



1994
Field Courses
Nature Study Vacations

THE NINETEENTH ANNUAL YELLOWSTONE INSTITUTE



Phillips / Reese
YI Collection

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Yellowstone Institute

Mammoth Office
(307)344-2294

June-Aug at Lamar
(307)344-7749

Cover photos by Gene Ball

Catalog layout by Pam Gontz

Dear Participant,

The Yellowstone area has become one of the great cultural gathering places as people from around the world come to view its wonders, and for the past nineteen years the Yellowstone Institute has offered indepth courses to the visitor interested in being immersed in this unique place.

The number and diversity of courses has grown as the public's interest has grown and become more sophisticated. This year, with almost ninety courses conducted throughout the seasons, you will find topics to explore whether you are inclined toward the natural sciences, human history, the humanities, back country adventures, or the more recreational. With courses for all ages, individuals or families can learn about Yellowstone, and themselves, in a relaxed, outdoor setting.

As you contemplate the next year, consider a quality time of learning with others who share your interests. We hope to see you in the months ahead.

Sincerely,


Don Nelson, Director

THE YELLOWSTONE ASSOCIATION

The Association was founded in 1933 to support educational, historical and scientific programs for the benefit of Yellowstone National Park and its visitors. Among the Association's past and present projects are the following:

- *Founded the Yellowstone Institute in 1976 and serves as its sponsoring organization.*
- *Donated research library to park in 1967 and provides continued support through purchase of books and periodicals and hiring of part-time librarians.*
- *Publishes books and pamphlets pertaining to Yellowstone.*
- *Assists naturalists with visitor information services at Visitor Centers.*
- *Aids naturalists with distribution of schedules of programs for visitors.*
- *Administers grants and gifts for designated projects in the park.*
- *Helps fund seasonal training for naturalists.*
- *Funded Yellowstone's first braille trail.*
- *Donated computer equipment to the naturalist division for use in preparing the park newspaper and schedules of ranger-led activities.*

The Yellowstone Association for Natural Science, History and Education, Inc. is a non-profit, tax-exempt organization.

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CALENDAR 1994

MAY-JUNE

May 31-Jun 3	601 ✓	Mammal Tracking
May 31-Jun 3	602	Wildlife Observation -- Spring
* June 4-5	603	Native American Religious Beliefs in Yellowstone Park
June 10-13	604	Grizzly Bear Ecology & Management
June 12-16	605 ✓	Mammals Great & Small
June 14-16	606 ✓	Bears: Folklore & Biology
June 17-19	607 ✓	Yellowstone Birds of Prey
* June 17-19	608	Birding Yellowstone
June 17-19	609 ✓	Edible Plants & Medicinal Herbs
June 17-19	610	Fly Fishing the West Side
June 20-22	611 ✓	Interpreting Yellowstone with Ranger Ted
June 20-24	612 ✓	Bears: Bones, Signs & Stories
June 20-24	613 ✓	Birds of Yellowstone
* June 24-26	614	Learning Birds by Sound
> June 25	615	Ylstr Nature Detective Wkshp - Plants & Butterflies
* June 25-26	616 ✓	Butterflies of Greater Yellowstone
June 27-29	617 ✓	Beetles, Bugs, & Damselflies
> June 27-30	618 ✓	John Colter: The Discovery of Yellowstone National Park
> June 27-30	619	Family Horsepacking: West Slope I
June 27-Jul 1	620 ✓	Lakes of Yellowstone by Canoe
June 30-Jul 3	621	Horsepacking: Springtime Flora & Fauna

