

YELLOWSTONE ASSOCIATION

INSTITUTE

~



2000/2001

TWENTY-FIFTH ANNIVERSARY

Phillips / Reese
YI Collection

CONTENTS & INTRODUCTION

Contents	Pages
Calendar of Courses	3-4
General Information	7-8
Instructor Profiles	37-43
Membership Information	50
Registration Form	51
Registration Information	6
Travel Information	5
Yellowstone Institute Store	44-48

Course Index	Pages
Aquatics	16, 18
Art	19, 20, 29
Astronomy	25, 27
Backpacking	23, 25, 26, 28
Bears	12
Birds	13, 14, 15, 16, 33
Bison	22
Ethics	19
Family Courses	13, 14, 15, 16, 18
Fire	9
Fish/Fishing	18, 22, 24, 29, 30
Folklore	12, 20, 33
Geology/	
Geysers	9, 17, 18, 20, 21, 23, 24, 26
Hiking	15, 21, 24, 29
History	15, 16, 23, 24
Horsepacking	34, 35, 36
Insects	16, 17
Journal Keeping	17, 22
Kayaking	27, 29
Llama Trekking	20, 22
Mammals	9, 10, 11, 12, 14, 21, 33
Map & Compass	13, 27
Native Americans	23
Paleontology	14
Photography	10, 16, 17, 29, 30
Tracking	10, 11, 17, 24
Wilderness First Aid	28, 30
Wildflowers/	
Plants	13, 14, 15, 17, 20, 21, 22, 28
Weather	26, 32
Wildlife Observation	9, 10, 11, 13, 33
Winter Courses	30, 31, 32, 33, 49
Wolves	9, 10, 11, 13, 19, 32, 33
Writing	25, 26, 30

Dear Friend of the Institute,

Twenty-five years ago, the Institute offered its first summer classes in cooperation with the National Park Service. Our intent was to provide an in-depth educational experience for park visitors, and we conducted a dozen courses at temporary facilities inside the park.

From this modest beginning we have grown to become one of the largest and most respected field schools in the national park system. We've held true to our original purpose, and we now have a permanent campus and a wide range of courses to help introduce visitors to the wonders of Yellowstone.

Our 2000/2001 catalog includes more than 125 courses offered throughout the year. Among the new offerings this year are **one-day courses** at various park locations and a series of **Master Artist Workshops** at the Mammoth Hot Springs Hotel. We've also scheduled several additional horsepacking trips and some exciting new multi-day courses.

I hope that you will join us as we celebrate our twenty-fifth anniversary here in Yellowstone. There are plenty of courses to choose from, and the quality of our instruction continues to be outstanding!

Sincerely,



Jeff Brown

Director of Educational Operations

Yellowstone Association

STAFF

Executive Director
Pat Cole

Director of Educational Operations
Jeff Brown

Institute Manager
Pam Gontz

Sales Manager
Deborah Collins

Controller
Rebekah Johnson

Mail Sales Manager
Beth Taylor

Membership Coordinator
Craig Elliott

Warehouse Manager
Joyce Wilson

Administrative Assistant
Diane Kline

Administrative Assistant
Kristie Wiederholt

Chairperson
Marilyn G. Alkire

Vice Chairperson
W. Randall Porter

Secretary/Treasurer
Boyd Ratchye

Asst. Secretary/Treasurer
Stephen E. Cole

Board Members
Jerry Brady
Thomas D. Brock
Stuart E. Knapp
Judy McNally
Bryan Morgan
Thomas Offutt
Louise Benz Plank
Michael S. Sample
Arnold W. Siegel
Don Streubel
Norma Tirrell

BOARD OF TRUSTEES

Advisory Committee
C. Robert Binger
Dr. William Carlson
Corlene H. Cathcart
Leslie C. Cox
Wallace Dayton
John M. Dietrich
John Good
Aubrey L. Haines
Peter Hassrick
Henry S. Kingman
Monte Later
Dr. John Montagne
Maryanne Mott
Guido R. Rahr Jr.
Harriet S. Spencer
Stephen W. Tedder
Dr. William J. Tietz
Beverly Whitman

PARK REPRESENTATIVES

Park Superintendent
Michael Finley

Chief of Interpretation
Diane Chalfant

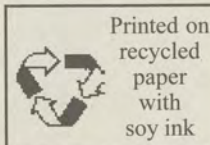
Assistant Superintendent
Marvin Jensen

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

www.YellowstoneAssociation.org
dkline@YellowstoneAssociation.org

Cover Artwork - Peg Steunenberg
Cover Design - Adrienne Pollard
Catalog Editor - Chandra Morris
Catalog Layout - 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.



CALENDAR OF COURSES

Multi-Day Courses

In-depth courses on the natural and cultural history of the Yellowstone ecosystem.

May-June 2000

May 9-11	501	Wildlife Watching in Grizzly Country
> May 12-14	502 ✓	Field Biology of Fire
May 13-15	503	Hot Springs, History & Habitat—A Closer Look at Mammoth
> May 16-18	504	Spring Wildlife on the Northern Range
May 19-21	505	The Wolf's Return—Mythology to Recovery
> May 19-21	506	Learning Photography & Camera Basics in the Great Outdoors
May 20-22	507	Spring Returns to Yellowstone
May 24-26	508	Wolf Watching in Yellowstone
> May 24-26	509 ✓	Mountain Dwellers of the Yellowstone Ecosystem
May 30-June 2	601 ✓	Mammal Tracking
May 30-June 2	602	Wildlife Observation—Spring
>* June 2-4	603	Wolves—Reality & Myth
>* June 3-4	604	Cougars—Ghosts of the Rockies
>* June 3-4	605	Pronghorn, Elk & Bighorn Sheep in the Mammoth Area
June 9-12	606	Grizzly Bear Ecology & Management
June 10-13	607 ✓	Mammals Great & Small
June 13-15	608 ✓	Bears—Folklore & Biology
June 14-17	609 ✓	Bears: Bones, Signs & Stories
June 16-18	610	Yellowstone Grizzlies: Past, Present & Future
June 19-21	611 ✓	The Evolution, Ecology & Future of the Wolf Family
June 19-22	612	Wildlife Observation—Spring
June 22-24	615	Family Days in the Lamar—The Wolves Come Home
> June 22-24	616	Wolves—Reality & Myth
* June 23-25	617	Learning Birds by Sound
June 23-25	618	Fossils of Yellowstone
June 26-28	620 ✓	Introduction to Yellowstone's Birds
June 26-28	621 ✓	Plant Eaters of Yellowstone
June 27-29	622 ✓	Wild Edible Plants & Medicinal Herbs
June 29-July 1	623	Day Hiking in Wonderland
> June 30-July 2	624 ✓	Advanced Birds of Yellowstone

July 2000

July 1-3	704	Along the Yellowstone River with Lewis & Clark
> July 3-4	706	Exploring Yellowstone's Bird Life
July 3-4	707 ✓	Aquatic Insects of Yellowstone
July 5-7	708 ✓	Introduction to the Butterflies of Greater Yellowstone
July 5-8	710	Photographing Nature in Yellowstone Country #1
July 6-9	711	Artistic Field Journals
>* July 8-9	712 ✓	Advanced Studies on Butterflies of Yellowstone

July 2000 (cont.)

July 9-11	713 ✓	Great Earth Odyssey
July 9-12	714 ✓	Mammal Tracking
July 10-12	716	Plants of Yellowstone
July 11-14	717	Photographing Nature in Yellowstone Country #2
> July 13-15	718 ✓	Yellowstone's Living Streams
July 13-15	719	Yellowstone's Fisheries Beyond Angling
July 14-16	721 ✓	Geysers, Mud Pots & Hot Springs
* July 15-16	722	Family Adventures in Yellowstone—Mammoth
July 15-17	723	Wolf Watching in Yellowstone
> July 16-18	724	Painting Wildflowers & Butterflies
July 18-19	725	Family Adventures in Yellowstone—Canyon
> July 18-20	726 ✓	Environmental Ethics in Yellowstone
July 18-20	727 ✓	Geysers, Mud Pots & Hot Springs
July 19-22	728	Watercolor Painting—Visions Past & Present
July 21-22	729	Wildflowers of Yellowstone
July 21-23	730	Exploring Yellowstone's Microbes
July 21-24	731	Mountain Folklore—A Llama Trek
July 23-25	734	Hiking Through Time—Day Hikes into the Geological Past
July 23-25	735 ✓	Alpine Wildflower Walks
> July 23-26	736 ✓	Lesser-Known Carnivores of the Greater Yellowstone Ecosystem
July 25-27	738 ✓	The Bison of Yellowstone
July 28-30	739	Fly-Fishing—Less Experienced
July 28-31	740 ✓	Wildflowers of the High Country (Llama Trek)
July 28-31	741	A Trail Through Leaves—The Art of the Field Journal
July 31-Aug 2	744	Backpacking—Leave No Trace in Grizzly Country
> July 31-Aug 2	745	History of Yellowstone Artists & Photographers

August 2000

Aug 1-3	801	Smoking Mountains—Indians & Yellowstone Park
Aug 3-6	802	Day Hiking Yellowstone
Aug 4-6	803	Fly-Fishing—More Experienced
Aug 7-9	804	Yellowstone's Southern Roadside History
Aug 7-10	805	Day Hiking Yellowstone
Aug 7-11	806 ✓	Geology of the Yellowstone Country
> Aug 11-13	808	Fly-Fishing for Women
> Aug 11-13	809	Nature Writing—From Appreciation to Publication

> denotes a *New* class

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

✓ denotes classes that are available for university credit

CALENDAR OF COURSES (cont.)

August 2000 (cont.)

Aug 12-14	810	Backpacking in Grizzly Country
> Aug 12-14	811	Discover Your Sky—Observing Techniques for Backyard Astronomers
Aug 13-15	812 ✓	Fire & Ice—Yellowstone's Last Two Million Years
> Aug 13-18	813	Creating with the Elements
Aug 16-18	814	Weather Cycles in the Big Sky
> Aug 17-21	815	Backpacking Yellowstone—The Gallatin Region
Aug 18-21	816	Shoshone Lake Sea Kayaking
Aug 20-23	818	Map, Compass & Stars Across Yellowstone
Aug 20-23	819	Exploring the New Universe
Aug 23-26	820	Base Camp in the Beartooths—A Mountain Journey
> Aug 28-30	822	Backcountry Cooking & Nutrition
Aug 29-30	823	Wilderness First Aid
Aug 29-31	824 ✓	Wild Edible Plants & Medicinal Herbs

September-December 2000

> Sept 5-7	901	Autumn Day Hiking in Yellowstone
Sept 8-11	902	Shoshone Lake Sea Kayaking
Sept 15-17	905	Fly-Fishing in the Fall
Sept 23-26	906	Autumn Photography in Yellowstone
> Sept 29-Oct 1	909	Introduction to Fly-Fishing
Nov 9-18	1101	Wilderness First Responder
Dec 2-3	1201	Wilderness First Aid

January-March 2001

Jan 12-15	101	Snowshoeing in Yellowstone
* Jan 19-21	102	Snow Tracking
> Jan 26-28	103	Winter on a Sliver
Feb 1-4	201	Exploring the Yellowstone Landscape on Skis
Feb 10-12	202	Weather Cycles in the Big Sky
Feb 13-15	203	Exploring Yellowstone on Snowshoes
> Feb 16-18	204	Exploring Yellowstone's Winter World on Skis
Feb 23-25	205	Wolf Watching in Yellowstone
Mar 7-9	301	Coyote & Raven—Fact & Folklore
> Mar 12-13	302	The Sly Fox
* Mar 16-18	303	Yellowstone's Wolves
Mar 23-26	304	Wildlife Observation—Winter

NEW! Winter Wonderland Package

A five-day guided introduction to Yellowstone in winter, with instruction by an Institute naturalist and accommodations at park hotels. Packages available each week from January 7 through March 2, 2001. Additional information on page 49.

NEW! Master Artist Workshops

Expert instruction by nationally known painters, writers, and photographers.

> Sept 9-12	903	Nature Painting—For Art's Sake
> Sept 28-Oct 1	908	Yellowstone: Photographing the Quintessential Landscape
> Oct 5-8	1001	Nature & Environmental Writing

NEW! One-Day Courses

Full-day field courses designed to introduce park resources.

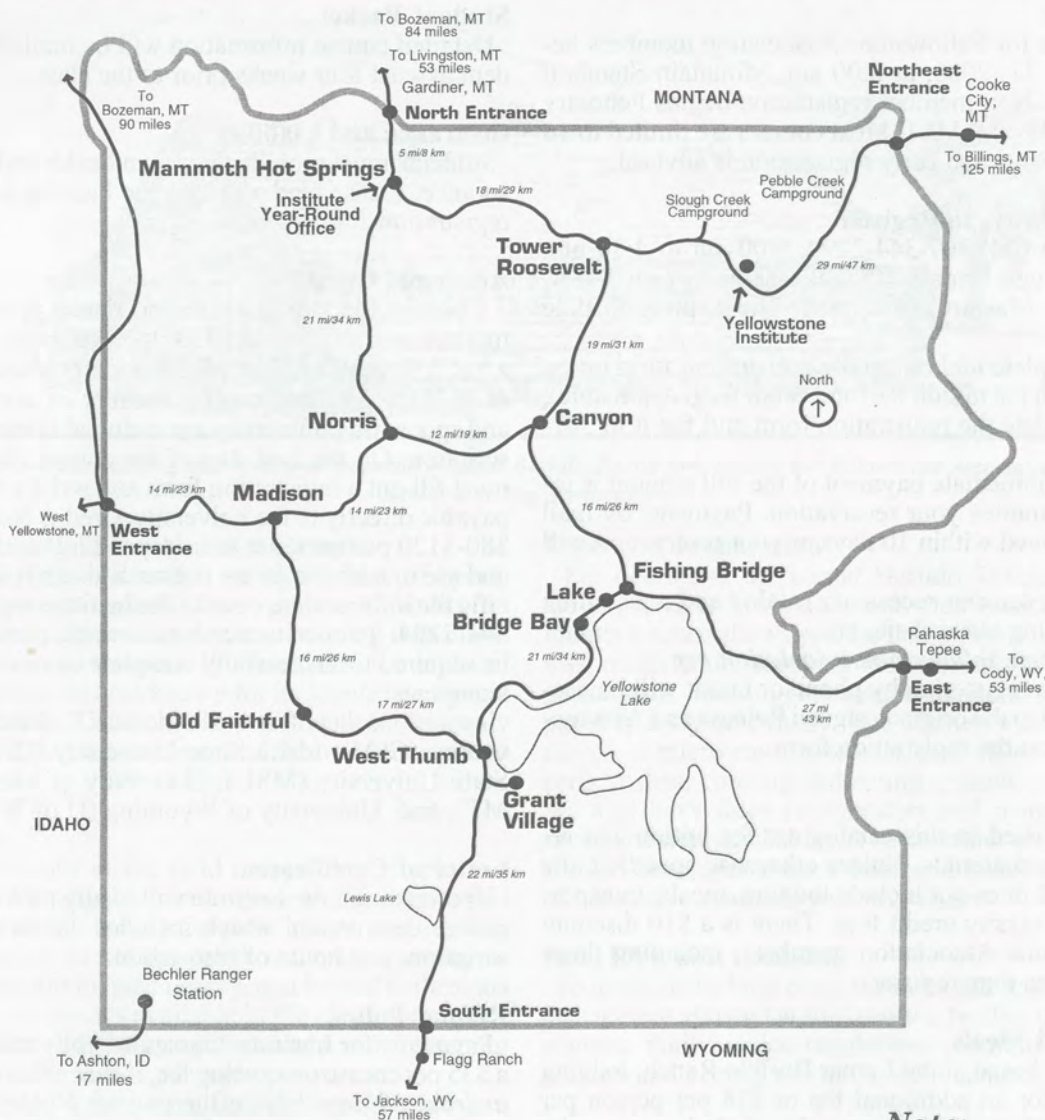
> June 22	613	Wildflowers in the Mammoth Area
> June 22	614	Exploring Yellowstone by Map & Compass
> *July 1	701	Wildflowers in the Mammoth Area
> *July 1	702	Old Times at Old Faithful
> *July 2	705	Ghost Hotels of Yellowstone
> *July 22	732	Life at High Temperatures
> *July 23	733	Life at High Temperatures
> *July 30	743	Life at High Temperatures
Aug 10	807	Mammal Tracking

Horsepacking Courses

Backcountry courses with an emphasis on low-impact camping and stock use.

June 24-26	619	Family Horsepacking: On the West Slope of the Tetons
July 1-3	703	Family Horsepacking: On the West Slope of the Tetons
July 5-7	709	Family Horsepacking: Hellroaring & the Black Canyon—Plants & Animals of Yellowstone
> July 9-14	715	Horsepacking: Wildflowers & Wildlife of the Lamar River Drainage
July 13-17	720	Horsepacking: Hellroaring & the Black Canyon—Plants & Animals of Yellowstone
July 23-28	737	Horsepacking: South Boundary, Fox Park & the Teton Wilderness—The Wilderness Story
July 28-Aug 2	742	Horsepacking: Trapper Trails Through the Thorofare
Aug 19-23	817	Horsepacking: Washburn Expedition—Yellowstone & Heart Lakes, the Origin of a National Park
Aug 23-27	821	Horsepacking: Gustavus C. Doane Memorial Ride—Yellowstone's Snake River Country
Aug 31-Sept 4	825	Horsepacking: Nez Perce Trail—Alternate Route, Mirror Plateau
> Sept 10-15	904	Horsepacking: Sights & Sounds of Yellowstone's Backcountry
> Sept 24-27	907	Horsepacking: Poacher's Cabin

TRAVEL INFORMATION & DIRECTORY



Note:

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

Airports		Distances/Auto Travel Times to Yellowstone Association Institute		Directory	
Major Airports		From Bozeman		Camping & Park Information	
Bozeman, MT		via Livingston	118 mi. 2 1/2 hrs	National Park Service	
Billings, MT		From Billings		Visitor Services 307-344-7381	
		via Red Lodge	143 mi. 3 1/2 hrs	www.nps.gov/yell/	
		via Livingston	207 mi. 3 3/4 hrs		
Regional Airports		From Cody		Park Lodging, RV Park, Marina	
Cody, WY		via East Entrance	126 mi. 3 hrs	AmFac Parks & Resorts	
Jackson, WY		via Northeast Entrance	84 mi. 2 1/4 hrs	307-344-7311	
West Yellowstone, WY		From Jackson	146 mi. 3 1/2 hrs		
Idaho Falls, ID		From West Yellowstone	70 mi. 2 hrs	Wyoming Travel Information	
		From Idaho Falls	240 mi. 4 1/2 hrs	Wyoming Division of Tourism	
				800-225-5996	
<i>Plan on extra driving time in the park. The speed limit is 45 mph.</i>					

REGISTRATION INFORMATION

Registration

Registration for Yellowstone Association members begins January 31, 2000, at 8:00 am, Mountain Standard Time (MST). Non-member registration begins February 7, 2000, at 8:00 am, MST. Most courses are limited to 10 to 15 participants and early registration is advised.

Three Easy Ways to Register

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

Mail: Complete and return the registration form on pg 51, along with the tuition fee (and cabin fee if applicable).

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

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

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

www.YellowstoneAssociation.org

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

Tuition

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

Lodging and Meals

For courses based at the Lamar Buffalo Ranch, lodging is available for an additional fee of \$18 per person per night, and students must bring and cook their own meals. A portion of this fee is contributed to the National Park Service for maintenance of the field campus. For all other courses, students must make their own arrangements for lodging and meals. (See Nearby Camping, Lodging and Groceries, pg 8.)

Transportation

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

Location

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

Student Packet

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

Insurance and Liability

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

Academic Credit

Courses for which academic credit is available are marked on the Calendar of Courses on pages 3 and 4 with a "✓". Type of credit ("U" for undergraduate credit and/or "G" for graduate credit), number of semester hours, and sponsoring university are included in each course description. On the first day of the course, the participant must fill out a registration form and write a tuition check payable directly to the university. Credits fees range from \$80-\$120 per semester hour depending on the university and are in addition to the tuition and cabin fees. For specific fee information, contact the Institute registrar at 307-344-2294. To receive academic credit, participants may be required to successfully complete exams and other assignments.

