Phillips (*Wild Edible Plants & Medicinal Herbs; Wildflowers of Yellowstone; Wildflowers of the High Country [Llama Trek]; Alpine Wildflower Walks; Exploring Yellowstone's Northern Range—Winter Ecology and Survival*) is an ecologist with the U.S. Forest Service on the Lewis and Clark National Forest. His hobbies include ethnobotany, herbalism, wildflower photography, and mountaineering. He is intimately familiar with the vegetation of the Greater Yellowstone Ecosystem. Wayne has over 20 years of cross-country skiing and ski mountaineering experience and is a regular ski tour leader of the Cross-Country Club of Great Falls, Montana.

Harold Picton, Ph.D., (*Bears—Folklore & Biology; Life at the Extremes*) is a professor of wildlife management at Montana State University. In addition to his involvement in grizzly bear research, he also teaches physiology. He has authored research papers and popular articles dealing with the ecology and physiology of a number of species. Many of his graduate students have completed projects in the Yellowstone area.

Ruth Rudner (*Wildland Heritage Horsepack*) is an outdoor writer, author of eight books and numerous articles, among them frequent contributions to *The Wall Street Journal Leisure & Arts Page*. She has spent much of the past several years working on material dealing with Indian sacred land. A teacher of occasional writing workshops, she received a Writers' Voice fellowship in 1994 to teach a master-level workshop series at the Billings Family YMCA. Over the past 12 years she has hiked and ridden much of Yellowstone's backcountry. An experienced wildlands horsepacker—she is a Professional Guide Institute member.

Vincent L. Santucci (*Fossils of Yellowstone*) is a paleontologist specializing in National Park Service fossil resource management, research, and protection. His career has included paleontological surveys at Badlands, Grand Canyon, Petrified Forest, and Yellowstone National Parks. He served as an instructor at Slippery Rock University and the University of Pittsburgh.

Mack Shortt (*Participate in Yellowstone Archaeology*) has a masters degree in archaeology from the University of Calgary. He has extensive experience with archaeological inventory, site evaluations and excavations in Alberta, British Columbia, Montana, Wyoming, and Lifeways in Canada (a private consulting company) and the Museum of the Rockies. Some recent projects include four seasons in Glacier and Yellowstone National Parks. He specialized in the analysis of animal bones and stone tools and has worked extensively with avocationalists and is director for the Calgary Chapter of the Alberta Archaeological Society.

Peg Steunenbergh (*Wildflower Art*) has a B.S. from Avila College and a B.A. (drawing and painting) from San Jose State University. Additional art education included a one-year course of study in graphic arts. She continued her studies in illustration at the Academy of Art in San Francisco. Peg recently completed the graduate studies program in science illustration at the University of California, Santa Cruz. She has been involved with Mt. Diablo Interpretative Association, and, in conjunction with Roberts Rinehart publishers, co-illustrated the publication, *Plants of the East Bay Parks*. Peg has her own annual educational product line providing information about the plants and animals of California to the public.

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 and Yellowstone*) is a professor of philosophy at Rocky Mountain College where he teaches environmental ethics, philosophy of technology and culture, and various interdisciplinary courses. A native of Livingston, 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. In his professional writings he uses his training in philosophy and the humanities to deepen the examination of local and global environmental issues, as illustrated in his *Crazy Mountains: Learning from Wilderness to Weigh Technology*.

Tom Watson (*Exploring the Yellowstone Ecosystem*) has spent the last 17 summers studying geology and ecology in the Greater Yellowstone Ecosystem, most recently as a Yellowstone Institute instructor, presenter for the National Wildlife Federation Summit programs, and guide for Off the Beaten Path. During the school year he teaches biology and geology in California.

Don White, Ph.D., (*Life at the Extremes*) has taught ecology and physiology at Montana State University-Bozeman, and teaches zoology at the University of Montana-Butte. He is currently conducting research on grizzly bear foraging ecology and male reproductive physiology. He has published numerous technical articles, as well as a teaching manual for a bear video.

Lee H. Whittlesey (*Yellowstone Place Names—The Nomenclature of Wonderland; Yellowstone's 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.

Scott Wood (*Lakes of Yellowstone by Canoe; Autumn Canoeing in Yellowstone*) has 22 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 Institute?

The Institute is seeking funds to replace its inefficient and undersized student refrigerators. We want to increase current volume and use refrigerators that are ecologically sound, state-of-the-art units that use about *one-fifth* of the energy of typical ones. Our goal is to raise \$5,800 to buy three refrigerators. Contributions in any amount will, of course, be gratefully received and acknowledged. If you contribute \$125 or more, we will have a framed display in the bunkhouse during classes listing your name as a major donor. Contributions "in memory of" may also be made and will be acknowledged in the manner you request.

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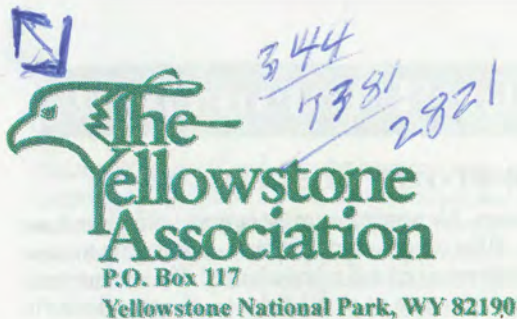
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[Note: Refund Policy on page 6]

Name(s) _____ ☐ Male ☐ Female ☐ Check here if you're *new* to the Institute

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Where can you be reached one month prior to the course? Address _____ Phone _____
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