JULY

July 1-2	701	Wars & Words Over Wildlands
July 3-4	702	The Flight of the Nez Perce Thru Ylstr
July 4-6	703 ✓	Interpreting Yellowstone with Ranger Ted
> July 6-9	704	Family Horsepacking: West Slope II
> July 9	705	Ylstr Nature Detective Wkshp - Mammals
* July 9-10	706	Wolves of Yellowstone: The Missing Link
July 10-14	707	Horsepacking: Teton West Slope
July 11-13	708 ✓	Fire, Ice & Fossil Forests
July 11-14	709	Photographing Nature in Ylstr Country
July 14-15	710	Hiking & Camping in Grizzly Country
July 15-17	711	Exploring the Yellowstone Ecosystem
July 15-17	712	3 Days at the Buffalo Ranch (Ages 8-11)
July 15-19	713	Horsepacking: Traditional Nez Perce Rte
July 17-19	714	Family Days at Pebble Creek
July 18-20	715	Photographing the Scenic Beauty of Ylstr
> July 18-22	716	Backpacking Yellowstone the "Leave No Trace" Way
July 19-21	717 ✓	Headwater Watershed Ecology
July 19-23	718	Horsepacking: Indian Trails
July 20-22	719	Family Days: Exploring the Park with a Family
* July 22-23	720 ✓	Alpine Wildflowers
July 22-24	721 ✓	Geysers, Mudpots, & Hot Springs
> July 22-24	722	Environmental Ethics
July 22-24	723	Family Days in the Thermal Basins
> July 23	724	Ylstr Nature Detective Wkshp - Birds & Rocks
July 23-27	725	Horsepacking: Nez Perce Alternate Trail
July 25-28	726 ✓	Alpine Ecology
July 25-28	727 ✓	Wildflowers Llama Trek
July 25-29	728 ✓	Hydrothermal Systems & Ylstr Caldera

JULY [cont.]

July 26-29	729	The Art of Keeping a Field Journal
* July 30-31	730 ✓	Wildflowers of Yellowstone
Jul 30-Aug 2	731 ✓	Mammal Tracking

AUGUST

Aug 1-3	801	Yellowstone's Wayside History
Aug 1-3	802 ✓	Interpreting Yellowstone with Ranger Ted
> Aug 1-5	803	Backpacking Yellowstone the "Leave No Trace" Way
Aug 1-5	804	Horsepacking: Trapper Trails
Aug 5-7	805	Ylstr Before the Tourists: Prehistoric People of the Park
Aug 5-7	806	Fly Fishing: Less Experienced
Aug 5-9	807	Horsepacking: Washburn Expedition Trail
Aug 8-10	808 ✓	Ylstr Streams Through the Eyes of a Trout
> Aug 8-12	809 ✓	Carnivores of the Greater Ylstr Ecosystem
Aug 8-12	810	Backpacking the Beartooths
Aug 10-13	811	Family Horsepacking: Southwest Corner I
Aug 10-14	812	Horsepacking: Bechler River Canyon Trail
Aug 12-14	813	Fly Fishing: More Experienced
> Aug 13	814	Ylstr Nature Detective Wkshp - Geysers
* Aug 13-14	815 ✓	Episodic History of Yellowstone Lake
Aug 15-19	816	Wilderness Thinkers & Their Legacies
> Aug 15-19	817	Horsepacking: Over the Top - the Tetons
> Aug 15-19	818	Drawing & Storytelling Family Workshop
> Aug 16-19	819	Introduction to Forest Ecology
Aug 17-20	820	Family Horsepacking: Southwest Corner II
> Aug 20	821	Ylstr Nature Detective Wkshp-Entomology
* Aug 20-21	822	Women & Ylstr - A Historical Perspective
Aug 20-24	823 ✓	Geology of the Yellowstone Country
Aug 22-26	824	Finding Your Own Voice: Writing Wkshp
> Aug 24-28	825	Horsepacking: The Gallatin Corner

SEPTEMBER

> Sept 8-11	901	Autumn Scenic Photography
Sept 11-15	902	Autumn Wildlife Photography
Sept 15-18	903	Wildlife Observation -- Fall
Sept 23-25	904	Flyfishing in the Fall

WINTER 1994-1995

Dec 28-Jan 1	101	Winter Wilderness Photography
Jan 13-16	102	Backcountry by Ski
* Jan 28-29	103	How Mammals Survive Winter
> Jan 28-Feb 5	104	Exploring Yellowstone In Winter
Feb 17-20	105	Yellowstone's Winter World
Feb 22-26	106	Winter Wildlife & Atmospheric Scenics