Institutions that offer credit include: Colorado State University (CSU); Idaho State University (ISU); Montana State University (MSU); University of Montana, (U of MT); and University of Wyoming (U of WY)

Letter of Certification

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

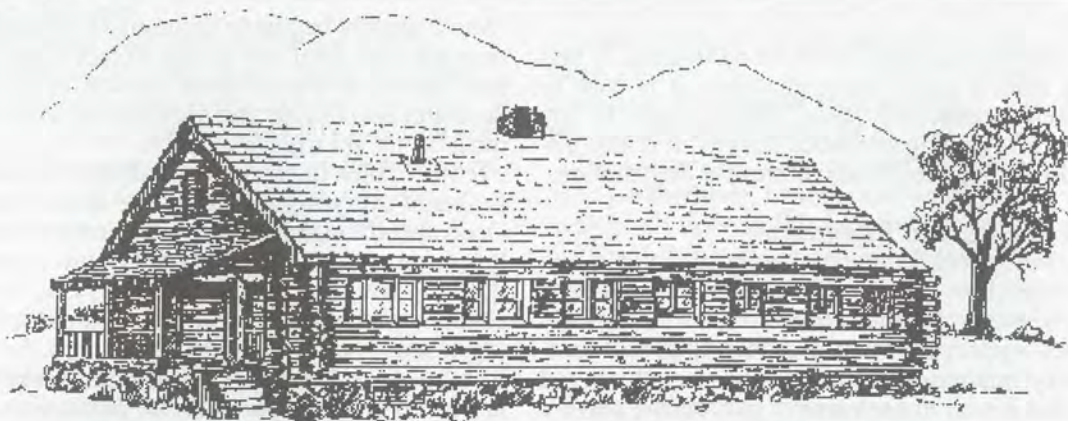
Refund Policy

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

Important:

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

GENERAL INFORMATION



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

The Lamar Buffalo Ranch Field Campus

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

Log Cabins

Accommodations at the field campus are simple and comfortable. Participants share space in log cabins that include three single beds, a propane heater, and reading lights. The cabins do not have electrical outlets or plumbing. Outhouses are located nearby, and heated bathrooms and showers are always available in the classroom building. Participants must bring a pillow and a warm sleeping bag. The cabin fee is \$18 per night per person.

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

The Bunkhouse

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

Food and Preparation

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

Pets, RVs, and Camping

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

Children

Children who meet stated minimum age requirements are very welcome in family programs. All other courses are designed for adults; however, children 16 years and older may sometimes participate depending on class content and activities. A participating adult must accompany minors pre-approved by the Institute manager and instructor. Inquire when you register.

Physical Condition

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

Visit our website at: www.YellowstoneAssociation.org

GENERAL INFORMATION (cont.)

Altitude

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

Weather, Clothing, and Equipment

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

Nearby Camping, Lodging, and Groceries

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

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

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

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

Additional Information for Winter Courses:

Winter at the Field Campus

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

Weather

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

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

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

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

Equipment

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

Ski and Snowshoe Rental

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



Leave No Trace

Leave No Trace (LNT) is a national educational program designed to encourage minimum impact skills and ethics among outdoor users. The Institute endorses this program and includes the LNT curriculum in our classes. We also offer a certification program for LNT trainers (see pg 23).

Custom Courses

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

2000 SUMMER FIELD COURSES

MAY

Early Season Discount



This symbol indicates courses for which Yellowstone National Park Lodges will offer discounted lodging rates. For specific rates and availability, please call 307-344-7311 and identify yourself as a Yellowstone Association Institute student. To take advantage of these special rates, you must make your reservation prior to April 1, 2000.

WILDLIFE WATCHING IN GRIZZLY COUNTRY: 501



May 9-11 **\$160 (Member's fee \$150)**
Location: Mammoth Hot Springs **Limit: 13**
Instructor: Gene Ball

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

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

FIELD BIOLOGY OF FIRE: 502



May 12-14 **\$160 (Member's Fee \$150)**
Location: Mammoth Hot Springs **Limit: 15**
Credit pending: U, 1 semester hour, MSU
Instructor: Catherine L. Raven, Ph.D. **NEW**

Yellowstone National Park is an exciting place to study fire biology. In the Great Plains and northern Rocky Mountains, many landowners and managers light fires to benefit the land. Field biologists, meantime, study the effects of fire as a management practice. In this course, we will see, feel, and smell the remnants of fire at four different sites in the Northern Range, and learn the natural history of the park. We will collect biological data to answer critical questions about the role of fire. What is fuel? How is it measured? Which exotic plants, native plants, and animals are affected and how are they related? Bring a camera so we can create detailed photo journals. Be prepared for moderate, but not strenuous hiking.

We will meet in the Mammoth Hot Springs area at 9:00 am on the first day and end at 4:00 pm on the last day.

Visit our website at:
www.YellowstoneAssociation.org

HOT SPRINGS, HISTORY & HABITAT—A CLOSER LOOK AT MAMMOTH: 503



May 13-15 **\$160 (Member's fee \$150)**
Location: Mammoth Hot Springs **Limit: 13**
Instructor: Jim Garry, M.S.

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

We will see the terraces and learn about their incredible underlying geology. We will examine the fascinating history of the fort and the world's first national park. We'll also go to one of the world's great wildlife viewing areas, the Lamar Valley, where we may see elk, bison, coyotes, bears, and wolves.

We will meet in the Mammoth Hot Springs area at 9:00 am on the first day and end late afternoon on the last day. *Rooms have been set aside at Mammoth—see lodging note above for details.*

SPRING WILDLIFE ON THE NORTHERN RANGE: 504



May 16-18 **\$160 (Member's fee \$150)**
Location: Mammoth Hot Springs **Limit: 13**
Instructor: Jim Garry, M.S. **NEW**

Winter departs slowly from Yellowstone, but with spring comes new life and a wildlife show second to none. There are wolf pups in dens and bear mothers with new young in tow. Red bison calves follow the herd and the elk come to term. Small hibernators scamper about and birds return from the south. We will spend time viewing and learning about the wildlife on Yellowstone's northern range, including one of the world's great wildlife viewing areas, the Lamar Valley, where we may see elk, bison, coyotes, bears, and wolves. Bring your binoculars and be prepared for short hikes in easy terrain.

We will meet in the Mammoth Hot Springs area at 9:00 am on the first day and end late afternoon on the last day. *Rooms have been set aside at Mammoth—see lodging note above for details.*

THE WOLF'S RETURN—MYTHOLOGY TO RECOVERY: 505



May 19-21 **\$185 (Member's fee \$175)**
Location: Mammoth Hot Springs **Limit: 15**
Instructors: Brian Peck & Linda Miller

The wolves are back! This year Yellowstone is home to more than ten packs and we'll be there to observe them. This field-oriented class will use storytelling and

2000 SUMMER FIELD COURSES

MAY-JUNE

field trips to explore the wolf's demise and triumphant return. 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. Be prepared to hike 3 to 5 miles a day.

We will meet in Mammoth Hot Springs at 7:00 am on the first day and end late afternoon on the last day. *Fee includes \$15 for course materials.*

LEARNING PHOTOGRAPHY & CAMERA BASICS IN THE GREAT OUTDOORS: 506



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

Location: Old Faithful Area **Limit: 13**

Instructor: Sandra Weber **NEW**

Yellowstone is a photographer's dream at any time of year, yet many people visit this scenic wonder and return home with pictures that don't accurately reflect its beauty and varied wildlife. The key to capturing Yellowstone is understanding how to use your camera correctly and creatively. We'll explore the basics: how to use shutter speed and aperture controls for the best results, which film speeds to use when, how to use filters creatively, find flattering angles and light, and more. Each aspect of 35mm outdoor color photography will be covered through slide shows, discussions, and plenty of outdoor practice while walking and hiking in and around the Old Faithful area.

We will meet in the Old Faithful area daily at 7:30 am, take a midday break, and resume from 2:00-7:00 pm. Prerequisite: Read your camera manual and bring it to class! *Rooms have been set aside at Old Faithful—see lodging note on pg 9 for details.*

SPRING RETURNS TO YELLOWSTONE: 507



May 20-22 **\$160 (Member's fee \$150)**

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

Instructor: Jim Garry, M.S.

Yellowstone comes alive in springtime, and we'll be there to witness the rebirth. Through daily field trips and discussions, we'll take a closer look at the wildlife, geology, and history of the Yellowstone Lake area. In Hayden Valley, we'll search for bears that have recently emerged from their dens and bison that have just been born. On the shores of Yellowstone Lake and at the Grand Canyon of the Yellowstone River, we'll see geological forces at work. At the Lake Hotel, we'll imagine what Yellowstone was like in earlier years. Be prepared for short hikes in easy terrain.

We will meet in the Lake area at 9:00 am on the first day and end late afternoon on the last day. *Rooms have been set aside at Lake—see lodging note on pg 9 for details.*

WOLF WATCHING IN YELLOWSTONE: 508

May 24-26 **\$160 (Member's fee \$150)**

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

Instructor: Norman A. Bishop

Yellowstone National Park may be the best place in the world to watch wolves. Bring your binoculars, scope and tripod, warm clothing for freezing mornings, and join the crowd. We'll consider the scientific and social reasons why some Americans have alternately reviled and revered wolves. We'll also think through the process of justifying their restoration as an experimental population under the Endangered Species Act. Find out what the wolves eat, how they kill their prey, who does the killing, and what effect wolves have on other animals, including livestock outside the park. Practice patience at the roadside watching for wolves at dawn and dusk, and discuss them while watching videos and slides in the classroom at midday.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 3:00 pm on the last day.

MOUNTAIN DWELLERS OF THE YELLOWSTONE ECOSYSTEM: 509

May 24-26 **\$160 (Member's Fee \$150)**

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

Credit pending: U, 1 semester hour, MSU

Instructor: Terry Enk, Ph.D. **NEW**

Bighorn sheep have long fascinated us with their charismatic physical appearance and ability to thrive in rugged, precipitous terrain. We will delve into the fascinating world of bighorn sheep and explore sheep natural history and ecology, including their unique adaptations to extreme environments, habitat use, food habits, and relations with other wildlife species (including predators) in this ecosystem. We will discuss the role of bighorn sheep in early cultures and explore current controversies and management issues. There will be some classroom time, but field observation during day trips is the major focus. Be prepared for occasional, short, easy to moderately strenuous hikes into sheep habitats. The schedule will be flexible depending on conditions. This course takes place during the bighorn sheep lambing period, and participants will have opportunities to observe both adult sheep and newborn youngsters.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end late afternoon on the last day.

MAMMAL TRACKING: INTERPRETING TRACKS, SCAT & OTHER SIGN

May 30-June 2: 601 **July 9-12: 714**

\$240 (Member's fee \$230)

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

Credit pending: U, 1 semester hour, U of MT, MSU

Instructor: James Halfpenny, Ph.D.

Mammals are elusive and hard to observe in the wild,

2000 SUMMER FIELD COURSES

MAY-JUNE

but much can be learned by detecting and reading their sign. As a tracker, you will learn the joys of interpreting natural history from sign. Our emphasis will be on tracking as a process for understanding animal behavior rather than on track identification.

Topics include: the roles of natural history and ecology, field notebooks, taxonomy, anatomy, terminology, measurements, track averaging, relative size, estimating track age, print identification, gait patterns, estimating speed, finding clues, and following trails. Slide lectures will highlight Jim's field experience, and laboratories will introduce concepts of gaits, speed, and animal signs. Field sessions will aid in learning to trail and read stories in tracks.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 5:00 pm on the last day. *Fee includes \$30 for a copy of the instructor's book, A Field Guide to Mammal Tracking, plus other course materials.*

WILDLIFE OBSERVATION—SPRING

May 30-June 2: 602

June 19-22: 612

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

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 park's wildlife. Methods of unobtrusive observation and the ethics of interaction with wildlife will be central themes. The flexible schedule will feature early morning and evening field trips and programs on various wildlife topics, issues, and controversies. Be prepared for occasional moderate hikes at higher elevations. The opening session will cover selection and use of binoculars, spotting scopes, and tripods for quality wildlife observation.

We will meet in the Lamar Ranch area at 4:00 pm on the first day and end at noon on the last day.

WOLVES—REALTY & MYTH

June 2-4: 603

June 22-24: 616

\$130 (Member's fee \$120)

Location: Lamar Buffalo Ranch

Limit: 13

Instructor: Nathan Varley, M.S. NEW

The mythological wolf has guided the human spirit through the ages. Today, in the process of pursuing the Yellowstone wolves, visitors have discovered much about these animals and themselves. Join us in a search for wolves and learn more about our relationship to these controversial carnivores. Immerse yourself in the ecological, cultural, and spiritual context of the wolf through observations, presentations, and discussions. Plan on being out for sunrise and sunset each day. Be prepared for moderately strenuous hikes in the morning or afternoon. In addition to presentations each evening,

there will be time for rest and quiet contemplation.

We will meet in the Lamar Ranch area at 7:00 pm on the first day and end at 3:00 pm on the last day. *Fee includes \$10 for course materials.*

COUGARS—GHOSTS OF THE ROCKIES: 604

June 3-4

\$115 (Member's Fee \$105)

Location: Lamar Buffalo Ranch

Limit: 13

Instructor: Toni K. Ruth, Ph.D. candidate NEW

Cougars, also known as "ghosts of the Rockies," are Yellowstone's most elusive large carnivores. Detection and interpretation of cougar sign is often the only way to understand their behavior and ecology. Through a combination of classroom and field instruction, you will be introduced to sign-interpretation and the history of cougars in the west and in Yellowstone. You will find out what Yellowstone cougars eat, how often they kill prey, and what effect wolves may have on cougar population and predation rates. You will also learn the "detective work" associated with locating cougar sign, examine current radio-tracking techniques, and discuss cougar-wolf interactions.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 4:00 pm on the last day.

PRONGHORN, ELK & BIGHORN SHEEP IN THE MAMMOTH AREA: 605

June 3-4

\$115 (Member's fee \$105)

Location: Mammoth Hot Springs

Limit: 13

Instructor: William C. Edwards, Ph.D. NEW

Join us as we explore the habits and habitats of these amazing park residents. By this time of year, young will be arriving to the delight of wildlife watchers. All of the species will be in the Mammoth area, providing an excellent opportunity for viewing. Each of the animals is unique and we will observe them in their natural habitats.

We will discuss the anatomy and physiology of pronghorn antelope, elk, and bighorn sheep, and how they differ in their adaptations to different habitats, then go to the field to observe them at home.

We will meet in the map room of the Mammoth Hotel at 8:30 am on the first day and end at 4:00 pm on the last day.



Photo by Pam Gontz

2000 SUMMER FIELD COURSES

JUNE

GRIZZLY BEAR ECOLOGY & MANAGEMENT: 606

June 9-12 **\$195 (Member's fee \$185)**

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

Instructor: Sue Consolo Murphy, M.S.

Are greater Yellowstone's grizzly bears endangered? What are the biggest threats to their long-term survival? Explore the bears' history and current status through field trips, lectures by researchers and managers, and early morning searches for these magnificent bruins. Walks are not lengthy or strenuous, but may occur in cold or inclement weather; warm clothing and sturdy footwear are essential.

We will meet in the Lamar Ranch area for a picnic at 6:00 pm on the first day and end at 3:00 pm on the last day. *Fee includes \$20 for course materials.*

MAMMALS GREAT & SMALL: 607

June 10-13 **\$210 (Member's fee \$200)**

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

Credit pending: U or G, 2 semester hours, ISU

Instructor: Don Streubel, D.A.

The ecological role of mammals in the Yellowstone ecosystem is the focus of this course. We will study large and small mammal behavior, factors affecting their distribution and abundance, and their management in different parts of the park. Fieldwork and early morning and evening observations of elk, bison, bears, bighorn sheep, pronghorns, ground squirrels (including a brief study of ground squirrel behavior), pikas, and possibly wolves will be emphasized. No specific biological background is required, but enthusiasm and a desire to enjoy long hours in the field with animals is a prerequisite. Be prepared for moderate, but not strenuous hiking.

We will meet in the Lamar Ranch area at 8:30 am on the first day and end late afternoon on the last day.

BEARS—FOLKLORE & BIOLOGY: 608

June 13-15 **\$170 (Member's fee \$160)**

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

Credit pending: U, 1 semester hour, MSU

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

Bears are the ultimate charismatic megafauna. This class will, by combining two disciplines and field observation time, explore why the bear looms so large both in Yellowstone and in our psychic landscape. We'll explore the bear's basic biology, including reproduction, behavior, food habits, home ranges, habitat use, and population biology. We'll also delve into the bears of our myths, dreams, folklore, cults, and popular culture. Throughout the course, we will compare and contrast scientific and folk knowledge, and explore the importance of both as part of our relationship with the land.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end late afternoon on the last day.

BEARS: BONES, SIGNS & STORIES: 609

June 14-17 **\$245 (Member's fee \$235)**

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

Credit pending: U, 1 semester hour, MSU, U of MT

Instructors: Elaine Anderson, Ph.D., James Halfpenny, Ph.D., & Jim Garry, M.S.

Ursophiles (Greek for "bear lovers") unite! Supplement your knowledge of bears with a unique triad of instructors. From Dr. Elaine Anderson you will learn the evolutionary history of carnivores, especially ursids, as she talks about fossil and recent bears—their bones and their distribution. Dr. Jim Halfpenny will discuss modern bears: their signs, ecology, and management. 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 and interpret stories left by claw marks. At evening programs, we will share worldwide bear lore.

We will meet in the Lamar Ranch area at 9:00 am the first day and end late afternoon on the last day. *Fee includes \$15 for course materials.*

YELLOWSTONE GRIZZLIES: PAST, PRESENT & FUTURE: 610

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

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

Instructor: Chuck Schwartz, Ph.D.

Join us for the latest information on grizzlies in Yellowstone. We'll review the history of bear management in the park, then take a closer look at the current status of Yellowstone's grizzlies, including population estimates, reproductive performance, and mortality rates. Finally, we'll talk about the bears' future, including the possible removal of this population from the endangered species list. Our schedule will include a combination of field trips (some in the early morning hours!) and lectures. Be prepared for moderate, but not strenuous hiking.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end by 3:00 pm on the last day.



Photo by Pam Gontz

THE EVOLUTION, ECOLOGY & FUTURE OF THE WOLF FAMILY: 611**June 19-21** **\$185 (Member fee \$175)****Location:** Lamar Buffalo Ranch **Limit: 15****Credit pending:** U, 1 semester hour, MSU, U of MT**Instructors:** Elaine Anderson, Ph.D., &
James Halfpenny, Ph.D.

Dire, gray, red, and timber wolves, coyotes, and foxes: these canids have all roamed North America. Some still survive here in spite of their human cohabitants. How did they evolve and where do they fit 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, and Jim, carnivore ecologist, to answer these and more questions.

Early morning and afternoon field trips emphasizing wolf observation and reintroduction into Yellowstone will supplement morning and evening lectures.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 5:00 pm on the last day. *Fee includes \$20 for course materials.*

WILDLIFE OBSERVATION—SPRING: 612**June 19-22 (see description on pg 11)****WILDFLOWERS IN THE MAMMOTH AREA****June 22: 613 July 1: 701 \$60 (Member's fee \$50)****Location:** Mammoth Hot Springs **Limit: 13****Instructor:** William C. Edwards, Ph.D. **NEW**

Over 1,000 different kinds of plants have been identified in the Greater Yellowstone ecosystem, adding to the visual splendor of the park. Many of them grow in the Mammoth area. Join us as we seek them out in their natural habitats along streams, in forests, and in fields. Marvel at the visual spectrum of color they display, learn about their uses and how they were named, and find out how you can identify other flowers you may find in the park.

June 22 course: Be prepared for short hikes in easy terrain.

July 1 course: Less strenuous with more roadside visits.

We will meet in the map room of the Mammoth Hotel at 8:30 am and return to the map room by 5:00 pm.

EXPLORING YELLOWSTONE BY MAP & COMPASS: 614**June 22** **\$60 (Member's Fee \$50)****Location:** Old Faithful Area **Limit: 15****Instructor:** Orville E. Bach, Jr., Ed.D. **NEW**

Yellowstone's off-trail backcountry contains an abundance and variety of unique and seldom-visited

natural phenomena, such as waterfalls, thermal areas, and lakes, which become accessible with the proper use of a map and compass. Participants will become proficient in reading a topographic map and using a compass by actually setting and following compass courses to some remote lakes and historical sites in the Old Faithful area. Maps and compasses will be provided. Participants should pack a lunch and bring rain gear in the event of inclement weather.

We will meet at the Old Faithful Visitor Center at 9:00 am, spend the day in the field, and end at 3:00 pm.

FAMILY DAYS IN THE LAMAR—THE WOLVES COME HOME: 615**June 22-24****Adult-\$170 (Member's fee \$160)****Child-\$95 (Member's fee \$85)****Location:** The Lamar Valley **Limit: 20****Instructors:** Sandra Nykerk & Jim Garry, M.S.

The Lamar Valley, a sweeping river valley that supports an amazing diversity of flora and fauna, has often been referred to as "America's Serengeti." We will explore the Lamar ecosystem, including the role of predators, and the cultural and biological events that led to the removal and eventual return of the wolf to Yellowstone. Field observation and group hikes will supplement classroom lectures. We'll be up early and out late hoping to see and hear the soulful howl of the Lamar wolves, so we'll take a midday break. Storytelling around the evening campfire will introduce you to the mythology and folklore of Yellowstone country. All activities will be paced for families and the final itinerary will be based on the ages and abilities of class participants.

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

WOLVES—REALITY & MYTH: 616**June 22-24 (see description on pg 11)** **NEW****LEARNING BIRDS BY SOUND: 617****June 23-25** **\$140 (Member's fee \$130)****Location:** Lamar Buffalo Ranch **Limit: 8****Instructor:** Terry McEneaney

One of the most pleasant features of birds is the sound 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, vocal clucks, quivering, fluttering, gaping, and even flying noises. 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. Birders with little, if any, experience in bird sound identification will learn how to identify the sounds of approximately 50 species of birds. This course is not easy and requires tremendous concentration. Field trips will be the major emphasis, with a chance for individual skill development.