> denotes a **New** class

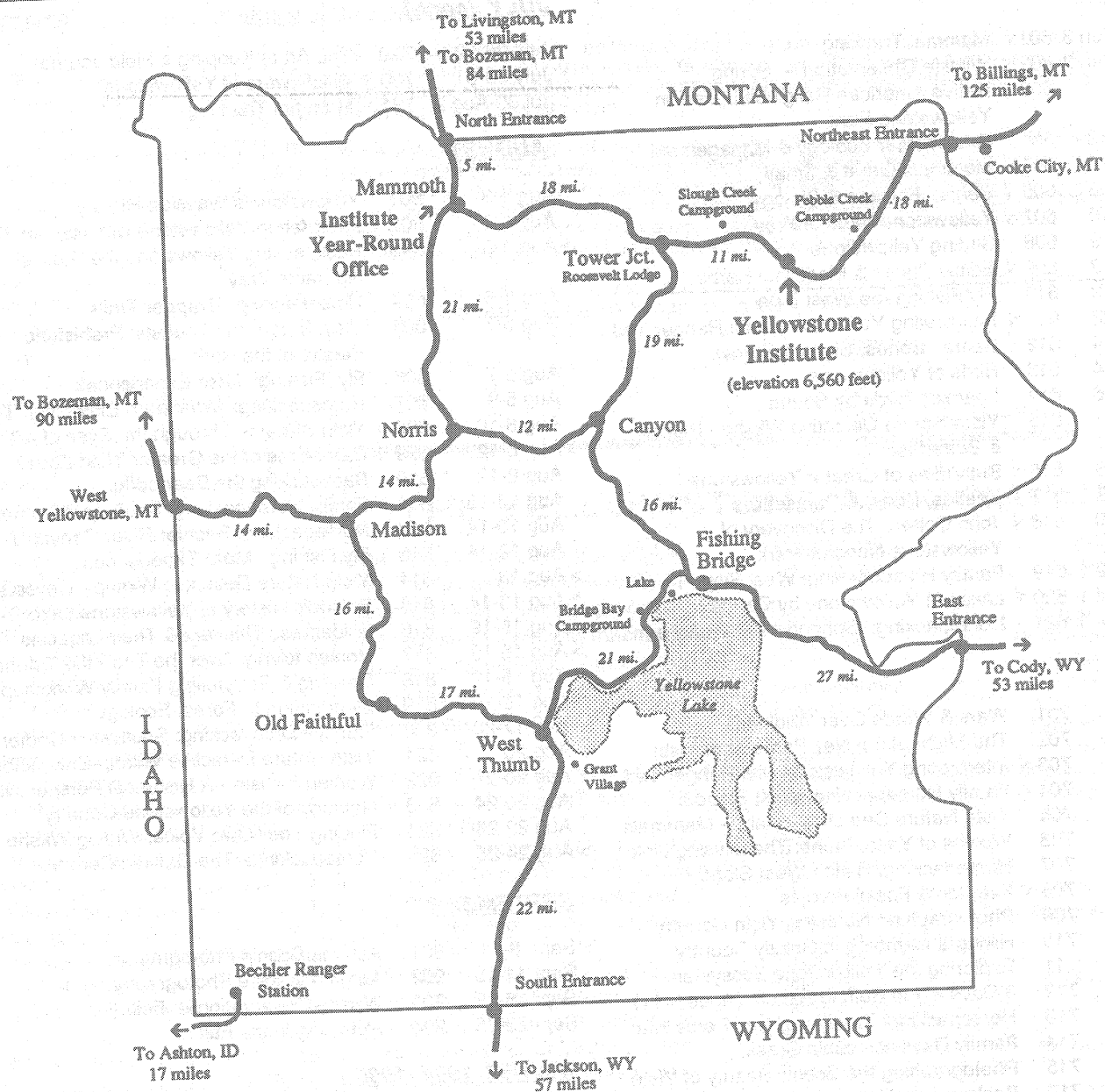
* denotes a weekend class (which may begin on Friday evening)

✓ denotes classes that are available for university credit



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TRAVEL INFORMATION AND DIRECTORY



Major Airports

Bozeman, MT
Billings, MT

Regional Airports

Cody, WY
Jackson, WY
W. Yellowstone, MT
Idaho Falls, ID

Distances/Auto Travel Times to Yellowstone Institute

From Bozeman	118 mi.	2-1/2 hrs.
via Livingston		
From Billings	143 mi.	3-1/2 hrs.
Cody	126 mi.	3 hrs.
Jackson	146 mi.	3-1/2 hrs.
W. Yellowstone	70 mi.	2 hrs.