We will meet in the Lamar Ranch area at 7:30 pm on the first day and end at 5:00 pm on the last day. Optional: outdoor barbecue at 6:00 pm on the first day, west porch of the classroom building.

FOSSILS OF YELLOWSTONE: 618

June 23-25 \$160 (Member's fee \$150)

Location: Mammoth Hot Springs Limit: 13

Instructor: Vincent L. Santucci

The fossil record of life is well represented within the rock layers of Yellowstone. Paleontologists have discovered a wide range of fossil types in the park, including marine invertebrates, petrified wood, leaves, and dinosaurs. A paleontological survey initiated at Yellowstone in 1996 documented over 20 fossil-producing units in the park. On our field trips, we will visit a variety of paleontologic sites where both plant and animal fossils are preserved. Participants will have the opportunity to assist paleontologists with field surveys and help document new sites and fossils.

We will meet in the Mammoth Hot Springs area at 8:00 am on the first day and end around 5:00 pm on the last day.

FAMILY HORSEPACKING IN THE TETONS: 619

June 24-26 (see description on pg 34)

INTRODUCTION TO YELLOWSTONE'S

BIRDS: 620

June 26-28 \$200 (Member's fee \$190)

Location: Lamar Buffalo Ranch Limit: 15

Credit pending: U, 1 semester hour, MSU

Instructor: John Martin, M.S.

This course for birders of all abilities will focus on the life histories, distribution, population dynamics, and ecological roles of species in the Greater Yellowstone ecosystem. After a half-day classroom introduction to bird identification characteristics and field ornithology, we will be in the field, regardless of weather conditions. Though we will not be able to view all the species in Yellowstone, the course includes a special boat trip to Frank Island and other points on Yellowstone Lake to observe shorebirds, waterfowl, osprey, and bald eagles.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 4:00 pm on the last day. *Fee includes \$25 for boat trip on Yellowstone Lake and course materials.*

PLANT EATERS OF YELLOWSTONE: 621

June 26-28 \$170 (Member's fee \$160)

Location: Lamar Buffalo Ranch Limit: 15

Credit pending: U, 1 semester hour, MSU

Instructors: Harold Picton, Ph.D. &

Terry Enk, Ph.D.

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

We will meet in the Lamar Ranch area at 9:00 am on the first day and end late afternoon on the last day.

WILD EDIBLE PLANTS & MEDICINAL HERBS

June 27-29: 622 August 29-31: 824

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

Location: Squirrel Meadows/Warm River Area, Targhee National Forest, Idaho Limit: 15

Credit pending: U, 1 semester hour, U of MT

Instructor: Wayne Phillips

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 Americans. This is an exceptional area to study the edible and medicinal properties of many native plants of the West. Field identification of wild plants, major poisonous plants of the area, and gentle-harvesting techniques will be emphasized. Participants will learn to develop their own wild food meals and herbal preparations.

June course: We will meet at a Forest Service cabin at Squirrel Meadows, on the road between Ashton, Idaho, and Flagg Ranch near the South Entrance to the park.

August course: We will meet at the former Warm River Fish Hatchery near Mesa Falls of the Henry's Fork of the Snake River between Ashton and Island Park, Idaho.

Both courses will meet in Ashton at 8:00 am the first day. Be prepared for short, leisurely walks of 1 to 3 miles with an elevation gain/loss of 300 feet. *Participants should come prepared to camp out, or stay in a motel in Ashton, which is less than an hour away. Fee includes \$10 for course materials. Note:* If the August course is taken for credit, grades for this course will be available some time after October 1.

2000 SUMMER FIELD COURSES

JUNE-JULY



Photo by Pam Gontz

DAY HIKING IN WONDERLAND: 623

June 29-July 1 **\$160 (Member's fee \$150)**

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

Instructor: Tom Watson, M.A.

In this course, we will explore Yellowstone's diverse natural world through casual hikes off the beaten path. Through our rambles into Yellowstone's moderately rugged interior we'll attempt to immerse ourselves in the sights and sounds of this natural world. Such hikes will give bird watchers, animal observers, geology explorers, and plant identifiers a chance to experience and learn in one of the world's greatest outdoor classrooms. Be prepared for light to moderately strenuous hikes of 1.5 to 4.5 miles per day. See and experience Yellowstone with a seasoned and knowledgeable guide. Good hiking shoes and an appetite to learn are your ticket to what some people call "Wonderland."

We will meet in the Lamar Ranch classroom at 9:00 am each day, then do fieldwork until late afternoon.

ADVANCED BIRDS OF YELLOWSTONE: 624

June 30-July 2 **\$200 (Member's fee \$190)**

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

Credit pending: U, 1 semester hour, MSU

Instructor: John Martin, M.S. **NEW**

This course features Yellowstone's raptors—hawks, eagles, falcons, and owls, and other hard-to-identify species. Identification in the field is emphasized along with the role of predation in biological communities, predator-prey relationships, breeding strategies, and habitat influences. Conservation measures unique to raptors will also be examined. Participants will take a special boat trip to Frank Island and other points on Lake Yellowstone to observe nesting and hunting osprey and bald eagles.

We will meet in the Lamar Ranch area at 9:00 a.m. on the first day and end at 4:00 pm on the last day. *Fee includes \$25 for boat trip on Yellowstone Lake and course materials.*

WILDFLOWERS IN THE MAMMOTH AREA: 701

July 1 (see description on pg 13)

OLD TIMES AT OLD FAITHFUL: 702

July 1 **\$60 (Member's Fee \$50)**

Location: Old Faithful Area **Limit: 15**

Instructor: Leslie J. Quinn, M.Ed. **NEW**

Since the Washburn party named Old Faithful in 1870, the land around the geyser has been the most visited part of the Yellowstone area. The village of Old Faithful is a fascinating and important cultural landmark for our national parks. This field course will examine the changing face and cultural history of the village. We will visit the Bear's Playground, Wylie "Permanent" Camp, the former and current sites of the Haynes Photo Shops, and the Inn, Lodge, and Hamilton Stores. You will learn many interesting historical facts (why do they call the Upper Hamilton Store the "B.A.C."?) and view antique photographs as we explore the past.

We will tour the village on foot. Be prepared to walk 3 to 4 miles during the course of the day. Walking shoes and rain gear are recommended.

We will meet at the fireplace in Old Faithful Inn at 9:00 am and end at 5:00 pm at the Inn.

FAMILY HORSEPACKING IN THE TETONS: 703

July 1-3 (see description on pg 34)

ALONG THE YELLOWSTONE RIVER WITH LEWIS & CLARK: 704

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

Location: Mammoth Hot Springs/Three Forks Area

Instructor: Jim Garry, M.S. **Limit: 13**

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

Almost two hundred years later, we will walk in their footsteps, see what they saw, read their journals, and speculate on what they would think of this country today. We'll journey to Three Forks and follow Clark's route to the Yellowstone. We'll see cottonwood trees like those he used to make canoes, and we'll visit a buffalo jump that was in use then.

We will meet in the Mammoth Hot Springs area at 9:00 am on the first day and end at Mammoth midday on the last day. *Participants must secure their own campsite or lodging in Mammoth Hot Springs and Three Forks—contact registrar for lodging information.*

Visit our website at:
www.YellowstoneAssociation.org

GHOST HOTELS OF YELLOWSTONE: 705

July 2 **\$60 (Member's Fee \$50)**
Location: Old Faithful Area **Limit: 13**
Instructor: Leslie J. Quinn, M.Ed. **NEW**

Did they really build a hotel in Yellowstone and never open it? Has Old Faithful Inn lost 51 rooms since it opened in 1904? Which hotel was slated to have a "drive through" installed for automobiles? In this field class, you will learn the answers to these and other questions. As we tour the sites of many of the lost hotels of the park, you will learn their histories, and discover some ghosts of the current hotels as well. Antique photographs will help us envision the scene at each locale. Hotel sites to be visited include Old Faithful, Fountain, Marshall's, Norris, Canyon, and Lake (multiple stops at some).

We will meet at the fireplace in Old Faithful Inn at 8:00 am and end at 5:00 pm at the Inn.

EXPLORING YELLOWSTONE'S BIRD LIFE: 706

July 3-4 **\$125 (Member's fee \$115)**
Location: Lamar Buffalo Ranch **Limit: 15**
Instructor: John Martin, M.S. & Pam Gontz **NEW**

Explore Yellowstone's bird life and learn to identify individual species by examining 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. Be prepared for moderate hikes of 1 to 3 miles in the early morning and evening hours when the weather can be cold and inclement.

We will meet in the Lamar Ranch area at 6:00 am on the first day and end at 4:00 pm on the last day. *Fee includes \$10 for course materials.*

AQUATIC INSECTS OF YELLOWSTONE: 707

July 3-4 **\$115 (Member's fee \$105)**
Location: Lamar Buffalo Ranch **Limit: 13**
Credit pending: 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 in their nymphal, immature stages are adapted to life in the water where they live with backswimmers, water boatmen, water striders, water bugs, scavengers, diving beetles, whirligigs, and a variety of maggots—the larvae of flies. The diversity and habitats of the aquatic forms of these insects on which so many birds and fish depend for survival will be examined through excursions in the lab and field.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 5:00 pm on the last day.

INTRODUCTION TO THE BUTTERFLIES OF GREATER YELLOWSTONE: 708

July 5-7 **\$160 (Member's fee \$150)**
Location: Lamar Buffalo Ranch **Limit: 13**
Credit pending: U or G, 1 semester hour, ISU
Instructor: Robert Anderson, Ph.D.

This is the first of two courses on butterflies which explores the beauty and aesthetic appeal of these charismatic insects whose diverse colors and patterns have inspired many a naturalist. The Greater Yellowstone ecosystem supports nearly 130 species of butterflies representing seven families. Several species, including the Yellowstone Checkerspot and Hayden's Ringlet, are unique to the region. Participants in this introductory course will discover the butterfly bounty of Yellowstone and its environs, and develop an understanding and appreciation of the diversity of invertebrate microfauna in Yellowstone.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 4:00 pm on the last day.

FAMILY HORSEPACKING: HELLROARING & THE BLACK CANYON: 709

July 5-7 (see description on pg 34)

PHOTOGRAPHING NATURE IN YELLOWSTONE COUNTRY #1: 710

July 5-8 **\$225 (Member's fee \$215)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Sandra Nykerk

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. This workshop will begin with basic photographic principles: the ethics of nature photography, creative visualization, learning to see the light, metering, exposure, and composition. We will go on to discuss film and equipment selection, macro photography, and using flash in the field. Classroom lectures and slide programs supplement in-the-field shooting for "hands-on" learning and enjoyment. Emphasis will be on developing personal vision and creativity, technical excellence, and an understanding that a really good nature photographer is an even better naturalist! For intermediate photography, see *Photographing Nature in Yellowstone Country #2*, course number 717, pages 17 and 18.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 4:00 pm on the last day. *Participants will be expected to pay for their own lab film processing.*

ARTISTIC FIELD JOURNALS: 711

July 6-9 \$220 (Member's fee \$210)

Location: Old Faithful Area Limit: 13

Instructor: Eleanor Williams Clark, M.L.A.

The Firehole River, geysers, and fumaroles intrigued early artists. Their sketches, recording the landscape of 1871, were essential in understanding and establishing Yellowstone Park. In this course, you will learn how field art facilitates a unique understanding of park resources. Using examples from early field artists such as Holmes and Moran, we will explore various field techniques for sketching and painting. The natural setting will inspire you: thermal features, creeks, rivers, meadows, and wildlife in the Old Faithful area. There will be basic instruction on how to paint in the field. Ink, pencil, charcoal, and watercolor paints will be used to create sketches and notes of our surroundings in the field and in quiet corners of the Old Faithful Inn.

We will meet in the Old Faithful area at 9:00 am on the first day and end at 2:00 pm on the last day. *Rooms have been set aside at Old Faithful—contact registrar for reservation information. Fee includes \$10 for course materials.*

ADVANCED STUDIES ON BUTTERFLIES OF YELLOWSTONE: 712

July 8-9 \$160 (Member's fee \$150)

Location: Lamar Buffalo Ranch Limit: 13

Credit pending: U or G, 1 semester hour, ISU

Instructor: Robert Anderson, Ph.D. NEW

This is a continuation of the *Introduction to the Butterflies of Greater Yellowstone* course. In this advanced course, we will review and practice spot identification of families, and further analyze species that are active in the region. We will also consider scientific protocols for obtaining information relating to the systematic, biological, ecological, physiological, and other attributes of butterflies in the laboratory and field, using the Greater Yellowstone area as a model. We will observe the numbers, variety, flight characteristics, and food requirements of butterflies. Participants should be able to identify butterflies at the family level to take this course.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 4:00 pm on the last day.

GREAT EARTH ODYSSEY: 713

July 9-11 \$170 (Member's fee \$160)

Location: Old Faithful Area Limit: 15

Credit pending: U, 1 semester hour, U of MT

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

Yellowstone is the ideal backdrop for the study of geothermal systems. The dynamic geysers, bubbling mud pots, and colorful hot springs we see on the surface are, however, only part of the story. Beneath

our feet is another fascinating world rich in untapped and possibly even unidentified resources. We will review how geologic structures, the earth's inner heat, and groundwater work in concert to produce these and other geothermal features. We will also discuss possible global uses of geothermal resources.

This course is open to anyone, but it is particularly useful to teachers (K-8) and non-science specialists because it illustrates a new interdisciplinary geothermal education curriculum. We will explore basic earth science, history, geography, and language arts through classroom activities and field trips.

We will meet in the Old Faithful area at 9:00 am on the first day and end late afternoon on the last day. *Rooms have been set aside at Old Faithful—contact registrar for reservation information.*

MAMMAL TRACKING: INTERPRETING TRACKS, SCAT & OTHER SIGN: 714

July 9-12 (see description on pgs 10 and 11)

HORSEPACKING: WILDFLOWERS & WILDLIFE OF THE LAMAR RIVER DRAINAGE: 715

July 9-14 (see description on pgs 34 and 35)

PLANTS OF YELLOWSTONE: 716

July 10-12 \$160 (Member's fee \$150)

Location: Lamar Buffalo Ranch Limit: 13

Instructor: Jennifer Whipple, M.A.

This course focuses on the fascinating wildflowers and vegetation of Yellowstone National Park, from the alpine flowers of Mt. Washburn to the specialized plants of the thermal areas. Participants will learn to recognize plant families, genera, and species, including some that are rarely seen in the park. We'll also discuss a variety of related park issues during informal field sessions. Be prepared to spend some time in vehicles as we explore the different locations of various wildflowers scattered throughout the park. We will investigate many different habitats on short (less than 1 mile) walks. Wear appropriate shoes for wet areas.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end late afternoon on the last day.

PHOTOGRAPHING NATURE IN YELLOWSTONE COUNTRY #2: 717

July 11-14 \$225 (Member's fee \$215)

Location: Yellowstone Area Limit: 13

Instructor: Sandra Nykerk

This intermediate field photography course is an opportunity for you to further develop the skills you learned in *Photographing Nature in Yellowstone Country #1*, course number 710, page 16, through more field time. We will base at three different locations in the park. Each day will be spent photographing Yellowstone; all of our learning will be through hands-on

experience. 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. Subjects to be covered include: selecting the right film and lens for your subject, coping with environmental conditions in the field, continuing development of personal vision and creativity, and the importance of natural history knowledge to the nature photographer. The introductory course is not a prerequisite to this course but you must have a working understanding of photographic principles and a fundamental familiarity with your equipment.

We will meet in the Mammoth area at 9:00 am on the first day and end at 4:00 pm on the last day. *We recommend the following dates and areas for camping or lodging: July 11—Mammoth area; July 12—Yellowstone Lake area; July 13—Old Faithful area. Rooms have been set aside at Mammoth, Lake, and Old Faithful—contact registrar for reservation information.*

YELLOWSTONE'S LIVING STREAMS: 718

July 13-15 **\$170 (Member's fee \$160)**
Location: Lamar Buffalo Ranch **Limit: 15**
Credit pending: U or G, 1 semester hour, U of MT
Instructor: Roy Mink, Ph.D. **NEW**

Yellowstone is well known for its pristine mountain streams, meadows, and streamside habitats supporting large numbers of aquatic and terrestrial animals. Participants will discover the wide variety and value of streamside vegetation communities, stream channels, and aquatic environments that make up the most productive habitats of Yellowstone. You will explore a variety of Yellowstone's streams and processes of disturbance, and learn how to assess stream condition and potential. Participants will learn the STREAMWALK assessment procedure and assess effects of fire, floods, and wild ungulates on streams and streamside vegetation. Students will learn what constitutes a healthy, properly functioning stream and riparian ecosystem and apply the information from this course to classroom and/or citizen assessment and monitoring activities for any stream system.

We will meet in the Lamar Ranch area at 9:00 am on the first day.

YELLOWSTONE'S FISHERIES BEYOND ANGLING: 719

July 13-15 **\$170 (Member's fee \$160)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructors: Dan Mahony, M.S. & National Park Service (NPS) Fisheries Biologists

Fish in Yellowstone Park have been highly valued by members of the angling community since the park's creation. These fish populations also directly or indirectly affect many other aquatic and terrestrial species

of the ecosystem. Fishery biologists from the NPS Aquatic Resources Center will discuss current impacts to the fish populations in Yellowstone and examine management options to ensure perpetuation of these aquatic residents.

After an introductory talk, on-site visits will be made to several lakes and streams where participants may observe or participate in fishery management activities. Be prepared for everything from rain to mosquitoes. Chest waders are recommended, but optional.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end late afternoon on the last day. *Fee includes \$10 for a copy of Yellowstone Fishes: Ecology, History, and Angling in the Park by John Varley & Paul Schullery.*

HORSEPACKING: HELLROARING & THE BLACK CANYON: 720

July 13-17 (see description on pg 35)

GEYSERS, MUD POTS & HOT SPRINGS

July 14-16: 721 **July 18-20: 727**
\$180 (Member's fee \$170)
Location: Old Faithful Area **Limit: 15**
Credit pending: U, 1 semester hour, MSU
Instructor: Duncan Foley, Ph.D.

Explore the rare, spectacular geothermal features of Yellowstone in this course. After a short introduction to the geologic setting of Yellowstone, we will visit mud pots, hot springs, and geysers. Be prepared for short hikes, timed to try to see several of the less common geysers erupt.

We will meet at the Grand Canyon of the Yellowstone at 11:00 am on the first day, then proceed to the Old Faithful area for a full day of geyser gazing on the second day. On the third day, we will visit Norris Geyser Basin and other sites. The course ends late afternoon on the last day. No background in geology is required. Fee does not include lodging. This class will be based at Old Faithful. *Rooms have been set aside at Old Faithful—contact registrar for reservation information.*

FAMILY ADVENTURES IN YELLOWSTONE

July 15-16: 722 Mammoth
July 18-19: 725 Canyon
Adult-\$130 (Member's fee \$120)
Child-\$80 (Member's fee \$70) **Limit: 20**
Instructor: Clare Long, M.S. & Donna Richardson, M.S.

Discover the natural wonders of Yellowstone with your family. We'll explore different habitats and search for signs of animal and plant life. We'll head out on forest forays and try to answer some of the natural history mysteries found in the wilds of Yellowstone. A

2000 SUMMER FIELD COURSES

JULY

variety of informal outdoor learning activities will encourage hands-on discovery of the environment for kids ages 8 to 80.

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

Canyon: Unlock the secrets of Yellowstone Canyon and the Hayden Valley area. Search for signs of life in the nooks and crannies of different ecosystems. Be prepared for easy-paced hikes of several miles each day.

Both courses will meet at 8:30 am the first day and end at 3:00 pm on the last day. Evening campground activities will help us explore nightlife in Yellowstone. *Families who camp must secure their own campsites early in the day or make reservations through AmFac Parks & Resorts at 307-344-7311. Participants must provide their own camping equipment and food, including field lunches. Participants will caravan for field trips.*

WOLF WATCHING IN YELLOWSTONE: 723

July 15-17 **\$130 (Member's fee \$120)**

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

Instructor: Norman A. Bishop

Yellowstone National Park may be the best place in the world to watch wolves. Bring your binoculars, scope and tripod, warm clothing for freezing mornings, and join the crowd. In this course, we will consider the scientific and social reasons why some Americans have alternately reviled and revered wolves. We'll also examine the process of justifying the wolf's restoration as an experimental population under the Endangered Species Act. Find out what the wolves eat, how they kill their prey, who does the killing, and what effect the wolves have on other animals, including livestock outside the park. We'll watch for wolves from the roadside at dawn and dusk, and discuss them while watching videos and slides in the classroom at midday.

We will meet in the Lamar Ranch area at 7:00 pm on the first day and end at 3:00 pm on the last day.

PAINTING WILDFLOWERS & BUTTERFLIES: 724

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

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

Instructor: Peg Steunenberg **NEW**

To draw it is to know it. This class explores the wildflowers of Yellowstone through drawing and painting. Morning sessions include hiking, field sketching, and field observation. Afternoon sessions assist artists in refining field sketches, transferring drawings to preferred working surface, and experimenting with the medium of choice. Demonstrations in watercolor and colored pencil will be offered. Utilizing

butterfly specimens, addition of these lovely insects to the painting will be introduced. The delights and dilemmas of working from photographs will be discussed. A detailed course outline and explanatory technique notes will be available. A supply list will be available at registration.