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

DIRECTORY

Camping & Park Information
National Park Service,
Visitor Services (307)344-7381

Park Lodging, RV Park, Marina
TW Recreational Services
(307)344-7311

Wyoming Travel Information
Wyoming Division of Tourism
(800)225-5996

GENERAL INFORMATION

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

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

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

Most courses are limited to 12-15 participants. Early registration is advised. Reservations can be made by phone.

Location Courses are held at various locations within the Yellowstone ecosystem. Most are conducted at the Institute facility known as the Buffalo Ranch. It is an historic Park Service facility located in the Lamar Valley between the Northeast Entrance and Tower Junction. (See map on previous page.) All classes meet there unless otherwise stated next to date under class descriptions.

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

Cabins There are twelve rustic multiple-occupancy cabins at the Institute. Most have two or three single beds. They have no plumbing, heating, or electrical outlets, but do have wall lights. Students must bring a pillow and warm sleeping bag. The fee is \$8 per person per night. Cabin rental for family members of participants may be allowed if space is available.

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

Pets, RVs, and Camping Pets are not allowed at the Institute, and Park Service regulations prohibit camping and recreational vehicle use on the grounds at the Yellowstone Institute facility.

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

Classroom and Kitchen Facility The Institute's log building is heated and has two classrooms, three bathrooms with showers, a kitchen where people do their own cooking, and an eating area. The facility, though clean and adequate, is fairly simple. There are also picnic tables and a back porch overlooking Lamar Valley.

Food and Preparation Unless otherwise specified, participants provide their own food. There are two stoves and three refrigerators, a microwave and food storage areas. Ample cooking and eating utensils are provided. Space is limited so meals should be kept simple. The camaraderie of the community kitchen is one of the joys of students.

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

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

Institutions which offer credit include:

University of Montana (U of MT),
Montana State University (MSU),
Idaho State University (ISU),
Brigham Young University (BYU),
Ricks College (RC), and the
University of Wyoming (U of WY).

Registration forms will be provided on the first day of the course. Fees for credit are collected on the first day of class and are usually \$25-\$70. Students may enroll through their own university for independent study.

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

Physical Condition Participants should be in good general health for these courses because most courses require at least some walking at higher elevations. Classes which involve backpacking, horsepacking, canoeing, and field work will be more demanding. Ask in advance if you have any questions on this matter.

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

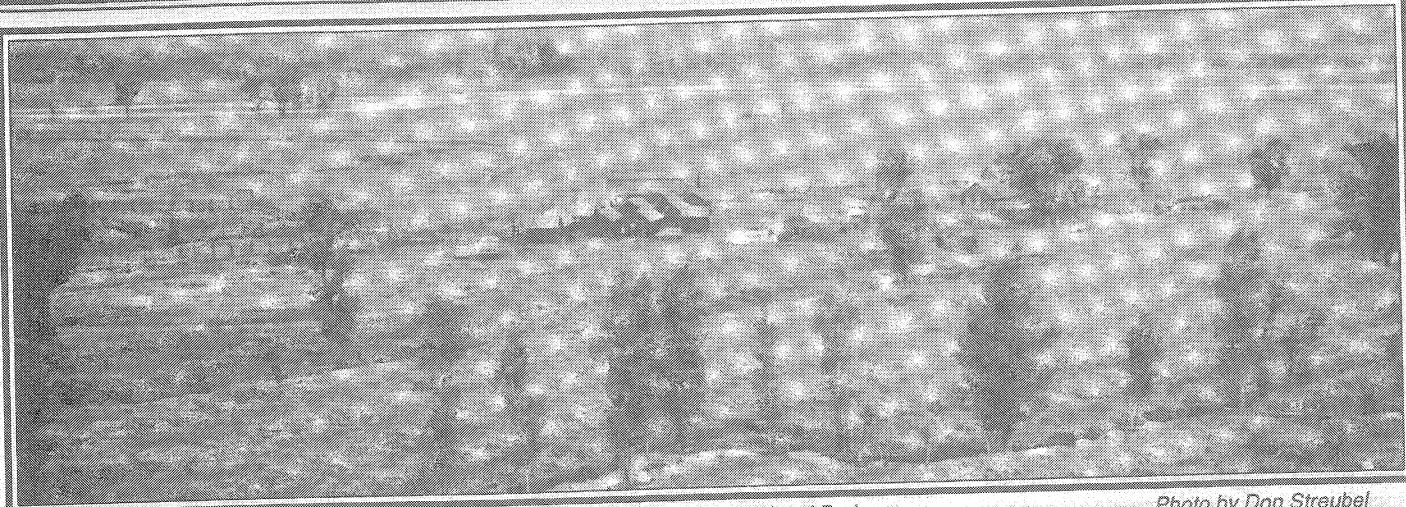
Weather Much class time will be spent outdoors. Students should be prepared for a variety of mountain weather conditions and some cold temperatures. Rain gear and warm clothing are essential.