We will meet in the Lamar Ranch area at 8:30 am on the first day.

FAMILY ADVENTURES IN YELLOWSTONE—CANYON: 725

July 18-19 (see description on pgs 18 and 19)

ENVIRONMENTAL ETHICS IN YELLOWSTONE: 726

July 18-20 **\$170 (Member's fee \$160)**

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

Credit pending: U, 1 semester hour, CSU

Instructor: Holmes Rolston, III, Ph.D. **NEW**

This seminar will explore values carried by, and duties to, the natural world. We will relate environmental ethics to ecological science and evolutionary biology, with attention to the logic of moving from what is in nature to what ought to be. Examples of ethical decisions made in encounters with fauna and flora—bighorn sheep, bison, ducks, butterflies, lodgepole pine forests—and with endangered species and threatened ecosystems, as well as philosophical issues in Yellowstone National Park and the Greater Yellowstone ecosystem will be a particular focus.

Through classroom and outdoor experience, ethical



Art by Peg Steunenberg

2000 SUMMER FIELD COURSES

JULY

reflection, and exploration of natural environments, you will discover what it means to live as a responsible human being in both the human and biotic communities of life on Earth. View the social and natural worlds with Yellowstone Park as a center of comparison and contrast between wildland and inhabited landscapes.

We will meet in the Lamar Ranch area at 6:00 pm for supper on the first day and end at 2:00 pm on the last day. *Fee includes \$10 for a copy of the instructor's book, Conserving Natural Value.*

GEYSERS, MUD POTS & HOT SPRINGS: 727 July 18-20 (see description on pg 18)

WATERCOLOR PAINTING—VISIONS PAST & PRESENT: 728

July 19-22 \$210 (Member's fee \$200)
Location: Lamar Buffalo Ranch Limit: 13
Instructor: Michael J. Halverson, M.A.

This painting expedition will include a brief summary of the life and times of Thomas Moran, Yellowstone's premier artist, whose colorful watercolor images helped persuade Congress to establish the area as the first national park.

We will paint on location at several of Moran's favorite spots and compare his visions with ours. Color theory, composition, value, and technique will be addressed in relation to our field studies. Beginning participants will receive instruction in the fundamentals of watercolor while the more advanced will work on improving their techniques and developing compositions. Field sketches will be used to determine future compositions which may be worked on and refined during the evening hours. Materials will be kept as simple as possible for mobility and ease in handling.

We will meet in the Lamar Ranch area at 9:00 am on the first day.



Photo by Pam Gontz

WILDFLOWERS OF YELLOWSTONE: 729

July 21-22 \$115 (Member's fee \$105)
Location: Lamar Buffalo Ranch Limit: 13
Instructor: Wayne Phillips

This class is for anyone who has ever wondered what a flower is. You will develop basic plant identification skills and study a variety of forest, meadow, and streamside habitats while on botanical walks. 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. Be prepared to hike 2 to 3 miles with elevation gains up to 600 feet. More strenuous walks vary with group interest.

We will meet in the Lamar Ranch area at 9:00 on the first day and end at 4:00 pm on the last day.

EXPLORING YELLOWSTONE'S MICROBES: 730 July 21-23 \$170 (Member's fee \$160)

Location: Mammoth Hot Springs Limit: 10
Instructor: Anna-Louise Reysenbach, Ph.D.

This intensive course will acquaint you with the spectacular diversity of microbial life in Yellowstone's thermal springs. We will explore the extremes in which these organisms thrive, consider their biotechnological value, and consider whether Yellowstone's thermal springs might reveal something about life on other planets, and how life may have evolved on Earth.

A short introduction each day precedes a visit and occasional short hike to a hot spring area. Late afternoons or evenings you will view microorganisms under a microscope, watch optional demonstrations of laboratory techniques used to study microbial diversity, and hear an informal presentation of the biology of deep-sea hydrothermal vents. No background in microbiology required. A basic understanding of biology recommended.

We will meet in the Mammoth area at 8:30 am on the first day and end around 3:00 pm on the last day.

Rooms have been set aside at Mammoth—contact registrar for reservation information.

MOUNTAIN FOLKLORE—A LLAMA TREK: 731 July 21-24 \$525 (Member's fee \$515) Location: Green Lakes/Granite Basin Limit: 10 Instructor: Jim Garry, M.S.

The high mountains are where winter spends the summer. Spring becomes fall with only a fleeting nod at summer in between. Brief seasons make the alpine environment more spectacular. Here plants, animals, and people must adapt to survive.

With llamas as our pack animals, we will trek into the mountains to study "folk natural history" and compare folklore and current scientific thinking. Bring your imagination and your hiking boots. We'll explore the

mountains by day and the folk tales at night around the campfire. Be prepared to hike 4 to 6 miles each day with elevation gains of 500 to 2,000 feet. There will be numerous stream crossings and some bushwhacking.

We will meet in the Green Lakes area at 8:00 am on the first day (details will be provided in the student packet). *Participants must bring their own tent, sleeping bag, pad, and pack. Fee includes group equipment, food, and llama packing. A camp cook will prepare meals.*

LIFE AT HIGH TEMPERATURES

July 22: 732 July 23: 733 July 30: 743
\$60 (Member's fee \$50) Limit: 15
Location: Lower Geyser Basin/Norris Geyser Basin
Instructor: Thomas D. Brock, Ph.D. NEW

The brilliant colors of Yellowstone's thermal areas are due to vast populations of microorganisms that thrive even in boiling water. Some of these organisms are important in medicine and industry. In this field course, we will examine the nature and biotechnological uses of these fascinating organisms. Simple environmental measurements and sampling methods will be demonstrated. We will avoid the boardwalks and visit thermal areas off the beaten track. Be prepared for short walks over wet or slippery ground, some climbing, and stream crossing. Substantial footgear is essential.

We will meet at the Great Fountain Geyser parking lot (on Firehole Lake Drive, Lower Geyser Basin) at 9:00 am. We will carpool or motor caravan from there to the Norris Geyser Basin. The course ends at 5:00 pm at Roaring Mountain on the road between Norris and Mammoth.

LIFE AT HIGH TEMPERATURES: 733

July 23 (see description above) NEW



Photo by Pam Gontz

HIKING THROUGH TIME—DAY HIKES INTO THE GEOLOGICAL PAST: 734

July 23-25 \$160 (Member's fee \$150)
Location: Lamar Buffalo Ranch Limit: 13
Instructor: Tom Watson, M.A.

Did you know that it's possible to go back into time? In a sense, Yellowstone is a time machine, and by hiking through its interior, you can go back and trace the park's geologic history through almost three billion years. You will have an opportunity to take relatively moderate hikes off-road to observe and consider firsthand the ancient processes that shaped what we see today in Yellowstone's rocks, mountains, valleys, and geyser basins. No past experience in geology is required, only a desire to learn about the mysteries of Yellowstone's geology. Be prepared to hike 4 miles each day. Good hiking boots, sunscreen, sunglasses, a day pack with lunch and rain gear are required. Field journals, cameras, binoculars and hand lenses are optional.

We will meet at the Lamar Ranch classroom at 9:00 am each day, then go to the field until late afternoon.

ALPINE WILDFLOWER WALKS: 735

July 23-25 \$140 (Member's fee \$130)
Location: Cooke City, Montana Limit: 13
Credit pending: U, 1 semester hour, U of MT
Instructor: Wayne Phillips

Wildflowers growing in the alpine tundra above tree line will be the focus of this course. Participants will hike through the high country of the Beartooth Plateau to study the beauty of flowers found only in circumpolar arctic environments and on the highest mountaintops south of the arctic. A variety of alpine ecosystems will be studied: the "krummholz," a wind battered, horizontal pygmy forest; the cushion plants of boulder fellfields; alpine meadows; and receding snowbanks. Be prepared to hike 4 to 6 miles or more, with elevation gains of 500 to 2,000 feet. You will hike off-trail through rugged boulder-strewn terrain with numerous stream and snowbank crossings, at elevations of 9,000 to 11,000 feet. Participants should be physically fit and prepared for strenuous hikes in rugged terrain.

We will meet in Cooke City at 4:00 pm on the first day and end at 4:00 pm on the last day. *Fee includes \$10 for course materials.*

THE LESSER-KNOWN CARNIVORES OF THE GREATER YELLOWSTONE ECOSYSTEM: 736

July 23-26 \$225 (Member's fee \$215)
Location: Lamar Buffalo Ranch Limit: 13
Credit pending: U, 1 semester hour, MSU
Instructor: Don White, Jr., Ph.D. NEW

Discover the excitement and beauty of the lesser-known carnivores of the Greater Yellowstone region: coyotes, foxes, mountain lions, lynx, bobcats, wolver-

ines, otters, fisher, badgers, and marten. Join us for extensive discussions of carnivore biology, ecology, behavior, conservation, and evolution. This course will feature guest speakers, lectures, readings, videos, and field trips to the habitats where these carnivores are found. These secretive species generally occur at low densities, however, we will attempt to observe them during early morning and evening field trips.

We will meet in the Lamar Ranch area at 9:00 am on the first day. *Fee includes \$15 for course materials.*

HORSEPACKING: SOUTH BOUNDARY, FOX PARK & THE TETON WILDERNESS: 737

July 23-28 (see description on pg 35)

THE BISON OF YELLOWSTONE: 738

July 25-27 \$125 (Member's fee \$115)

Location: Lamar Buffalo Ranch Limit: 15

Credit pending: U, 1 semester hour, MSU

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

The big boys are rumbling. While we're watching the bison rut, we'll learn about more than breeding behavior. *Buffalo* are one of the Old West's classic, enduring symbols; *bison* are one of the New West's issues. Here in Yellowstone, where once we fought for their survival as a species, bison are now a focal point in the fight to define the new West. This class will explore the bison's history and natural history, its role in Indian cultures, and in the expanding white culture of the 19th century. Since we're at the Buffalo Ranch, we'll dig into the Ranch's role in the survival of the bison. We'll also explore the current political turmoil around the definition of the Yellowstone ecosystem and the bison's role in that controversy.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end mid-afternoon on the last day.

FLY-FISHING THE CATCH-AND-RELEASE WAY

July 28-30 Less Experienced: 739 Limit: 8

August 4-6 More Experienced: 803 Limit: 9

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

Location: Lamar Buffalo Ranch

Instructor: Richard Parks

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

July course: We will concentrate on the basics. This course is intended for those who have purchased their own equipment but have not spent much time fly-fishing. Half the course time will be spent away from the water practicing casting and other techniques. The rest of the time, the instructor will work with small groups on the stream. He will be available each evening for discussion.

August course: For those who have mastered the basics. We will focus almost exclusively on fishing Yellowstone's waters. The instructor will act primarily as a resource person to help participants polish their skills. Most instruction will be on an individual basis or in small groups. The group will meet for morning and evening discussions.

Be prepared for some hiking and climbing. The Yellowstone River in the park lies above 7,000 feet in altitude and neither the stream banks nor their approaches are flat.

Both classes will meet in the Lamar Ranch area at 8:30 am on the first day. *Yellowstone Park fishing permits are required and available at most visitor centers.*

WILDFLOWERS OF THE HIGH COUNTRY (LLAMA TREK): 740

July 28-31 \$525 (Member's fee \$515)

Location: Jedediah Smith Wilderness Limit: 10

Credit pending: U, 1 semester hour, U of MT

Instructor: Wayne Phillips

This backcountry study of alpine plants will focus on the diverse wildflowers that thrive on the edges of alpine lakes, streams, and snowbanks. We will explore the alpine tundra and the open subalpine parklands and forests of the Jedediah Smith Wilderness adjacent to Grand Teton National Park. Be prepared to hike 4 to 6 miles with elevation gains of 500 to 2,000 feet. You will hike off-trail through boulder-strewn terrain with numerous stream and snowbank crossings, at elevations of 9,000 to 11,000 feet. Participants must be physically fit and prepared to carry a pack on strenuous hikes in rugged mountain terrain. Llamas will transport all food, group gear, and 20 pounds of personal gear per person to the base camp. The participant must carry personal gear over 20 pounds. Each person must provide their own tent, sleeping bag, pad, eating utensils, clothes, and backpack. Fee includes group equipment (stoves, fuel, etc.), food, llama packing, and food preparation by a camp cook.

We will meet at Driggs, Idaho, at 9:00 am on the first day and end at 4:00 pm on the last day.

A TRAIL THROUGH LEAVES—THE ART OF THE FIELD JOURNAL: 741

July 28-31 \$230 (Member's fee \$220)

Location: Lamar Buffalo Ranch Limit: 13

Instructor: Hannah Hinchman

A field journal is one of the best bridges between a person and the land. This course will introduce a type of journal keeping that mixes words and images, exploration and introspection, to create a new way of entering the world of nature. The course includes early morning writing rambles, classroom and field instruction in basic drawing methods, creative mapping,

2000 SUMMER FIELD COURSES

JULY-AUGUST

design and color, and careful observation. The course is designed to allow ample time for solitude, or for browsing in the instructor's extensive library. Be prepared for hikes of moderate length.

We will meet in the Lamar Ranch area at 10:00 am on the first day and end at noon on the last day.

HORSEPACKING: TRAPPER TRAILS THROUGH THE THOROFARE: 742

July 28-Aug 2 (see description on pg 35)

LIFE AT HIGH TEMPERATURES: 743

July 30 (see description on pg 21) **NEW**

BACKPACKING—LEAVE NO TRACE IN GRIZZLY COUNTRY: 744

July 31-August 2 \$185 (Member's fee \$175)

Location: Pebble Creek Backcountry Limit: 10

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

This course is for certification as a trainer in the national Leave No Trace (LNT) program, an educational program endorsed by the National Park Service and other land management agencies. The goal of the program is to promote "minimum impact" skills and ethics. A key component of LNT is development of trainers to educate the general public. On this backpacking trip, you will learn the principles, theories, and skills of Leave No Trace. This class is interactive and participants should come prepared to participate. In addition to LNT, we will discuss the biology and ecology of grizzly bears and learn the skills necessary to reduce the possibility of dangerous encounters. Be prepared to hike 12 miles with an initial climb of 1,100 feet. The pace of the course is designed for all levels of experience. Participants must be in good physical

condition. Participants must secure their own campsite or lodging before and after the course. The nearest campgrounds are Slough Creek or Tower Fall or lodging in the Silver Gate/Cooke City area. Participants must provide their own backpacking gear and food.

We will meet in the Pebble Creek area at 9:00 am on the first day.

HISTORY OF YELLOWSTONE ARTISTS & PHOTOGRAPHERS: 745

July 31-Aug 2 \$170 (Member's fee \$160)

Location: Lamar Buffalo Ranch Limit: 12

Instructors: Peter Hassrick &

Lee H. Whittlesey, J.D. **NEW**

Yellowstone was a mecca for artists and photographers in the late 19th and early 20th centuries. Major figures in American painting and photography found Yellowstone to be a natural template for an ever-changing artistic and photographic interpretation of America's western wilderness. In art, these interpretations range widely from the grand manner, nationalistic, panoramic landscapes of Thomas Moran and Albert Bierstadt to the delicately personal watercolors of Louis Comfort Tiffany. In photography, the 1870s and 1880s were represented by the well-known works of William Henry Jackson and F. Jay Haynes, and the less known works of Joshua Crissman, Henry Bird Calfee, Thomas Hine, A.F. Thrasher, Bundy and Train, Rutter and Nesbitt, and L.A. Huffman.

In this course, we will examine the history of American art and photography through the artistic and photographic interpretation of Yellowstone. We will study many actual images and discuss the "sweat and inspiration" behind them, the influence of creative impulse on aesthetic forms, the taste of the times, the demands of an enthusiastic public, and the difficulty of reaching the Yellowstone Wonderland.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 4:00 pm on the last day.

SMOKING MOUNTAINS—INDIANS & YELLOWSTONE PARK: 801

August 1-3 \$130 (Member's fee \$120)

Location: Lamar Buffalo Ranch Limit: 13

Instructor: Jeanne M. Eder, M.A.

Join us as we learn about the people who first inhabited the "Smoking Mountains" of Yellowstone. Through a combination of classroom and field time, we will examine the history of the Indians in Yellowstone Park and their spiritual concepts for living in harmony in nature. We will enjoy a traditional Indian meal and watch videos to enhance our understanding of Indian people. We will also take field trips to approved sites.

We will meet in the Lamar Ranch area at 5:00 pm on the first day and end mid-afternoon on the last day.



Photo by Pam Gontz

DAY HIKING YELLOWSTONE

August 3-6 802 Limit: 13
August 7-10 805 Limit: 13

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

Location: Lamar Buffalo Ranch

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

Join us as we explore Yellowstone beyond road's end. Day hiking in the park provides a unique opportunity to experience the wild places of Yellowstone. Without the burden of a heavy pack, we will explore Yellowstone's varied landscapes. Each day's hike will include both formal and informal discussions on the natural and cultural history of Yellowstone, and wilderness travel.

Be prepared to hike 5 to 10 miles each day with elevation gains up to 1,500 feet. Participants must be in good physical condition.

Both courses will meet in the Lamar Ranch area at 7:30 pm on the first day.

FLY-FISHING—MORE EXPERIENCED: 803

August 4-6 (see description on pg 22)

YELLOWSTONE'S SOUTHERN ROADSIDE

HISTORY: 804

August 7-9 \$160 (Member's fee \$150)

Location: Old Faithful Area Limit: 13

Instructor: Lee H. Whittlesey, J.D.

The Yellowstone landscape is rich in evidence of early human activity. Traveling the park's roads, we will discover many fascinating sites worth closer examination. Informative daylong field trips and off road hikes (up to 3 miles round trip) to examine these sites and discuss their significance 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 in our discussions will be stories of early violent deaths in the park from the instructor's book, *Death in Yellowstone*.

We will meet in the Old Faithful area at 8:30 am on the first day. *Rooms have been set aside at Old Faithful—contact registrar for reservation information.*

DAY HIKING YELLOWSTONE: 805

August 7-10 (see description above)

GEOLOGY OF THE YELLOWSTONE

COUNTRY: 806

August 7-11 \$265 (Member's fee \$255)

Location: Lamar Buffalo Ranch & Old Faithful

Credit pending: U or G, 1 semester hour,

U of WY, U of MT

Instructor: David Fountain, Ph.D. Limit: 13

Explore the geologic history of Yellowstone Park from its ancient beginnings to the spectacular eruptions that formed the world's largest known calderas. Daily field excursions through the park will introduce you to such topics as volcanic rocks and processes, glaciation, earthquakes and faulting, hydrothermal features, sedimentary rocks and processes, metamorphism, and tectonics. Be prepared to hike 1.5 to 2 miles up to Specimen Ridge, an elevation gain of 800 feet. Completion of an introductory geology course is preferred but not required.

We will meet in the Lamar Ranch area at 8:00 am on the first day and end late afternoon on the last day. On Thursday evening, participants will spend the evening in the Old Faithful area. *Rooms have been set aside at Old Faithful—contact registrar for reservation information. Fee includes \$10 for course materials. Note: If taken for credit, grades for this course will be available after mid-September.*

MAMMAL TRACKING: 807

August 10 \$60 (Member's fee \$50)

Location: Gardiner, Montana Limit: 15

Instructor: James Halfpenny, Ph.D. NEW

Brush up your natural history detective skills by learning to read tracks. This overview class features both lectures and fieldwork designed to develop your skills at finding and interpreting tracks on your own outings. Mammal tracking will serve as a life-long starting point for observing nature's hidden secrets. The morning lecture, held at Jim's Track Museum, will include foot anatomy, footprint information content and identification, averaging, relative size, animal movements and gaits, trails, and stories. In the afternoon, we will travel to one of Yellowstone's hottest tracking areas to learn about locating footprints, plaster casting, following faint trails, and interpreting stories. Bring a sack lunch and expect to get wet and muddy. Be prepared to hike up to 2 miles round trip.

We will meet in the Gardiner area at 8:00 am and end at 5:00 pm in Gardiner.

FLY-FISHING FOR WOMEN: 808

August 11-13 \$210 (Member's fee \$200)

Location: Mammoth Hot Springs Limit: 6

Instructor: Rhea Topping NEW

Give yourself a treat! Call a girlfriend, get a sitter for the kids, and join the fun! This course is designed to

Visit our website at:
www.YellowstoneAssociation.org

jump-start your interest in fly-fishing! We will cover all the basics: knots, necessary equipment, fly patterns and the insects they imitate, playing and landing a fish, catch-and-release, and fly-fishing etiquette. Emphasis will be placed on developing good casting skills and techniques.

Instruction will be provided in the classroom, through evening slide shows, and on several different streams in the park. There will be time to practice and fish on your own, and view wildlife at dusk. Our goal is to leave you with the desire to go fly-fishing again and again.

We will meet in the Mammoth Hot Springs area at 2:00 pm on the first day and end late afternoon on the last day. *Yellowstone Park fishing permits are required and are available at most visitor centers. Participants must provide their own equipment. Rooms have been set aside at Mammoth Hot Springs—contact registrar for reservation information.*

NATURE WRITING—FROM APPRECIATION TO PUBLICATION: 809

August 11-13 **\$160 (Member's fee \$150)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: John Murray **NEW**

Have you ever wished you could transform your experiences and adventures in nature into articles and essays? Have you ever dreamed of polishing your work so that it might be published in a newspaper, magazine or book? If so, this is the course for you! Building on the success of last year's session, in which two class members produced work that will soon be published in one of my edited collections, the class will actively explore both the Yellowstone landscape and the writing potential of each participant. The class will informally blend both classroom instruction and field exercises as we cover such essential subjects as the journal, openings, closing, figurative language, word pictures, narration, revision, research, and publication. Be prepared for short hikes.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 4:30 pm on the last day.



Photo by Pam Gontz

BACKPACKING IN GRIZZLY COUNTRY: 810

August 12-14 **\$185 (Member's fee \$175)**
Location: Pebble Creek Backcountry **Limit: 10**
Instructors: Michael Bartley & Marla Covey, M.S.

This backpacking trip is for people who want to learn to travel safely, confidently, and respectfully in grizzly country. The grizzly bear is one of the most magnificent animals in the world and backpacking in the land of the "Great Bear" can be a magical experience. However, for your safety and the welfare of the bear it is essential that you learn how to exist with grizzly bears. Adapting the principles of "Leave No Trace" to bear country, you will learn the 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. We will discuss the biological, ecological, political, and social aspects of this threatened bear and its long-term prospects for recovery. Be prepared for an easy hike of 12 miles with an initial climb of 1,100 feet. For the beginning backpacker. Participants must be in good physical condition.

We will meet in the Lamar Ranch area at 9:00 am on the first day and return to the trailhead at 3:00 pm on the last day. *Participants must provide their own backpacking gear and food. Participants must secure their own campsite or lodging before and after the course. The nearest campgrounds are Slough Creek or Tower Falls or lodging in the Silver Gate/Cooke City area.*

DISCOVER YOUR SKY—OBSERVING TECHNIQUES FOR BACKYARD ASTRONOMERS: 811

August 12-14 **\$175 (Member's fee \$165)**
Location: Lamar Buffalo Ranch **Limit: 15**
Instructor: Mike Murray **NEW**

If you've ever wanted to learn the "tricks" for easily getting around the sky, this class is for you! In this workshop, we will use slides, star maps, an inflatable "Starlab" planetarium, and observations of the pristine Yellowstone night sky to develop your skills for finding astronomical wonders. We will discuss how best to choose, use, and care for a telescope, and we will examine several types. We will utilize binoculars and a large-aperture telescope for evening observing sessions. This course coincides with the peak of the Perseid Meteor Shower.

We will meet in the Lamar Ranch area at 7:30 pm on the first day and begin our evening observing sessions at 10:00 pm that night. *Fee includes \$15 for course materials.*



Photo by Pam Gontz

FIRE & ICE—YELLOWSTONE'S LAST TWO MILLION YEARS: 812

August 13-15 \$170 (Member's fee \$160)

Location: Canyon **Limit:** 13

Credit pending: Credit Pending-U of MT

Instructor: David Fountain, Ph.D.

In the last two million years in Yellowstone, a dramatic interplay between repeated glaciations and catastrophic volcanic eruptions have shaped the park's magnificent landscape and set the stage for the modern ecosystem. We will examine the evidence for and consequences of these past glacial episodes and the multiple cataclysmic caldera formation events. Field excursions in the Lake, Canyon, and Lamar Valley areas will focus on the products of glacial erosion and deposition, glacial lake deposits, evidence for climate change in the past, catastrophic floods, nature and style of recent volcanic eruptions, hydrothermal explosions, and evidence for uplift and subsidence of the Yellowstone caldera. Be prepared for short, easy walks and one strenuous 3-mile hike up Mt. Washburn, a gain in elevation of 1,400 feet. From the 10,000-foot summit, we will have a grand overview of the park's frosty and fiery life.

We will meet in the Canyon Village area at 8:30 am on the first day and end late afternoon on the last day. *Fee includes \$10 for course materials.*

CREATING WITH THE ELEMENTS: 813

August 13-18 \$265 (Member's fee \$255)

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

Instructors: Dorothy Hinshaw Patent, Ph.D. & Deborah Jane Milton, Ph.D. **NEW**

For the artist in all of us, the elemental forces that created Yellowstone's landscape inspire and liberate our own creativity. Discover your unique creative response to the elements: earth, air, fire and water, and try your hand at both writing and illustrating. Through a combination of classroom and field time, we will explore metaphor, point of view, rambunctious verbs, the power

of story, and the magic of poetry. We'll practice spontaneity by drawing with a pen and painting with watercolors. We'll also expand sensory awareness, develop observational skills, build confidence, and nurture our unique creative voices in this course.

Be prepared for easy to moderate hikes to remote sites. In the evenings, we will meet for stories around the campfire and a picnic supper on a high bluff at twilight.

We will meet in the Lamar Ranch area at 7:00 pm the first day and end at noon on the last day.

WEATHER CYCLES IN THE BIG SKY: 814

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

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

Instructor: Dave Thurlow

The cyclical behavior of the atmosphere, from day to day, season to season, and year to year instills a sense of wonder, respect, and curiosity in those who choose to take notice. This course will encourage you to view the sky in new ways and apply your observations to your own piece of sky back home. Through slides, video, and direct observations, the focus will be on the summer weather patterns of Yellowstone.

You will gain a basic understanding of how weather works—from micro to global scale. Simple observational parameters and cloud types will be discussed, giving you the language to describe the atmosphere and the knowledge to make your own forecasts. Yellowstone offers prime weather viewing opportunities, and we will be flexible enough to take advantage of anything that pops up.

Much of our time will be spent in the field, including a full day hike to the weather observatory atop Mt. Washburn.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 3:00 pm on the last day.

BACKPACKING YELLOWSTONE—THE GALLATIN REGION (2nd in the park series): 815

August 17-21 \$315 (Member's fee \$305) **NEW**

Location: Gallatin Range **Limit:** 8

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

This backpacking trek will take you into the rugged and wild northwest corner of Yellowstone Park. Starting near Swan Flat we will cross the Gallatin Range, a land of exceptional beauty, and end the trip along Fan Creek. This is magnificent high country with some of the finest views in all of Yellowstone. Elk, deer, moose, bighorn sheep, and bears are abundant in this region. Daily classes will cover backpacking skills, the area's natural history, park management issues, and wilderness ethics. Throughout the trip we will practice the principles and skills of "Leave No Trace" camping and travel.

This is the second in the annual series of weeklong

backpacking trips in Yellowstone. Each of the annual hikes highlights a unique region within the larger Greater Yellowstone ecosystem. Be prepared to hike 24 miles with an elevation gain of nearly 3,000 feet. There will be a one-day layover for rest or a climb up Electric Peak, one of the great mountains in Yellowstone. Participants must be in good physical condition.

We will meet at the Fawn Pass trailhead in the park's northwest corner at 8:00 am and be shuttled to the Glen Creek trailhead near Mammoth. *Participants must provide their own backpacking gear and food. Participants must secure their own campsite or lodging before and after the course. The nearest campground or lodging is in West Yellowstone, Montana.*

SHOSHONE LAKE SEA KAYAKING

August 18-21: 816

Sept 8-11: 902

\$695 (Member's fee \$685)

Limit: 6

Location: Shoshone Lake, Yellowstone Backcountry

Instructor: Rich Bloom, M.A.

A combination of wilderness travel without a backpack and natural history exploration—what could be better! The focus of these trips will be general Yellowstone natural history, thermal geomorphology and ecology, and fire ecology. We'll also learn appropriate outdoor and sea-kayaking skills. Experts in both wilderness sea kayaking and Yellowstone natural history lead all trips. Highlights of this adventure include the opportunity to explore backcountry thermal features around the lakes, view wildlife in their natural habitat, camp near pristine shores, and fish and hike in relative solitude.

You will explore Lewis Lake, then tow your kayak about 1 mile while wading in the Lewis River to roadless Shoshone Lake—headwaters of the Snake River. You will spend two full days (three nights) on Shoshone Lake kayaking, swimming, fishing, and exploring the wonders of nearby Shoshone Geyser Basin. No prior kayak experience required but this is an active course and not for the novice camper. We will paddle approximately 30 miles in four days and hike about 6 miles one day.

We will meet at the Lewis Lake campground boat dock at 9:00 am on the first day. *Fee includes all kayaking equipment, group camping gear, and food.*

HORSEPACKING: WASHBURN EXPEDITION—YELLOWSTONE & HEART LAKES: 817

August 19-23 (see description on pg 35)

MAP, COMPASS & STARS ACROSS YELLOWSTONE: 818

August 20-23

\$175 (Member's fee \$165)

Location: Lamar Buffalo Ranch

Limit: 15

Instructor: James Halfpenny, Ph.D.

A sliver of metal that points north changed the world.

In this hands-on course, you will learn practical aspects of finding your way with map, compass, and night navigation. We'll make a compass, then learn why it doesn't point north. Using compasses corrected for magnetic declination, we will map the Lamar field station. Then, we'll turn that map into a topographic map. Expect some orienteering in this course. We'll review Yellowstone maps and study how UTM's (universal transverse mercator grids), latitude and longitude help Yellowstone biologists study animals. Also, we'll take a look at GIS (geographic information systems) and GPS (global positioning satellites) systems. Learn how the sun and stars reveal our latitude, directions, and time. This course is designed for beginners.

We will meet in the Lamar Ranch area at 7:30 pm on the first day and end at 4:00 pm on the last day. *Fee includes \$15 for course materials.*

EXPLORING THE NEW UNIVERSE: 819

August 20-23

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

Location: Lamar Buffalo Ranch

Limit: 13

Instructor: Bob Berman

Like a planetarium come to life, the skies over Yellowstone are ideal for investigating the universe. Astronomer Bob Berman will take you on a fast-paced, humor-filled tour of the universe through colorful movies shot in space, images from spacecraft, the latest Hubble Telescope photographs, and night sky watching.

Open to all, but geared for those with no background in astronomy, this course will include astonishing facts (the moon is exactly as dark as asphalt); timeless observation techniques (how to see earth's shadow any evening); and upcoming sky spectacles of the next several years. Explore the cosmos and learn about String Theory, space-time, black holes, the possibilities of other universes, and how to easily trace out every North Star through history.

We will meet in the Lamar Ranch area at 7:30 pm on the first day and end at noon on the last day. *Fee includes \$15 for a copy of the instructor's book, *Secrets of the Night Sky*.*



Photo by Pam Gontz

2000 SUMMER/FALL FIELD COURSES

AUG-SEPT

BASE CAMP IN THE BEARTOOTHS— A MOUNTAIN JOURNEY: 820

August 23-26 **\$245 (Member's fee \$235)**

Location: Beartooth Wilderness **Limit: 10**

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

Immerse yourself in one of the finest wild areas in North America—the Absaroka Beartooth Wilderness. This course is for those who want a true wilderness experience in the Greater Yellowstone ecosystem. We will hike to a backcountry base camp and explore the surrounding mountains from there. Around the campfire and on the trail, we'll talk about the meaning of wilderness and learn how to minimize our impact in this fragile alpine environment. There will be plenty of time to relax and reflect in this spectacular setting.

Be prepared to hike 5 to 6 miles, carrying a full backpack to and from base camp, to an elevation above 9,000 feet. There will be some steep climbs. Participants must be in good physical condition.

We will meet at the Top of the World Store between Cooke City and Beartooth Pass at 9:00 am on the first day. *Participants must provide their own backpacking gear and food. Participants must secure their own campsite or lodging before and after the course. The nearest campground is the Island Lake Campground, located in the Beartooth Mountains and operated by the Forest Service. The nearest lodging is the Silver Gate/Cooke City area.*

HORSEPACKING: GUSTAVUS C. DOANE MEMORIAL RIDE—YELLOWSTONE'S SNAKE RIVER COUNTRY: 821

August 23-27 (see description on pgs 35 and 36)



Photo by Pam Gontz

BACKCOUNTRY COOKING & NUTRITION: 822

August 28-30 **\$185 (Member's fee \$175)**

**Location: Lamar Buffalo Ranch & Black Canyon
of the Yellowstone** **Limit: 10**

Instructors: Michael Bartley &

Marla Covey, M.S.

NEW

On this overnight backpack into the Black Canyon of the Yellowstone, you will have an opportunity to experience the rewards of wholesome and creative meals far from the convenience of a kitchen. Daily classes will explore basic nutrition principles, food planning and preparation, cooking techniques, and bear country considerations.

Everyone will have a chance to use their newly acquired techniques to help prepare a portion of the meals. Throughout the course we will practice the principles of Leave No Trace and discuss the natural history of Yellowstone. Participants must be in good physical condition.

We will meet in the Lamar Ranch area at 9:00 am on the first day and return to the trailhead at 3:00 pm on the last day. *Participants must provide their own backpacking gear and food. Participants must secure their own campsite or lodging before and after the course. The nearest campgrounds are Slough Creek or Tower Falls or lodging in the Silver Gate/Cooke City area. Participants may stay at the Institute cabins the first night of the course.*

WILDERNESS FIRST AID

August 29-30: 823

December 2-3: 1201

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

Location: Lamar Buffalo Ranch **Limit: 24**

Instructor: Wilderness Medicine Institute Staff

Do you spend a lot of time in the outdoors? Have you ever wondered how you would respond to a backcountry emergency? This 16-hour certification course is ideal for hikers, skiers, and outdoor professionals who want to learn the basics of emergency care in remote settings. Some of the topics to be addressed are patient assessment, shock, wilderness wounds, fractures and dislocations, hypothermia, heat illness, altitude illness, and bites and stings. Emphasis is placed on learning the principles of medical care rather memorizing information. May be used to re-certify as a Wilderness First Responder. No previous certification is required.

We will meet in the Lamar Ranch area at 8:00 am on the first day and end at 5:00 pm on the last day.

WILD EDIBLE PLANTS & MEDICINAL HERBS: 824 August 29-31 (see description on pg 14)

HORSEPACKING: NEZ PERCE TRAIL—

ALTERNATE ROUTE, MIRROR PLATEAU: 825

August 31-September 4 (see description on pg 36)

Late Season Discount



This symbol indicates courses for which Yellowstone National Park Lodges will offer discounted lodging rates. For specific rates and availability, please call 307-344-7311 and identify yourself as a Yellowstone Association Institute student. To take advantage of these special rates, you must make your reservation prior to September 1, 2000.

AUTUMN DAY HIKING IN YELLOWSTONE: 901
September 5-7 **\$160 (Member's fee \$150)**
Location: Mammoth Hot Springs **Limit: 13**
Instructor: Michael Bartley **NEW**

Join us as we explore Yellowstone during the season of fall colors and bugling elk. Day hiking in the park provides a unique opportunity to experience the wild places of Yellowstone without the encumbrance of a heavy pack. In this course, we will explore Yellowstone's varied landscapes as the park inhabitants prepare for winter. Formal and informal discussions will focus on the natural and cultural history of Yellowstone and wilderness travel. Be prepared to hike 5 to 10 miles each day with elevation gains up to 1,500 feet. Participants must be in good physical condition.

We will meet in the Mammoth Hot Springs area at 9:00 pm on the first day and end at 4:00 pm on the last day. *Rooms have been set aside at Mammoth—contact registrar for reservation information.*

SHOSHONE LAKE SEA KAYAKING: 902
September 8-11 (see description on pg 27)

NATURE PAINTING—FOR ART'S SAKE: 903
September 9-12 **\$395 (Member's Fee \$385)**
Location: Mammoth Hot Springs **Limit: 15**
Instructor: Greg Beecham **NEW**

This workshop is designed for the nature artist—aspiring, advanced amateur, or professional. The emphasis will be on exploring nature as a means to an artistic end as opposed to rendering photographic images of animals. We will discuss the elements of a good painting: color, value, drawing, composition, brushwork, and edges. Class time will consist of afternoon lectures and slide presentations. The instructor will explain his use of photographs, plein air painting, and experience in the wild to compose paintings. Other topics include: manipulation of paint, use of light, how color and value affect mood, and exciting imagery. Plein air painting sessions will be scheduled for each morning. Evenings will be reserved for encouraging critiques of participants' work (bring several slides of your work).

We will meet at Mammoth Hot Springs for an informal evening session, 7:00 to 9:00 pm, on the first day, and end at 4:00 pm on the last day. *Rooms have been set aside at Mammoth—contact registrar for reservation information.*

HORSEPACKING: SIGHTS & SOUNDS OF YELLOWSTONE'S BACKCOUNTRY: 904 **NEW**
September 10-15 (see description on pg 36)

FLY-FISHING IN THE FALL: 905
September 15-17 **\$210 (Member's fee \$200)**
Location: Mammoth Hot Springs **Limit: 9**
Instructor: Richard Parks

If you have some experience with fly-fishing, but want to expand and polish their skills, this course is for you. Participants will have the opportunity to fish several of the park streams, including the Yellowstone, Gardner, and Firehole Rivers. Most instruction will be on an individual basis or in small groups. You will receive intensive instruction for one full day, then have the opportunity to practice on your own, and meet with the group for morning and evening discussions.

We will meet in the Mammoth Hot Springs area at 8:30 am on the first day of class. *Rooms have been set aside at Mammoth—contact registrar for reservation information. Yellowstone Park fishing permits are required and available at most visitor centers.*

AUTUMN PHOTOGRAPHY IN YELLOWSTONE: 906



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

Explore the many photographic opportunities of a Yellowstone autumn—from bugling elk and rutting pronghorn antelope to the delicate colors of the changing landscape. This course is designed for photographers of all levels, working in all formats (35 mm, medium and large formats), with a working understanding of photography and a fundamental familiarity with their own equipment. In the classroom, we will review basic photographic principles, the ethics of field photography, exposure control, composition, film and lens selection. In the field, we will draw inspiration from the Yellowstone landscape and the serendipity of wildlife. You will have ample opportunity to develop your personal vision and creativity and understand the importance of natural history knowledge to the nature photographer.

We will meet in the Mammoth Hot Springs area at 9:00 am on the first day and end at 4:00 pm on the last day. A list of recommended supplies and equipment will be forwarded to each participant prior to the course. *Rooms have been set aside at Mammoth—see lodging note above for details. Participants will be expected to pay for their own lab film processing.*

2000/2001 FALL/WINTER COURSES

SEPT-JAN

HORSEPACKING: POACHER'S CABIN: 907
September 24-27 (see description on pg 36)

**YELLOWSTONE: PHOTOGRAPHING THE
QUINTESSENTIAL LANDSCAPE: 908** 
September 28-October 1 \$395 (Member's fee \$385)
Location: Mammoth Hot Springs Limit: 15
Instructor: Pat O'Hara, M.S. NEW

Evocative and compelling, two-dimensional photographic images are compositions expressing awe and wonder of our three-dimensional world interpreted through all our senses. In this workshop, you will be encouraged and guided to become sensitively engaged with your environmental subjects, so that the creative processes become life-enhancing experiences. Through a combination of classroom and fieldwork, the elements of composition in color photography will be emphasized. This workshop is designed for the advanced photographer and will cover special techniques, single lens reflex (SLR) equipment, and contemporary digital technology.

Indoor instruction will take place mid-morning and mid-afternoon. Be prepared for early morning and evening field outings; schedule will be determined by weather conditions.

We will meet in the Mammoth area from 7:00-9:30 pm on the first day and end at 2:00 pm on the last day. *Rooms have been set aside at Mammoth—see lodging note on pg 29 for details. Participants will be expected to pay for their own lab film processing.*

INTRODUCTION TO FLY-FISHING: 909 
September 29-Oct 1
\$260 (Member's fee \$250)
Location: Mammoth Hot Springs Limit: 15
Instructors: Rab Cummings &
Chris Marosek NEW

Learn the basics of fly-fishing with fly-fishing educators from the Federation of Fly-Fishers (FFF) International Fly-Fishing Center in Livingston, Montana. This course will introduce participants to the many elements of fly-fishing including: equipment, casting, fly-tying, stream investigation, fish biology, conservation and much more. Activities will be hands-on and interactive with an emphasis on fun and safety. Instruction will take place in the classroom and on nearby park streams. Most equipment and materials will be provided.

We will meet in the Mammoth Hot Springs area at 8:30 am on the first day. *Rooms have been set aside at Mammoth—see lodging note on pg 29 for details. Fee includes \$50 for equipment. Yellowstone Park fishing permits are required and available at most visitor centers.*

**NATURE & ENVIRONMENTAL
WRITING: 1001** 
October 5-8 \$395 (Member's fee \$385)
Location: Mammoth Hot Springs Limit: 15
Instructor: Paul Schullery NEW

This class is an intensive introduction to many aspects of writing about nature and environmental topics. We will mostly be in class, but will have some time outdoors. Participants will receive reading materials from the instructor in advance. All participants are invited to submit samples of their own writing for individual critique (submission of material is voluntary). Guest speakers will address specific types of writing, from journalism to personal narrative. We will also cover such urgently compelling practical topics as dealing with publishers of various sorts, getting enough work done, and how to spend all those pesky big royalty checks.