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

Refund Policy Payments for Institute courses are fully refundable, less a \$35 per course processing fee (\$20 for Association members), if cancellation takes place at least 30 days before the course. No refunds can be made for cancellations received less than 30 days before start of course, unless your space can be filled. Tuition and cancellation processing fees may be applied toward tuition for another course during the current calendar year. Cabin fees are 100% refundable.

IMPORTANT: The Yellowstone Institute (YI) cannot make exceptions to this refund policy for any reason, including personal emergencies or weather. We strongly urge you to take out accident, baggage, and trip cancellation insurance through a travel agent. *Trip insurance protects you against financial loss if you must cancel or interrupt a trip because of illness or injuries to yourself, a family member, or travelling companion.*

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



The Yellowstone Institute facility located in the Lamar Valley of Yellowstone National Park.

Photo by Don Streubel

MAMMAL TRACKING: INTERPRETING TRACKS, SCAT, & OTHER SIGN

May 31 - June 3: 601 July 30 - August 2: 731

\$187 (Member's fee \$177)

Instructor: James Halfpenny, Ph.D.

Credit available (U, 1 semester hour, U of MT, or MSU)

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

Course content includes the role of natural history and ecology, keeping field notebooks, taxonomy, anatomy, terminology, measurements, track averaging, relative size, estimating track age, print identification, gait patterns, estimating speed, field techniques, finding clues, following trails, and teaching tracking. Slide lectures will provide access to Dr. Halfpenny's years of field experience, and laboratories will introduce concepts of gaits and speed. Field sessions will aid in learning to trail and read stories in tracks. *Fee includes \$20 for a copy of the instructor's book plus other course materials.*

WILDLIFE OBSERVATION - SPRING: 602

May 31 - June 3 \$127 (Member's fee \$117)

Instructor: Gene Ball

Late spring is a superb time for wildlife in Yellowstone. Field observation will be the major goal and activity of this introduction to the pre-summer park. Methods of unobtrusive observation and the ethics of interaction with wildlife will be central themes. The flexible schedule will feature early morning and evening field trips, short midday hikes, and programs on various wildlife topics plus related issues and controversies.

The course will begin at 1:00 pm on May 31 and run to noon on June 3. The opening session will cover selection and use of binoculars and spotting scopes for quality wildlife observation.



NATIVE AMERICAN RELIGIOUS BELIEFS IN YELLOWSTONE PARK: 603

June 4-5 \$85 (Member's fee \$75)

Instructor: Jeanne M. Eder

This class will examine the spiritual connection of Native Americans with nature. Topics will include issues of occupation, and plants and animals in a religious context. This course includes a traditional Indian meal on the evening of June 4.

GRIZZLY BEAR ECOLOGY & MANAGEMENT: 604

June 10-13 \$145 (Member's fee \$135)

Instructor: Sue Consolo Murphy Limit: 20

Conservation of Yellowstone's grizzly bear population involves a long history of controversy, research, and management challenges. This course will examine the ecology of the threatened grizzly bear, its natural history and current status in the Yellowstone ecosystem and a number of on-going management issues that affect the population's potential for long-term survival. Participants should be prepared for field trips daily to try to observe bears in the wild. These trips will not involve lengthy or strenuous hiking, but may occur in cold or inclement weather and in early morning and evening hours. The course will begin on Friday evening, June 10.