We will meet at Mammoth Hot Springs for an informal evening session, 7:00 to 9:00 pm, on the first day, and end at 4:00 pm on the last day. *Rooms have been set aside at Mammoth—see lodging note on pg 29 for details.*

WILDERNESS FIRST RESPONDER: 1101
November 9-18 \$450 (Member's fee \$440)
Location: Lamar Buffalo Ranch Limit: 24
Instructor: Wilderness Medicine Institute Staff

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

We will meet in the Lamar Ranch area at 8:00 am on the first day and end at 5:00 pm on the last day.

WILDERNESS FIRST AID: 1201
December 2-3 (see description on pg 28)

SNOWSHOEING IN YELLOWSTONE: 101
January 12-15, 2001 \$175 (Member's fee \$165)
Location: Lamar Buffalo Ranch Limit: 13
Instructor: Scott Wood

This course offers the best of both worlds. During the day, we will strap on snowshoes and explore the winter

2001 WINTER COURSES

wilderness in and around the Lamar Valley. At night, we will meet in a warm classroom and then retire to the snug Institute cabins. Through this combination of daylong tours and classroom sessions, we will learn how to safely enjoy the winter environment on snowshoes. Snowshoeing in deep snow can be strenuous and participants should be in good physical condition.

We will meet in the Lamar Ranch area at 7:00 pm on the first day and end at 3:00 pm on the last day. *Participants must provide their own snowshoe equipment—see pg 8.*

SNOW TRACKING: 102

January 19-21, 2001 \$145 (Member's fee \$135)

Location: Lamar Buffalo Ranch Limit: 15

Instructor: James Halfpenny, Ph.D.

This course for winter enthusiasts is designed to shed light on the detailed information snow can provide. The white slate records nearly every movement by animals, allowing trackers an opportunity to observe extended sections of trails. You will learn to read trails for behavioral information, habitat preference, and travel suitability. Topics include snow properties, snow tracking basics, melted-out footprints, snow load, snow pillars, snow casting, snow tracking index, measuring, gait pattern recognition, trail interpretation, and ethograms. Morning classroom lectures will be supplemented by afternoon field trips. Field trips will be on skis.

We will meet in the Lamar Ranch area at 6:00 pm for an optional potluck followed by a lecture at 7:30 pm on the first day, and end at 5:00 pm on the last day.

Participants must provide their own ski equipment—see pg 8. Fee includes \$15 for course materials.



Photo by Pam Gontz

JANUARY-FEBRUARY



Photo by Pam Gontz

WINTER ON A SLIVER: 103

January 26-28, 2001 \$130 (Member's fee \$120)

Location: Lamar Buffalo Ranch Limit: 15

Instructor: James Halfpenny, Ph.D. NEW

Glide across Yellowstone on slivers of wood and observe wildlife living on slivers of energy during the white season. Two days on skis with North America's foremost animal tracker and winter ecologist will allow you to see winter wildlife and understand what it takes to survive in this environment. We'll dig snow pits, and test the snow to see how it protects and hinders animals. Nights will be spent indoors watching slide shows and enjoying a visit by the bard of the north, Robert Service. The adventurous may spend the night in a snow shelter. Relax, enjoy, and learn about winter in Yellowstone. Cross-country skis and advanced beginner level of ski experience required for this class; snowshoes not acceptable.

We will meet in the Lamar Ranch area at 7:00 pm on the first day and end at 5:00 pm on the last day. *Participants must provide their own ski equipment—see pg 8.*

EXPLORING THE YELLOWSTONE LANDSCAPE ON SKIS: 201

February 1-4, 2001 \$225 (Member's fee \$215)

Location: Lamar Buffalo Ranch Limit: 13

Instructor: Bill Hopkins

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

We will ski most of each day from the Lamar Ranch

area, with one day devoted to a ski in the park's interior. Short morning classes will precede each day's tour.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 2:00 pm on the last day. *Participants must provide their own ski and/or snowshoe equipment—see pg 8. Fee includes \$15 for a snowcoach shuttle into the interior.*

WEATHER CYCLES IN THE BIG SKY: 202

February 10-12, 2001 \$160 (Member's fee \$150)

Location: Lamar Buffalo Ranch Limit: 13

Instructor: Dave Thurlow

The cyclical behavior of the atmosphere, from day to day, season to season, and year to year instills a sense of wonder, respect and curiosity in those who choose to take notice. This course will encourage you to view the sky in new ways and apply your observations to your own piece of sky back home. Through slides, video, and direct observations, the focus will be on the winter weather patterns of Yellowstone.

You will gain a basic understanding of how weather works—from micro to global scale. Simple observational parameters and cloud types will be discussed, giving you the language to describe the atmosphere and the knowledge to make your own forecasts. Yellowstone offers prime weather viewing opportunities, and we will be flexible enough to take advantage of anything that pops up.

Be prepared for field trips on skies or snowshoes and bring plenty of warm clothing.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 3:00 pm on the last day.



Photo by Pam Gontz

EXPLORING YELLOWSTONE ON SNOWSHOES: 203

February 13-15, 2001 \$160 (Member's fee \$150)

Location: Lamar Buffalo Ranch Limit: 13

Instructor: Dale Sexton

For those who do not ski, snowshoeing provides an excellent, low-impact, yet rigorous mode of travel for exploring a snow-covered Yellowstone. Course discussion will include winter ecology, preparation for winter excursions, avalanche awareness, and map reading/route finding. Enjoy the experience of winter in Yellowstone! Be prepared to travel 2 to 8 miles a day on snowshoes, depending on conditions. Short morning presentations will precede each day's excursion.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 3:00 pm on the last day. *Participants must provide their own snowshoe equipment—see pg 8.*

EXPLORING YELLOWSTONE'S WINTER WORLD ON SKIS: 204

February 16-18, 2001 \$170 (Member's fee \$160)

Location: Lamar Buffalo Ranch Limit: 15

Instructors: Wayne Phillips & Leslie Stoltz NEW

Imagine yourself in a magical world blanketed with snow—the silence broken only by a wolf's howl or the crunch of cold crystals under your gliding skis. This class will provide a greater understanding of how everything fits together in this fantastic and sometimes unforgiving land. Cross-country skiing, photography, nature study, and learning to travel safely will be emphasized.

You will have an opportunity to improve your cross-country skiing, practice map and compass skills, analyze snow, and evaluate avalanche hazard. We will study the dynamics of snow, its relationship with the land, and its effect on animals and plants. Indoor classroom sessions will be followed by field trips. All levels of skiers are welcome, but be prepared to spend several hours at a time on skis.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 3:00 pm on the last day. *Participants must provide their own daypack, field lunches/snacks, outdoor clothing and ski equipment—see pg 8.*

WOLF WATCHING IN YELLOWSTONE: 205

February 23-25, 2001 \$160 (Member's fee \$150)

Location: Lamar Buffalo Ranch Limit: 13

Instructor: Norman A. Bishop

Yellowstone National Park may be the best place in the world to watch wolves. Bring your binoculars, scope and tripod, warm clothing for subzero mornings, and join the crowd. We will consider the scientific and social reasons why some Americans have alternately reviled and revered wolves, and examine the process of

2001 WINTER FIELD COURSES

MARCH

justifying wolf restoration as an experimental population under the Endangered Species Act. You will discover what the wolves eat, how they kill their prey, who does the killing, and what effect the wolves have on other animals, including livestock outside the park. We will watch for wolves at dawn and dusk from the roadside, and discuss them while watching videos and slides in the classroom at midday. Depending upon conditions and the wishes of participants, we may ski in wolf country and look for tracks. Cross-country skis and basic outdoor clothing required.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end at 3:00 pm on the last day.

COYOTE & RAVEN—FACT & FOLKLORE: 301
March 7-9, 2001 **\$160 (Member's fee \$150)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Jim Garry, M.S.

Winter is the ideal time to examine the natural history and folklore of coyotes and ravens. Deep in the midst of our coldest season, these park residents are active. Winter is also the time to tell tales of Coyote and of Raven, the tricksters.

We'll explore the Lamar Valley on snowshoes, moving slowly to watch the wildlife. You'll observe the coyote hunting for mice beneath the snow; the raven plunging from the sky to a carcass on the ground. We'll blend reality with myth and learn why Coyote and Raven, creators and destroyers, represent the best and the worst in human, animal, and divine nature. We'll explore folk tales and myths told by various cultures and develop a better understanding of those cultures.

We will meet in the Lamar Ranch area at 9:00 am on the first day and end mid-afternoon on the last day. *Participants must provide their own snowshoe equipment—see page 8.*

THE SLY FOX: 302
March 12-13, 2001 **\$115 (Member's fee \$105)**
Location: Lamar Buffalo Ranch **Limit: 13**
Instructor: Bob Fuhrmann, M.S. **NEW**

Join us as we explore the habitat and life history of the red fox in the Greater Yellowstone ecosystem. Until recently, red fox had never been studied in the Yellowstone area. Find out what might be unique about the fox, especially at higher elevations, and what the research reveals about this sly canid. We will discuss general ecology, differences between fox and coyote tracks, habitat, and much more. We'll also examine the relationships of all the canids—fox, coyote, and wolf—and discuss what influence the reintroduction of the wolves has had on the red fox. Our field studies will be conducted on skis or snowshoes, snow conditions permitting.

We will meet in the Lamar Ranch area at 9:00 am on

the first day and end at 4:00 pm on the last day. *Participants must provide their own ski or snowshoe equipment—see page 8.*

YELLOWSTONE'S WOLVES: 303
March 16-18, 2001 **\$145 (Member's fee \$135)**
Location: Lamar Buffalo Ranch **Limit: 15**
Instructor: James Halfpenny, Ph.D.

Listen closely—wolves howl over Lamar Valley. Wolves have established territories and travel the valley preying on elk and raising their pups. Be part of the latest news. Join us for an update on the wolf reintroduction and an overview of wolf ecology. Lectures will cover basic taxonomy, biology, ecology, and management. Field sessions will cover identifying wolf tracks (versus dog, fox, and coyote), understanding wolf gaits, reading stories in their trails, and interpreting wolf ecology in the field. With luck we may explore a kill site. Early mornings, we'll try to view wolves from the road. On Friday and Saturday, there will be evening lectures.

We will meet in the Lamar Ranch area at 7:30 pm on the first day, earlier for an informal potluck supper. Bring field lunches and lots of trail food. *Fee includes \$15 for course materials.*

WILDLIFE OBSERVATION—WINTER: 304
March 23-26, 2001 **\$160 (Member's fee \$150)**
Location: Lamar Buffalo Ranch **Limit: 15**
Instructor: Gene Ball

The end of winter offers its own unique wildlife viewing opportunities. The major goal and activity of this introductory course is field observation. Methods of unobtrusive observation and the ethics of interaction with wildlife will be the central themes. The opening session will cover selection and use of binoculars, spotting scopes, and tripods for quality wildlife observation. Discussion will focus on various wildlife topics, issues, and controversies. Our schedule will be flexible to conform to the movements of wildlife. Be prepared for morning and evening field trips, optional hiking, snowshoe, or ski outings.

We will meet in the Lamar Ranch area at 3:00 pm on the first day and end at 1:00 pm on the last day.



Photo by Pam Gontz

Institute horsepacking courses are both exciting and educational. The goal of these courses is to provide a true wilderness experience in the Yellowstone backcountry. Horsepacking is a traditional activity in Yellowstone, and our courses naturally lead to a greater appreciation of wildness and a deeper understanding of park resources. To make the experience even more meaningful, instructors share specific information about the natural and cultural history of Yellowstone and the low-impact use of pack stock. Fees include pack stock, saddle horses, camping equipment, and food. Participants must supply their own sleeping bag, clothing, and personal supplies. Trip locations may change based on current backcountry conditions. Unless specified, no prior riding experience is required.

To provide a range of high-quality experiences for our students, we work with two of Yellowstone's best backcountry outfitters:

Bleu Sky Pack Station offers fully participatory courses where students assist with saddling horses, loading pack stock, preparing meals, pitching tents, and completing camp chores. Participants learn how to care for the animals and how to travel and camp in wilderness without damaging this fragile country. Instructor Richard Clark is a master interpreter and a leading proponent of low-impact horsepacking at Yellowstone. Each course emphasizes a specific theme relevant to the area of the park that is being visited.

Wilderness Pack Trips, Inc. offers "catered" courses with the additional staff needed to handle all routine chores and cooking. Participants enjoy five-course meals and a more leisurely schedule, with plenty of time for observation and learning. Instructors Mike and Erin Thompson are experienced Yellowstone guides with an excellent reputation in the park. Guest naturalists will assist them on some courses.

FAMILY HORSEPACKING: DOING THINGS TOGETHER

ON THE WEST SLOPE OF THE TETONS: 619

June 24-26 Limit: 12

ON THE WEST SLOPE OF THE TETONS: 703

July 1-3 Limit: 12

HELLROARING & THE BLACK CANYON—

PLANTS & ANIMALS OF YELLOWSTONE: 709

July 5-7 Limit: 8

\$395 per person (Member's fee \$385 per person)

Instructor: Richard Clark, Bleu Sky Pack Station

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

Family groups who register should have at least one member under 14 years of age. All children must be

accompanied by an adult. Minimum age is 8 years old.

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

Hellroaring course: We will meet at the Hellroaring trailhead 3 miles west of Tower Junction in the northern section of Yellowstone at 10 am on the first day. The course will end at the same location at 3:00 pm on the last day.

HORSEPACKING: WILDFLOWERS & WILDLIFE OF THE LAMAR RIVER DRAINAGES: 715

July 9-14 Limit: 8

\$1395 per person (Member's fee \$1385 per person)

Instructor: Mike & Erin Thompson,

Wilderness Pack Trips, Inc. NEW

Discover the different species of plant and animal life in the Lamar River drainages. You will be actively involved in identifying, categorizing, and sketching or photographing the different species of plants and animals that inhabit this unique ecosystem. Day rides,

2000 HORSEPACKING COURSES

JULY-AUGUST

short hikes, spotting, and group discussions will be the order of the day. No prior riding experience is necessary.

We will meet at the Lamar River trailhead at 8:30 am on the first day and return to the same trailhead at 3:00 pm on the last day.

HORSEPACKING: HELLROARING & THE BLACK CANYON—PLANTS & ANIMALS OF YELLOWSTONE: 720

July 13-17

Limit: 8

\$795 per person (Member's fee \$785 per person)

Instructor: Richard Clark, Bleu Sky Pack Station

"It's a hell roarer," prospector A. H. Hubble reported to his partners in 1867, of the wide, wild stream running into the Yellowstone River from the Absaroka Mountains to the north. In this course, we will explore Hellroaring Creek and its environs and learn more about low-impact horsepacking in wildlands. We will also learn to identify selected wildflowers and tree species of Yellowstone's forests, recognize wildlife species in the area, and discuss Yellowstone ecology.

We will meet at the Hellroaring trailhead 3 miles west of Tower Junction at 11:00 am on the first day. We will return to the same trailhead early afternoon on the last day.

HORSEPACKING: SOUTH BOUNDARY, FOX PARK & THE TETON WILDERNESS—THE WILDERNESS STORY: 737

July 23-28

Limit: 10

\$895 per person (Member's fee \$885 per person)

Instructor: Richard Clark, Bleu Sky Pack Station

Yellowstone is a "wilderness" national park, and the adjoining Teton Wilderness is one of the earliest forest areas to be designated as "wilderness." Bob Marshall, an early advocate of the Wilderness Act was influential in this designation. In this course, we will explore the concept of "designated wilderness" and practice low-impact horse camping skills in such areas. Events, personalities, and ethics that led to the passage by Congress of the Wilderness Act will be discussed.

Be prepared for a physically demanding week. You will spend several long days in the saddle with no layovers. Recommended for experienced backcountry riders only. Consult with the instructor if you have questions about the level of experience required.

We will meet at the South Entrance trailhead at 1:00 pm on the first day. NOTE: The first and last days are short additions to this course in order to make five complete days of wilderness travel.

HORSEPACKING: TRAPPER TRAILS THROUGH THE THOROFARE: 742

July 28-August 2

Limit: 10

\$895 per person (Member's fee \$885 per person)

Instructor: Richard Clark, Bleu Sky Pack Station

Jim Bridger and Osbourne Russell were two of the mountain men who traveled Two Ocean Pass and entered the beaver-rich waters of Yellowstone. These men and other trappers followed the east shore of Yellowstone Lake en route to the interior of the Yellowstone plateau in search of fur and fortune. Join us as we examine the stories of those who came to obtain the fur wealth from Yellowstone's streams and rivers. Our route begins outside the park in the Teton Wilderness, follows the Yellowstone River north to Yellowstone Lake, and ends at the Nine-Mile trailhead on the northeast corner of the lake.

We will rendezvous at the Nine-Mile trailhead on the first day. We will be shuttled to Turpin Meadows trailhead in the Teton Wilderness, arriving at 1:00 pm. We will be shuttled back to our vehicles at the Nine-Mile trailhead on the last day.

HORSEPACKING: WASHBURN EXPEDITION—YELLOWSTONE & HEART LAKES, THE ORIGIN OF A NATIONAL PARK: 817

August 19-23

Limit: 10

\$795 per person (Member's fee \$785 per person)

Instructor: Richard Clark, Bleu Sky Pack Station

The idea of a "national park" blossomed out of the 1870 travels of nine citizens of Helena, Montana who passed through the Yellowstone country. We will discuss the birth of this idea and recount the experiences and adventures of this party as we explore the country that inspired them. Our expedition will begin at the Nine-Mile trailhead on the northeast corner of Yellowstone Lake. From there, we will ride horseback along the east and south shores of Yellowstone Lake, cross the Continental Divide, and traverse the Heart Lake area.

We will rendezvous at the Nine-Mile trailhead at 10:00 am on the first day. The Yellowstone Institute van will meet the group at the Heart Lake trailhead on the last day and shuttle people and gear back to their vehicles at Nine-Mile. We will arrive at Heart Lake at 1:00 pm and at Nine-Mile at 3:00 pm on the last day.

HORSEPACKING: GUSTAVUS C. DOANE MEMORIAL RIDE—YELLOWSTONE'S SNAKE RIVER COUNTRY: 821

August 23-27

Limit: 10

\$795 per person (Member's fee \$785 per person)

Instructor: Richard Clark, Bleu Sky Pack Station

Lieutenant Gustavus C. Doane was a prominent,

2000 HORSEPACKING COURSES

AUG-SEPT

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

This course is a memorial to Lt. Doane and his life on the western frontier. Using his story as an example, we will take a closer look at the frontier era in Yellowstone. Our horseback ride down the Snake River will include readings, campfire presentations, and group discussions centered on this theme.

We will meet at the Heart Lake trailhead in the southern part of the park at 10:00 am on the first day and end at 3:00 pm on the last day.

**HORSEPACKING: NEZ PERCE TRAIL—
ALTERNATE ROUTE, MIRROR PLATEAU: 825**
August 31-September 4 **Limit: 10**
\$795 per person (Member's fee \$785 per person)
Instructor: Richard Clark, Bleu Sky Pack Station

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

We will meet at the Pelican Creek trailhead, north of Yellowstone Lake, at 10:00 am on the first day and return to the same trailhead at 3:00 pm on the last day.

**HORSEPACKING: SIGHTS & SOUNDS OF
YELLOWSTONE'S BACKCOUNTRY: 904**
September 10-15 **Limit: 8**
\$1395 per person (Member's fee \$1385 per person)
Instructor: Mike & Erin Thompson,
Wilderness Pack Trips, Inc. **NEW**

Howling wolves, bugling elk, trumpeting sandhill cranes, braying mules, babbling streams, starlit nights, and fall colors all blend into a spectacular natural classroom in the upper drainages of the Lamar River. Course will emphasize spotting, identifying, and observing plants and wildlife. Participants will be encouraged to share observations, make castings of tracks, and help practice low-impact horsepacking.

We will meet at the Lamar River trailhead at 8:30 am and return to the same trailhead at 3:00 pm on the last day.

HORSEPACKING: POACHER'S CABIN: 907
September 24-27 **Limit: 8**
\$995 per person (Member's fee \$985 per person)
Instructor: Mike & Erin Thompson,
Wilderness Pack Trips, Inc. **NEW**

Step back in time to the era when Poacher's Cabin was in use. In this course, we will explore the impact of poachers on the preservation of America's first national park from early days to the present. Participants will visit and explore the remains of one poacher's cabin. We will practice "Leave No Trace" techniques of low-impact horsepacking and observe, explore, discuss, and relate stories of past and present obstacles facing protection of Yellowstone's wildlife. Day rides will include the "Poacher's Cabin," thermal areas, and wildlife/waterfowl viewing areas.

We will meet at the Pelican Valley trailhead at 9:00 am on the first day and return to the same trailhead at 3:30 pm on the last day.

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



ALL YELLOWSTONE ASSOCIATION INSTITUTE BACKCOUNTRY COURSES PRACTICE LEAVE NO TRACE

Leave No Trace (LNT) is a national educational program designed to encourage minimum impact skills and ethics among outdoor users. The Institute endorses this program and includes the LNT curriculum in our classes. We also offer a certification program for LNT trainers (see pg 23).