MAMMALS GREAT & SMALL: 605

June 12-16 \$210 (Member's fee \$200)

Instructor: Don Streubel

Credit available (U or G, 2 semester hours, ISU)

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

BEARS: FOLKLORE & BIOLOGY: 606

June 14-16 \$125 (Member's fee \$115)

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

Credit available (U, 1 semester hour, MSU)

This class will combine two disciplines and field observation time to explore the basic aspects of bear biology including reproduction, behavior, food habits, home ranges, habitat use, and population biology; and to address the bear's role in folkstories, images of bears in popular culture, bears as cult symbols, and the role of bears in today's world. Comparing and contrasting folk and scientific knowledge, and the importance of both, will be a continuing course theme.



Photo by Gene Ball

YELLOWSTONE BIRDS OF PREY: 607

June 17-19 \$125 (Member's fee \$115)

Instructor: John W. Martin

Credit available (U, 1 semester hour, MSU)

This course features Yellowstone's hawks, eagles, falcons, and owls, collectively known as raptors, in their natural habitats. Identification will be emphasized along with the role of predation in biological communities, predator-prey relationships, breeding strategies, and habitat influences. Conservation measures and management problems unique to raptors will also be examined during the course. A special boat trip to Frank Island on Yellowstone Lake will be made to see nesting ospreys and bald eagles.

BIRDING YELLOWSTONE: 608

June 17-19 \$87 (Member's fee \$77)

Instructor: Richard Follett

The objective of this fast-paced course will be to see as many Yellowstone bird species as possible in two days! The class will feature early morning departures to visit prime locations and varied habitat sites with a goal of observing more than 80 species including the osprey, bald eagle, and trumpeter swan. There will also be opportunities to observe many of the park's mammals. The class will begin at 8:00 pm on Friday, June 17, with introductions and a session on birding in Yellowstone.

WILD EDIBLE PLANTS & MEDICINAL HERBS: 609

June 17-19 Squirrel Meadows area, Targhee National Forest, ID \$125 (Member's \$115)

Instructors: Wayne Phillips & Sunny Mavor

Credit available (U, 1 semester hour, U of MT)

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

Classroom headquarters for the course will be at the Warm River cabin near the Squirrel Meadows area which is located along the scenic road between Ashton, Idaho, and the Flagg Ranch near the South Entrance to the park. Participants should come prepared to camp out, or may choose to stay in a motel in Ashton, which is less than an hour away. This is one in a series of four wildflower classes; see also course numbers 720, 727, and 730.

FLY FISHING THE WEST SIDE: 610June 17-19 West Yellowstone, MT Limit: 9
Instructor: Richard Parks \$155 (Member's fee \$145)

Based out of West Yellowstone, this course will focus on fishing the Madison, Firehole, and Gibbon drainages. It is geared for the more experienced person who has mastered the basics. The instructor will act primarily as a resource person in assisting participants in polishing their skills. Most instruction will be on an individual basis or in small groups. The instructor will work intensively with three persons each day. During the two days you are not having intensive instruction, you will practice on your own and meet with the group for morning and evening discussions.

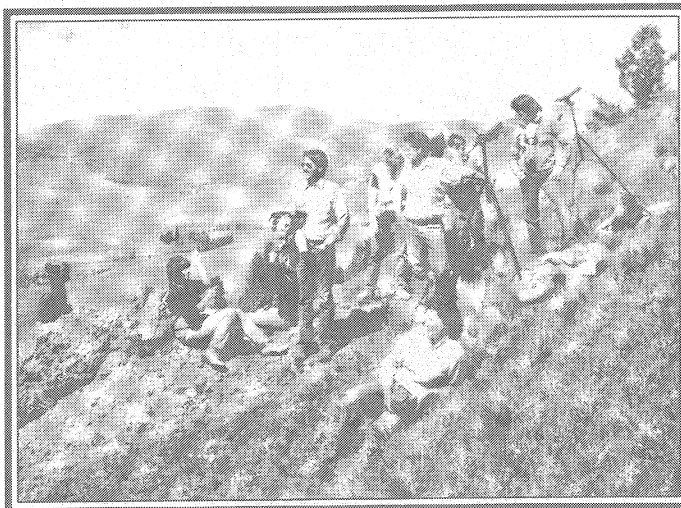


Photo by Gene Ball

1994 SUMMER FIELD COURSES

JUNE

INTERPRETING YELLOWSTONE WITH "RANGER TED"