INSTRUCTOR PROFILES

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

Robert Anderson, Ph.D., (*Aquatic Insects of Yellowstone; Introduction to the Butterflies of Greater Yellowstone; Advanced Studies on Butterflies of Yellowstone*) is an entomologist and professor of biological sciences at Idaho State University. He has published works on applied ecology and medical entomology, and produced videos on crickets, insect collecting, and butterflies of Yellowstone and Grand Teton National Parks.

Orville E. Bach, Jr., Ed.D., (*Exploring Yellowstone by Map & Compass*) has worked 24 seasons as an interpretive ranger in Yellowstone National Park and is the author of *Exploring the Yellowstone Backcountry*. He has hiked, skied, and canoed the Yellowstone backcountry for the past 32 years.

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

Michael Bartley (*Backpacking Courses; Day Hiking Yellowstone; Autumn Day Hiking in Yellowstone*) is a former field manager of the Yellowstone Association Institute. He is certified as a Master of the national Leave No Trace (LNT) program and has taught many 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.

Greg Beecham (*Nature Painting—For Art's Sake*) has been a full time professional artist for 22 years. He is the son of artist Tom Beecham and has been surrounded by art his whole life. His work has appeared on the covers of five magazines including *Wildlife Art* and *US Art*. He has been featured artist at the Pacific Rim Wildlife Art Show and the Southeastern Wildlife Exposition. Greg's prints are published by the Greenwich Workshop and his originals are shown at the Trailside Gallery of Jackson, Wyoming.

Bob Berman (*Exploring the New Universe*) has authored over 1,000 articles on popular astronomy. His full-page column has appeared in every issue of

Discover magazine since 1990, his articles are published regularly in *Astronomy Magazine*, and he writes the astronomy section for the *Old Farmers Almanac*. Berman is director of two observatories, author of *Secrets of the Night Sky* (Harper Collins 1995), *Cosmic Adventure* (Morrow 1998), and writer/host of *SkyWindow* on Northeast Public Radio.

Norman A. Bishop (*Wolf Watching in Yellowstone*) retired from Yellowstone in 1997. From 1985 to 1997, he gave 400 talks on wolves and their recovery. He led wolf seminars for the Yellowstone Association Institute and for the Teton Science School. For his wolf work, Norm received the National Parks and Conservation Association's 1988 Stephen T. Mather Award, Greater Yellowstone Coalition's 1991 Stewardship Award, Wolf Education and Research Center's 1996 Alpha Award, and a Department of Interior Meritorious Service Award.

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

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

Eleanor Williams Clark, M.L.A., (*Artistic Field Journals*) is the chief landscape architect for Yellowstone Park, and has kept journals of landscape projects, filled with observations, for 14 years. Her work involves the landscape architectural coordination for the park, including standards for design and construction. Landscape design involves ecology, sculptural aspects of landscape, and the influence of artistic endeavors that shape our connections to the land.

Richard Clark, Ph.D., (*Horsepacking Courses*) is a native of the Yellowstone country who has outfitted and guided professionally for over 37 years in the Yellowstone area. He is currently director of the Professional Guide Institute (PGI) at Western Montana College at Dillon. The PGI offers natural and cultural history

INSTRUCTOR PROFILES

instruction to professional guides. Dick's formal training is in botany, natural history, and ecology. He owns and manages Bleu Sky Pack Station, Inc., a concession of Yellowstone National Park.

Marla Covey, M.S., (*Backpacking Courses; Day Hiking Yellowstone*) works as a personal trainer in Boise, Idaho. Marla is certified as a Master of the national Leave No Trace (LNT) program and as an Emergency Medical Technician. She is an instructor for the National Outdoor Leadership School and has taught backcountry courses for the Outdoor Adventure Program at Colorado State University.

Rab Cummings (*Introduction to Fly-Fishing*) is the Aquatic Education Specialist at the Federation of Fly-Fishers (FFF) International Fly-Fishing Center in Livingston, Montana, where he teaches people of all ages about fish and aquatic ecology. He has worked as an outdoor educator and natural history interpreter for the past 11 years.

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

William C. Edwards, Ph.D., (*Pronghorn, Elk & Bighorn Sheep in the Mammoth Area; Wildflowers in the Mammoth Area*) is a retired professor who lives in the Yellowstone area north of Gardiner, Montana. He has worked as a seasonal ranger-naturalist in Grand Teton and Rocky Mountain National Parks, served ten years in the Wyoming State Legislature, and taught extensively at the high school, junior college, and university levels. He has degrees in biology, conservation and wildlife, and plant ecology.

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

Duncan Foley, Ph.D., (*Geysers, Mud Pots & Hot Springs*) is chair of the department of geosciences at Pacific Lutheran University in Tacoma, Washington. He has worked throughout the western United States and Guatemala on volcanoes and geothermal systems and

has taught Institute classes for the past 21 years.

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

Bob Fuhrmann, M.S., (*The Sly Fox*) works full time for Yellowstone National Park as the Education Program Coordinator. In this position, he organizes most of the programs for children's groups that visit the park. From 1994-1998, he researched the red fox in the northern Yellowstone area in order to complete his master's degree in fish and wildlife management from Montana State University in Bozeman.

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

Pam Gontz (*Exploring Yellowstone's Bird Life*) is the manager of the Yellowstone Association Institute and has spent the last 13 summers studying plant and animal life in the Greater Yellowstone ecosystem. She has participated in breeding bird surveys, breeding bird census plots, and Christmas bird counts. She has taught beginning and intermediate bird courses at the Clark Fork Field Institute and has given talks on birds at local colleges and Audubon societies.

James Halfpenny, Ph.D., (*Mammal Tracking: Interpreting Tracks, Scat & Other Sign; Bears: Bones, Signs & Stories; The Evolution, Ecology & Future of the Wolf Family; Mammal Tracking: Map, Compass & Stars Across Yellowstone; Snow Tracking; Winter on a*

INSTRUCTOR PROFILES

Sliver; Yellowstone's Wolves) is an ecologist and educator. Recently he was coordinator of Long-Term Ecological and Alpine Research at the University of Colorado. Jim and his partner, Diann Thompson, travel North America studying and teaching about bears, wolves, and animal sign. He has taught field courses since 1961 and wrote *A Field Guide to Tracking in North America, Winter: An Ecological Handbook*, and *Discovering Yellowstone Wolves*. Jim and Diann produce educational videos.

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

Peter H. Hassrick, M.A., (*History of Yellowstone Artists & Photographers*) is the Charles Marion Russell Professor of American Western Art at the University of Oklahoma and director of the university's Charles M. Russell Center for the Study of Art of the American West in Norman, Oklahoma. He was the founding director of the Georgia O'Keeffe Museum in Santa Fe, New Mexico, and director of the Buffalo Bill Historical Center in Cody, Wyoming. His books include *Frederic Remington* (1973), *The Way West* (1977), *The Rocky Mountains: A Vision for Artists in the 19th Century* (1983) with Patricia Trenton, *Treasures of the Old West* (1984), *Charles Russell* (1989), *Frederic Remington: A Catalogue Raisonné of Oils, Watercolors and Drawings* (1996) with Melissa Webster, and *The Georgia O'Keeffe Museum* (1997).

Hannah Hinchman (*A Trail Through Leaves—The Art of the Field Journal*) lives in Augusta, Montana, with four cats, two horses, and a dog. She's been keeping illuminated journals for 29 years, and is the author of two books on the subject: *A Trail Through Leaves: the Journal as a Path to Place* (W. W. Norton) and *A Life in Hand: Creating the Illuminated Journal* (Peregrine Smith; new edition January 1999). She's at work on a new book about her land along the Rocky Mountain front range.

Bill Hopkins (*Exploring the Yellowstone Landscape on Skis*) works for the National Park Service in Yellowstone, coordinating cooperative work groups for

backcountry trail work. He is an avid cross-country skier, enjoying the full range of the sport from racing to ski mountaineering. He has completed major ski traverses and descents throughout North America, including extensive winter exploration of the Yellowstone plateau. In addition he has taught, guided, and coached skiing in Washington, Montana, Wyoming, and New Zealand.

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

Dan Mahony, M.S., (*Yellowstone's Fisheries Beyond Angling*) is the senior fishery biologist for the National Park Service (NPS) in Yellowstone. This is his fifteenth year in the park. In his first 12 years, he managed the park fisheries with the U.S. Fish & Wildlife Service. His long-term studies have included aquatic habitat inventories, population assessments, aquatic invertebrate distributions, and potential solutions to some of the park's existing aquatic habitat deficiencies. Additional expertise will be contributed to his course by the NPS Aquatic Resources Unit: **Jim Ruzycki, Ph.D.**, student and lake trout biologist; **Jeff Lutch, M.S.**, lead biologist technician and stream ecology expert; and **Brian Ertel, B.A.**, biological technician (gill netting and electrofishing).

Chris Marosek (*Introduction to Fly-Fishing*) is an education specialist at the Federation of Fly-Fishers (FFF) International Fly-Fishing Center in Livingston, Montana, where he teaches people of all ages the finer points of fly-fishing. He is a certified casting instructor and licensed Montana guide.

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

INSTRUCTOR PROFILES

Terry McEneaney (*Learning Birds by Sound*) is the staff ornithologist for Yellowstone National Park. He has taught field ornithology courses for the Nature Conservancy in Montana and is the author of *Birds of Yellowstone*, *The Uncommon Loon*, and *The Birder's Guide to Montana*. He is the chairman of the Montana Bird Records Committee, a member of the Wyoming Bird Record Committee, and is currently writing a book on the ecology of Yellowstone birds.

Linda Miller (*The Wolf's Return-Mythology to Recovery*) has been working on wolf recovery issues and education for the past six 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. She also co-teaches wildlife education classes with Brian Peck at Flathead Valley Community College.

Deborah Jane Milton, Ph.D., (*Creating with the Elements*) is a specialist in human development, and has facilitated creative expression in outdoor settings for 15 years. Formerly a psychotherapist, she left her office practice in order to further explore creativity in response to the natural world that sustains us. She paints in a variety of media, writes, works in clay and stained glass, makes masks and dolls expressing the unconscious, and practices Ecstatic Body Postures, an anthropological discovery from preagricultural societies. She and her colleague Dorothy Hinshaw Patent, Ph.D., have been teaching for the Institute for ten years.

Roy Mink, Ph.D., (*Great Earth Odyssey; Yellowstone's Living Streams*) serves as director of the Idaho Water Resource Research Institute with the University of Idaho. In this position, he works on water quality studies in several Idaho watersheds. 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, M.S., (*Grizzly Bear Ecology & Management*) is a resource naturalist for Yellowstone Park. Since 1982 she has worked as a ranger/resource manager specializing in endangered species recovery and resource management. She works closely with the Interagency Grizzly Bear Study Team, and is a member of a team preparing a long-term conservation strategy for Greater Yellowstone's grizzlies. She has authored several papers on grizzly bear management and a book, *Wildlife at Yellowstone*.

John Murray (*Nature Writing-From Appreciation to Publication*) holds degrees in English from the University of Colorado and the University of Denver. From 1988 through 1994 he was an English professor at the University of Alaska, where he also directed the graduate degree program in professional writing. He is the author of over three dozen works of natural history, including such acclaimed books as *A Republic of Rivers*, *The Islands and the Sea*, and *Wild Africa* (Oxford University Press 1990, 1992, and 1993, respectively). In 1995 he was made a life member of the Nature Conservancy. He lives in Denver, Colorado.

Mike Murray (*Discover Your Sky-Observing Techniques for Backyard Astronomers*) works as assistant planetarium director at the Museum of the Rockies in Bozeman, Montana. He has over 23 years in astronomy education at a variety of museums, and has written numerous articles about astronomy for newspapers, magazines, and professional journals. He also gives presentations and facilitates workshops on amateur observing for astronomy clubs, museums, and star parties. Mike is the founder of the Southwest Montana Astronomical Society, President of the Rocky Mountain Planetarium Association, and a member of the Astronomical League.

Sandra Nykerk (*Family Days in the Lamar-the Wolves Come Home; Photographing Nature in Yellowstone Country #1; Photographing Nature in Yellowstone Country #2; Autumn Photography in Yellowstone*) is a naturalist and photographer living in Gardiner, Montana. Sandy has been teaching photography and natural history workshops throughout the country for over 16 years. Her images have been published in many calendars, books, and journals. Currently, Sandy is working on a book celebrating the unique biology and beauty of the Yellowstone hydrothermal features and recently completed a visual anthropology project on tourism in Yellowstone National Park as part of the Directed Interdisciplinary Studies program at Montana State University in Bozeman.

Pat O'Hara, M.S., (*Yellowstone: Photographing the Quintessential Landscape*) has a master's degree in forest resources, and has been an environmental photographer and a leader in his profession for two decades. His contemporary travel schedule takes him to national and international locations, often to photograph remote parks and wilderness areas. His color photography has been showcased in 17 books, many on important conservation issues. Pat's work has been published extensively in magazines, calendars, greeting cards, posters, advertisements, and electronic mediums.

INSTRUCTOR PROFILES

Deborah Page (*Great Earth Odyssey*) is a writer, teacher, and consultant. In over 19 years, she has taught regular elementary classes, special programs in gifted and talented education, elementary hands-on science, language arts, and enrichment science courses for the Junior Academy of the California Academy of Sciences, San Francisco. She has been a consultant, researcher, and writer with the Geothermal Education Office (GEO) since 1993. Currently, she is developing a teaching resource on geothermal energy sponsored by The Watercourse (Project WET) and GEO.

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 for his fly-tying, and as a teacher, and river guide. He is intimately familiar with Yellowstone's waters. He is also deeply involved in regional resource issues and is the author of *Fishing Yellowstone National Park*.

Dorothy Hinshaw Patent, Ph.D., (*Creating with the Elements*) is a full-time writer, co-author of a cookbook and two gardening books for adults, and more than 100 science and nature books for children. She has been helping others express themselves using the written word for more than a decade, including nine years at the Yellowstone Association Institute. She has received the Eva Gordon Award (American Nature Study Society), Golden Kite Award (Society of Children's Book Writers), and other honors.

Brian Peck (*The Wolf's Return-Mythology to Recovery*) is an experienced naturalist and wildlife consultant from Columbia Falls, Montana. He has served as the Grizzly Recovery Coordinator for the Great Bear Foundation and Endangered Species Coordinator for National Audubon's Rocky Mountain office. He also spent the winter of 1986-87 tracking and studying wolves around Glacier National Park for the Wolf Ecology project. He conducts natural history programs for the Glacier Institute, World Wildlife Fund, and Montana's Flathead Valley Community College.

Wayne Phillips (*Wild Edible Plants & Medicinal Herbs; Wildflowers of Yellowstone; Alpine Wildflower Walks; Wildflowers of the High Country (Llama Trek); Exploring Yellowstone's Winter World on Skis*) formerly a Forest Service ecologist, is now devoting full time to teaching and writing about the flora of the Central and Northern Rocky Mountains. He has taught botany/wildflower classes at the Yellowstone Association Institute since 1982. His teaching experience includes botany classes as a faculty affiliate at the University of Montana, Montana State University-Northern, and the College of Great Falls. He is currently the president of

the Montana Native Plant Society and the author of *Central Rocky Mountain Wildflowers*.

Harold Picton, Ph.D., (*Bears-Folklore & Biology; Plant Eaters of Yellowstone; The Bison of Yellowstone*) is an emeritus professor of wildlife at Montana State University in Bozeman. He and his students are currently involved in both herbivore and carnivore studies. He and more than 50 of his previous graduate students have published over 100 articles in both the scientific and popular press.

Leslie J. Quinn, M.Ed., (*Old Times at Old Faithful; Ghost Hotels of Yellowstone*) is information specialist and interpretive trainer for Amfac Parks & Resorts in Yellowstone. A park guide for 20 years, he trains park bus tour guides, boat guides, and wranglers, is the editor of the (privately circulated) *Commentary Handbook and Commentary Newsletter*, and is an occasional contributor to *Yellowstone Science*. His special interests include Yellowstone Park village history and the maritime history of Yellowstone Lake.

Catherine L. Raven, Ph.D., (*Field Biology of Fire*) began fighting fires in 1983 while she was a ranger in Glacier National Park. As a backcountry ranger in Mt. Rainier National Park, she fought fires in Yellowstone during the summer of 1988. She was the first fire effects monitor at North Cascades National Park and completed her Ph.D. in biology while continuing fire effect monitoring at Voyageurs National Park.

Anna-Louise Reysenbach, Ph.D., (*Exploring Yellowstone's Microbes*) is a microbial ecologist. She teaches at Portland State University, Oregon. Her research focuses on the ecology of microorganisms from high temperature environments. Over the past decade, her work has taken her to the thermal springs of Yellowstone National Park, Iceland, New Zealand, and the Azores, and in research submersibles to the deep-sea hydrothermal vents along the mid-oceanic ridges.

Donna Richardson, M.S., (*Family Adventures in Yellowstone*) is a district ranger for interpretive services at Lowell National Historical Park. She has worked for the National Park Service for over 14 years, first as a front line interpreter, then as an education specialist before achieving her current position. She holds masters degrees in environmental studies and education, both from Antioch New England Graduate School.

Holmes Rolston, III, Ph.D., (*Environmental Ethics in Yellowstone*) is University Distinguished Professor of Philosophy at Colorado State University. In addition to being the author of *Conserving Natural Value*, used in his Institute course, he is also the author of *Environ-*

INSTRUCTOR PROFILES

mental Ethics and Philosophy Gone Wild. He is the associate editor of the journal *Environmental Ethics*. He teaches environmental ethics at both undergraduate and graduate levels at Colorado State University.

Toni K. Ruth, Ph.D. candidate, (*Cougars-Ghosts of the Rockies*) is a research scientist with the Hornocker Wildlife Institute, an internationally recognized organization specializing in large carnivore research and conservation. She is the Yellowstone cougar project leader investigating the effects of wolf reintroduction on the cougar population, predation on prey, and interspecific interactions between the two species. Toni has over 12 years of field experience working with large carnivores (primarily cougars) in a variety of habitats including Florida, Texas, New Mexico, and Montana.

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, Yellowstone, and Zion National Parks. He served as an instructor at Slippery Rock University and the University of Pittsburgh in Pennsylvania.

Julie A. Scanlin (*Great Earth Odyssey*) is an environmental educator with the Idaho Water Resources Research Institute at the University of Idaho. She specializes in water education programs and is the state coordinator for Project WET (Water Education for Teachers). Julie is currently working with the Geothermal Education Office to produce and distribute a geothermal resources curriculum. She has been active with Idaho's Stream Walk Program, the Idaho Water Education Foundation's Idaho Water Camp, and serves on the committee for Idaho Water Awareness Week.

Paul Schullery (*Nature & Environmental Writing*) writes independently, and also works for the National Park Service in Yellowstone as a writer and editor specializing in ecological and environmental history topics. Paul is the author, co-author, or editor of 28 books, including ten about Yellowstone. For his work as a historian and nature writer, he has received an honorary doctorate of letters from Montana State University and the Wallace Stegner Award from the University of Colorado Center of the American West.

Chuck Schwartz, Ph.D., (*Yellowstone Grizzlies: Past, Present & Future*) is the leader of the Interagency Grizzly Bears Study Team, an interdisciplinary group of scientists responsible for conducting long-term research and monitoring of the Yellowstone grizzly bear. He is technical advisor to the Interagency Grizzly

Bear Committee and Affiliate Associate Professor of Biology at Montana State University, Bozeman. Chuck has over 23 years of field experience working with large carnivores and ungulates in Alaska and the western United States.

Dale Sexton, (*Exploring Yellowstone on Snowshoes*) a lifelong resident of Livingston, Montana, has extensive backcountry experience in and around the Greater Yellowstone area. He has been a fly-fishing guide for over 15 years, guiding extensively in the less traveled areas of Yellowstone. He is also an experienced cross-country skiing instructor and avid snowshoer. When not out exploring the backcountry of Yellowstone, he owns and operates Timber Trails, an outdoor specialty store in Livingston.

Peg Steunenberg (*Painting Wildflowers & Butterflies*) is a natural science illustrator who completed the graduate studies program in science illustration at the University of California, Santa Cruz. Her work has appeared in a number of publications, the Nature Company product line, and her own line of educational products. Peg's work was accepted for the 1996 Guild of Natural Science Illustrators Annual Exhibit at the Smithsonian Institution, and she was recently awarded the Bronze Award for Technical Merit at the 1997 San Francisco Society of Illustrators annual juried show. Her work was accepted into the juried 1999 competition, 16th Annual Biological Conference, at the St. Louis Botanical Garden.

Leslie Stoltz (*Exploring Yellowstone's Winter World on Skis*) works part of the year as a summer and winter naturalist guide and educator at Lone Mountain Guest Ranch in Big Sky, Montana. She is a Professional Ski Instructors of America level III guide and instructor. She also leads natural history trips for Elderhostel, World Wildlife Fund, and National Parks and Conservation Association. Previously she worked with the National Park Service in both Yellowstone and Glacier National Parks.

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

Mike and Erin Thompson (*Horsepacking Courses*) own and operate Wilderness Pack Trips, Inc. which is based out of Livingston, Montana. Mike is a guide, outfitter, and rancher, and holds degrees in animal science and agricultural education. Erin has a back-

INSTRUCTOR PROFILES

ground in biology, horse training, and backcountry cooking. Together, they provide their guests with opportunities to interact with their environment and experience true wilderness travel.

Dave Thurlow (*Weather Cycles in the Big Sky*) is a weather education consultant from Jackson, New Hampshire. He is the writer and host of The Weather Notebook, heard nationwide on public radio stations. He also consults for museums and nature centers and is working on a public television documentary about wind. Trained as a meteorologist, Dave has also spent many years as a naturalist for the Massachusetts Audubon Society and the Appalachian Mountain Club. Dave has written articles for several outdoor publications, including *Weatherwise* magazine.

Rhea Topping (*Fly-Fishing for Women*) is an active member of the Federation of Fly-Fishers (FFF). Since 1995, she has served as a regional (Mid-Atlantic council) and national director, served on several committees, and was named FFF 1999 Woman of the Year. Rhea is a master casting instructor of the Casting Instructor Certification Program, the only female instructor in the Wulff School of Fly-Fishing in New York, and head instructor for the Becoming An Outdoor Woman fly-fishing program in Vermont. She teaches at her school pond in Upperville, Virginia, and recently started Mayfly Adventures for small group fishing expeditions.

Nathan Varley, M.S., (*Wolves-Reality & Myth*) is a naturalist, writer, and guide specializing in Yellowstone ecology. He grew up in the park and has lived most of his life in the Yellowstone area. He has studied many wildlife species including mountain goats, river otters, moose, and pine marten. For four years he has been active with various projects related to the gray wolf including instruction, film, and research.

Tom Watson, M.A., (*Day Hiking in Wonderland; Hiking Through Time-Day Hikes into the Geological Past*) has a degree in education and biological science. He has spent the last 20 summers studying geology and ecology in the Greater Yellowstone ecosystem, as a Yellowstone Association Institute instructor, as presenter for the National Wildlife Federation Summit programs, and as guide for Off the Beaten Path. During the school year he teaches biology and geology.

Sandra Weber (*Learning Photography & Camera Basics in the Great Outdoors*) is a writer and photographer whose feature articles and photos have appeared in leading newspapers such as the *New York Times* and *Washington Post*, and in magazines such as *Yankee* and *Coast to Coast*. She began studying photography at the Yellowstone Association Institute and has since taught

photography at the Chautauqua Institute, Chautauqua, New York. Her book for point-and-shooters, *Great Pictures Are A Snap!* was published by *Amphoto* in 1996.

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

Don White, Jr., Ph.D., (*The Lesser-Known Carnivores of the Greater Yellowstone Ecosystem*) is an assistant professor in the department of biology at Drury University, Springfield, Missouri, where he teaches ecology, evolution, and comparative anatomy. He is currently conducting research in wildlife disease, grizzly bear reproductive physiology, and is developing non-intrusive methods to monitor forest carnivore populations, including black bears and bobcats. He publishes technical articles regularly in peer-reviewed research journals. He has also written several popular articles on wildlife-related topics.

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

Wilderness Medicine Institute, an institute of the National Outdoor Leadership School (*Wilderness First Aid; Wilderness First Responder*) has been a leader in wilderness medicine education since 1976. WMI provides all levels of wilderness medicine training for state and federal agencies, colleges, and outdoor programs throughout the West.

Scott Wood (*Snowshoeing in Yellowstone*) has 24 years' experience in outdoor education and is an instructor at Ricks College in Rexburg, Idaho. He is a certified Red Cross canoeing instructor, a certified backcountry ski guide and has extensive avalanche experience.

The Institute Store

Show your commitment to Yellowstone.

Proceeds support education and research in the park.

Yellowstone Association members receive a 15% discount on all items.



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

Twenty-Fifth Anniversary Short-Sleeved T-Shirt

Celebrate the Yellowstone Association Institute's twenty-fifth anniversary. Limited edition shirts feature a special bison design as seen on the catalog cover. Heavyweight t-shirt in 100% cotton. Screen printed. By Hanes. Color: Natural. Sizes: S-XXL. **\$18.95**

Short-Sleeved T-Shirt

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

Long-Sleeved T-Shirt

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

Short-Sleeved Wolf Pack T-Shirt

Show your support for wolves! Front design features a whole pack with Institute logo. Heavyweight t-shirt in 100% cotton. Screen printed. By Liberty Graphics. Color: Ash. Sizes: S-XXL. **\$18.95**

Short-Sleeved Children's Gray Wolf Puppy T-Shirt

Kids love the playful wolf puppies on this shirt. Front design includes Institute logo. Heavyweight t-shirt in 100% cotton. Screen printed. By Liberty Graphics. Color: White. Youth Sizes: S-L. **\$13.95**

Institute Polo

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

Sweatshirt

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

Long-Sleeved Denim Shirt

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

Fleece Vest

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

Fleece Pullover

Just like your favorite sweatshirt...only warmer and more durable for serious outdoor use. Form-fitting pullover with zippered neck in Kodiak Polarfleece. Embroidered. By Chuck Roast. Colors: Black, Red, Medium Blue. Sizes: M-XXL. **\$54.95**

Fleece Jacket

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

Institute Brushed Canvas Cap

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

Institute Pigment-Dyed Cap

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



Yellowstone Association Institute t-shirt, vest, hat, and waist pack.

Waist Pack

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

Pajaro Field Bag

A naturalist's dream! Tough Cordura nylon bag with adjustable waist strap has seven pockets for binoculars, guidebooks, maps, and other field supplies. 6.5" x 9" x 2.5." Embroidered. Colors: Forest Green/Black, Navy/Black. **\$32.95**

Nalgene Water Bottle

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

Institute Enamel Pin

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

RECOMMENDED READING

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

General Park Information

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

The Yellowstone Association

An indispensable resource for planning a trip to Yellowstone. Recently-published guidebook includes information to assist with all aspects of your trip, from reservations to road maps to recommended activities. Includes beautiful color photos and detailed descriptions of park facilities, natural and cultural history. 1998. 80 pages. #10522 **\$6.95**

Yellowstone Winter Guide

Jeff Henry

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

Getting to Know Yellowstone National Park

Patty Knapp

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



Backcountry

Yellowstone Trails: A Hiking Guide

Mark C. Marschall

The definitive guide to backcountry hiking in Yellowstone, written by a Yellowstone backcountry ranger, and published by the Yellowstone Association. Includes descriptions and mileage for more than 100 trails, including 45 dayhikes. 1999. 192 pages.

#10603 **\$7.95**
#10203 ... Spiral Bound **\$9.95**

Backcountry (cont.)

New Paddling Yellowstone and Grand Teton National Parks

Don Nelson

Written by a former Institute director, this is the first and only guide to those places in Yellowstone and Teton parks where travel by canoe and kayak is allowed. 1999. 148 pages. #10606 **\$10.95**

Backcountry Bear Basics

Dave Smith

"Backcountry Bear Basics" has all the detailed information you need to know to reduce the risk of dangerous encounters in bear country. 109 pages. #10544 ... **\$10.95**

Trails Illustrated Maps

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

Yellowstone National Park (1:168,500) #70008 ... **\$9.95**
 Old Faithful (1:83,333) #70009 **\$7.95**
 Mammoth (1:83,333) #70010 **\$7.95**
 Tower/Canyon (1:83,333) #70011 **\$7.95**
 Yellowstone Lake (1:83,333) #70012 **\$7.95**



Animals and Plants

The Wolves of Yellowstone

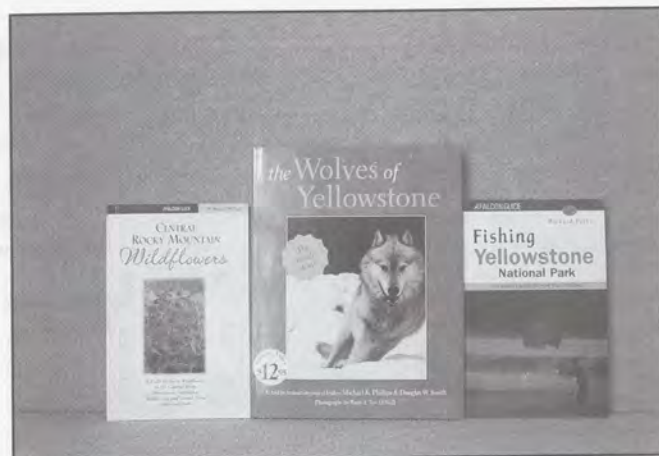
Michael K. Phillips and Douglas W. Smith

The inside story of wolf reintroduction at Yellowstone, told by the biologists responsible for the restoration. 1996. Hardcover. 128 pages. #10476 **\$12.95**

The Bears of Yellowstone

Paul Schullery

An excellent overview of the ecology, management, and popular history of Yellowstone's bears. 1992. 318 pages. #10018 **\$15.00**



Birds of Yellowstone

Terry McEneaney

An introduction to Yellowstone birds and their habitats, written by the park ornithologist. Includes guide to roadside viewing areas. 1988. 171 pages. #10036 **\$14.95**

Small Mammals of the Yellowstone Ecosystem

Donald Streubel

This book teaches us to see and appreciate the often-overlooked small mammals of Yellowstone, from shrews to badgers. Includes an introduction to small mammals and detailed descriptions of 53 species. 1988. 152 pages. #10258 **\$12.50**

Wildlife Watcher's Guide—Yellowstone and Grand Teton National Parks

Todd Wilkinson

Authoritative guide includes color photos, habitat, identifying features, natural history, and best places to see birds and mammals found in Yellowstone. 1999. 96 pages. #10262 **\$11.95**

Yellowstone Fishes

John D. Varley and Paul Schullery

The best text on Yellowstone fishes, written by the director and the senior editor of the Yellowstone Center for Resources. The sections on natural history, management, and angling are not only for fishermen; anyone interested in the natural history of Yellowstone will enjoy this book. 1998. 154 pages. #10503 **\$19.95**

Field Guide to Mammal Tracking

James C. Halfpenny

Written by a long-time Institute instructor, who is also a renowned tracker, this book explains how to identify tracks and interpret the stories they can tell. 1986. 163 pages. #10254 **\$14.95**

Animals and Plants (cont.)

New Fishing Yellowstone National Park

Richard Parks

An insider's guide to fishing at Yellowstone. Includes resident fish species, recommended flies and lures, and detailed access information for more than 100 sites in the park. 1998. 242 pages. #10509 **\$14.95**

New Central Rocky Mountain Wildflowers

H. Wayne Phillips

Excellent new guide includes color photos, clear descriptions, and interesting facts on nearly 300 wildflowers found in the Central Rocky Mountains. 1999. 232 pages. #10597 **\$19.95**

Scats and Tracks of the Rocky Mountains

James C. Halfpenny

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

Earth and Sky

Interpreting the Landscape of Grand Teton and Yellowstone National Parks

John M. Good and Kenneth L. Pierce

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

Life at High Temperatures

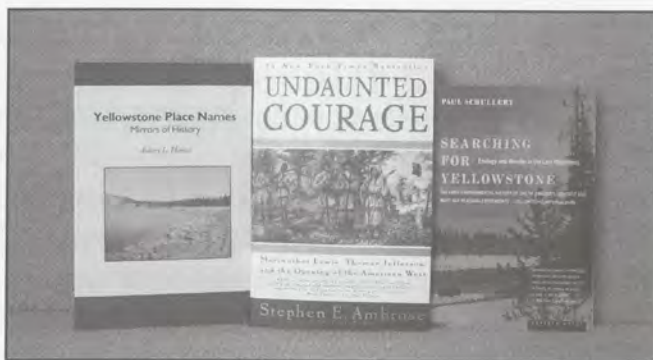
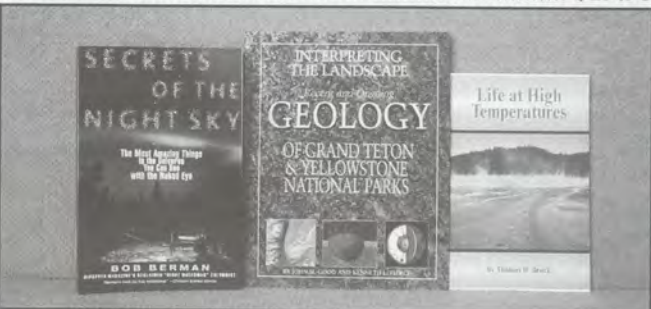
Thomas D. Brock

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

The Geysers of Yellowstone

T. Scott Bryan

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



Secrets of the Night Sky

Bob Berman

An entertaining and easy-to-understand guide to the sun, moon, stars, and planets—for anyone interested in astronomy. 1995. 320 pages. #10578 **\$15.00**

History and Art

Death in Yellowstone

Lee H. Whittlesey

Yellowstone's park historian reveals lessons to be learned from more than 300 deaths by everything from earthquakes to bear attacks, poison gas, and lightning. 1995. Available spring of 2000. 276 pages. #10411 **\$16.95**

Yellowstone Place Names

Aubrey L. Haines

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

Undaunted Courage

Stephen E. Ambrose

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

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

Hannah Hinchman

Using beautiful selections from her own journals, Hannah shows us how writing and drawing can enliven our senses and help connect us with the natural world. 1997. 192 pages. #10584 **\$17.95**

Searching for Yellowstone

Paul Schullery

Local author Paul Schullery examines the relationship between people and Yellowstone from earliest times to the present day, with emphasis on our changing perceptions of this special place. 1997. 338 pages. #10520 **\$14.00**

What is the Yellowstone Association?

The Yellowstone Association is a non-profit organization which benefits Yellowstone National Park and its visitors. The Association sells educational materials and donates the proceeds to the National Park Service for education and research. Additional revenues are generated through our membership program (see page 50). Members' benefits include a 15% discount on our products, a subscription to our quarterly newsletter, the park newspaper, and reduced rates for courses at our field school, the Yellowstone Association Institute. To see more than 600 additional educational products, visit our website at www.YellowstoneAssociation.org.

2000/2001 Order Form

Payment Method: ☐ Check ☐ Credit Card

Please make checks payable to "Yellowstone Association"

Name _____

Address _____

City _____ State _____ Zip _____

Daytime phone (____) _____

Charge to: ☐ VISA ☐ MasterCard ☐ Discover

Number _____ Exp _____

Cardholder Signature _____

Four Easy Ways to Order:

Mail: The Yellowstone Association
PO Box 117
Yellowstone National Park, WY
82190

Phone: 307-344-2293
Monday through Friday
8:00 - 4:30 MST

Fax: 307-344-2486 Anytime

Web: www.YellowstoneAssociation.org

Item #	Description	Size	Color	Alternate Color	Qty	Price	Total										
SHIPPING & HANDLING				Subtotal													
<table border="0"> <tr> <td>Amount of Order</td> <td>Priority Mail</td> </tr> <tr> <td>up to \$10.00</td> <td>\$5.00</td> </tr> <tr> <td>\$10.01 to \$26.00</td> <td>\$6.50</td> </tr> <tr> <td>\$25.01 to \$50.00</td> <td>\$7.50</td> </tr> <tr> <td>\$50.01 and up</td> <td>\$8.50</td> </tr> </table>				Amount of Order	Priority Mail	up to \$10.00	\$5.00	\$10.01 to \$26.00	\$6.50	\$25.01 to \$50.00	\$7.50	\$50.01 and up	\$8.50	Yellowstone Association members deduct 15%			
Amount of Order	Priority Mail																
up to \$10.00	\$5.00																
\$10.01 to \$26.00	\$6.50																
\$25.01 to \$50.00	\$7.50																
\$50.01 and up	\$8.50																
Foreign Orders The chart above does not apply to orders shipped outside the U.S. We charge our actual mailing cost plus \$2.00 for handling. Please contact us if you want to know the cost in advance. Please specify: ☐ Surface (8-12 weeks) ☐ Air (1-2 weeks)				4% sales tax (Wyoming residents only)													
				Shipping & Handling													
				Total Payment													

Will You Help Support the Yellowstone Association Institute Scholarship Fund?

For many people, attending a course at the Yellowstone Association Institute is a life-changing experience. Students exploring Yellowstone with expert instructors make new friends, gain new insights, and develop a lasting appreciation for the natural and cultural history of the world's first national park. As a result, **Institute students are among the park's greatest supporters.**

Unfortunately, not everyone can afford to pay the full cost of participating in our educational programs. **We regularly receive requests from individuals who would like to attend a course but cannot do so without financial assistance.** Many of these people are teachers and students with an academic interest in Yellowstone National Park. If we can find a way for them to attend, they will help share our educational message with a wider audience.

The **Institute Scholarship Fund** was created in 1999 to help meet this need. Donations to the fund are kept in a restricted account and the annual interest income will be used to provide limited financial assistance to teachers and students. Institute staff will award scholarships based on a simple application.

Please consider making a contribution to help us build this fund! Your support allows others to benefit from the same remarkable educational experience that so many of us have enjoyed. It is hard to imagine a better investment in the future of Yellowstone National Park.

Please make check payable to "**Yellowstone Association**" or we can charge it to your Visa, MasterCard, or Discover card.

Mail to: Yellowstone Association Institute
Scholarship Fund
Yellowstone Association
PO Box 117
Yellowstone National Park, WY
82190

Enjoy the best of both worlds with our popular new Winter Wonderland Package!

The Yellowstone Association Institute and Yellowstone National Park Lodges have joined forces to offer an exciting new educational program for park visitors. The "Wonderland Package" is a five-day guided tour designed to provide a comprehensive overview of Yellowstone in winter.

Participants in this program enjoy the best of both worlds. During the day, they tour the park by van, snowcoach, skis, or snowshoes. In the evening, they return to excellent meals and comfortable accommodations at park hotels.

A naturalist/guide from the Institute accompanies the group for the entire week to provide a closer look at the natural and cultural history of Yellowstone. Scheduled activities include ski and snowshoe tours, wildlife watching, a geology walk, and evening programs.

The Wonderland Package includes all instruction plus lodging with private bath at Mammoth Hot Springs Hotel (three nights) and Old Faithful Snow Lodge (two nights). Also provided are breakfasts, lunches, snacks, ski and snowshoe rentals, transportation, an in-room gift, a one-hour hot tub rental, and unlimited ice skating at Mammoth!

The 2000 program is offered from January 2 through March 3. Rates for Yellowstone Association members are \$595.25 double-occupancy and \$759.53 single-occupancy.

The 2001 program is offered from January 7 through March 2. Rates for Yellowstone Association members are \$685.00 double-occupancy and \$874.37 single-occupancy.

To make your reservation or request additional information, please contact the Yellowstone National Park Lodges staff at 307-344-7311.

Visit our website at:
www.YellowstoneAssociation.org

The Mission of The Yellowstone Association

The Yellowstone Association, in partnership with the National Park Service, fosters the public's understanding, appreciation and enjoyment of Yellowstone National Park and its surrounding ecosystem by funding and providing educational products and services.



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

Each year, the Yellowstone Association provides substantial funding for in-park wayside and museum exhibits, interpretive programs, scientific conferences, research, and educational publications. All the activities of the Yellowstone Association are dedicated to developing public appreciation for and awareness of Yellowstone's unique natural and cultural treasures. This appreciation of Yellowstone's 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. To become a member, fill out the Registration/Membership form on pg 51.

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

As a member, you will be entitled to the following benefits:

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

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

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

2000/2001 REGISTRATION/MEMBERSHIP FORM

[Note: Refund Policy on page 6]

Duplicate this form for multiple registrations if necessary

Name(s) _____ ☐ Male ☐ Female ☐ Check here if you're **new** to the Institute
Please list names & ages of children for family classes

Address _____

City _____ State _____ Wk Phone () _____ Hm Phone () _____

Zip _____ E-mail _____

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

How did you find out about the Yellowstone Association Institute? _____

☐ Check here if you are a current member of the Yellowstone Association or are joining now. (See pg 50)

Course Title and Number

Dates

Tuition

Lodging:

☐ I want to stay at the Institute cabins at Lamar the following nights at \$18/night. Dates _____

☐ My class does not meet at the Lamar facility. See course descriptions for recommended lodging or contact the registrar.

☐ I will make my own lodging or camping arrangements.

Total tuition fee(s) _____

Cabin fee(s) at \$18 _____

per person per night _____

Membership (optional) _____

*Fill out membership information
(see right)*

Total Enclosed _____

Payment by: ☐ Check ☐ MasterCard

☐ Visa ☐ Discover

Membership Information

☐ Renewing ☐ Joining for the first time

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

Annual Dues:

☐ Associate \$ 30 ☐ Patron \$ 250

☐ Contributing \$ 50 ☐ Sponsor \$ 500

☐ Sustaining \$ 100 ☐ Benefactor \$1000

Number _____ Expiration Date _____

Signature _____

YI-2000

Release and Assumption of Risk (Please return original, signed Release)

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

Date _____ Signature _____

Date _____ Signature _____

(SIGNATURES FOR ALL PARTICIPANTS REQUIRED)

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

Mail to: Yellowstone Association Institute, P.O. Box 117, Yellowstone Park, WY 82190

Fax to: 307-344-2485

Phone: 307-344-2294



Yellowstone Association Institute

P.O. Box 117

Yellowstone National Park

Wyoming 82190

FIRST CLASS

ADDRESS SERVICE REQUESTED