June 20-22 Fishing Bridge: 611

July 4-6 Fishing Bridge: 703

August 1-3 Fishing Bridge: 802

\$75/person (Member's fee \$70) Limit each session: 20

Instructor: Ted J. Parkinson

Credit available (G, 1 semester hour, BYU)

Participants will be introduced to some of the wonders of Yellowstone by a semi-retired ranger-naturalist whose first summer in Yellowstone was in 1945. Ted Parkinson has seen almost a complete turnaround in several park management policies. His series of nature hikes and programs will encompass themes such as park history, environmental issues, personal reminiscences, kinship and interdependence of all life, predator-prey relationships, wilderness ecosystems, a U.S. Army history-archeology hike, and true bear stories. Activities will include short hikes, a visit to a bear den, wildlife observation, and plant identification. All hikes will include lots of short stops for relevant comments. There will be free time in the afternoon until the evening program begins. Families will carpool to various trailheads each day. *This class will meet in the Lake/Fishing Bridge area. People who wish to camp may make reservations for a site at Bridge Bay Campground through Ticketron. Information about other lodging and camping options is available from the registrar.*

BEARS: BONES, SIGNS & STORIES: 612

June 20-24 \$225 (Member's fee \$215)

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

Credit available (U, 2 semester hours, MSU)

Ursophiles (Greek for "bear lovers") unite. Supplement your knowledge of bears with a unique triad of instructors. From Dr. Elaine Anderson you will learn the evolutionary history of carnivores, especially ursids, as she talks about fossil and recent bears—their bones and their distribution. Dr. Jim Halfpenny will teach about modern signs of bears, and conduct a research project cataloging the "bear trees" of Yellowstone. Jim Garry will explore the vast and fascinating folklore of the bear, while examining the bear's habitat and behavior. Lectures will be supplemented by field trips to study bear trees, interpret stories left by claw marks, and to map tree distribution. Evening programs will share the lore of bears from a world-wide perspective. *Tuition fee includes \$15 for materials and handouts.*

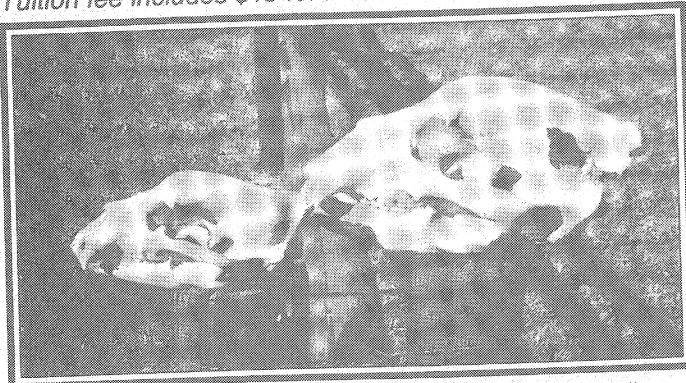


Photo by Gene Ball



Photo by Gene Ball

BIRDS OF YELLOWSTONE: 613

June 20-24

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

Instructor: Richard Follett

Credit available (G or U, 1 semester hour, U of MT)

This introductory ornithology course will emphasize field identification and ecological relationships of birds in the Yellowstone ecosystem. The course will feature field trips to all of the major habitats in the Yellowstone ecosystem, including a boat trip on Yellowstone Lake, a trip to the 11,000 foot summit of Beartooth Pass, and a breeding bird census of Blacktail Deer Plateau.

Every effort will be made to tailor instruction to the individual needs of the students. Amateur birders, including novices, as well as teachers and students will find this course extremely informative. Hikes and walks required for field surveys are not overly strenuous. Binoculars required.

LEARNING BIRDS BY SOUND: 614

June 24-26

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

Instructor: Terry McEneaney

Limit: 8

One of the most pleasant features of birdlife is the sounds they make. The most noticeable sounds in the spring are the songs of the perching birds; however, birds make a variety of other sounds such as calls, chip notes, clucks that are vocal, quivering, fluttering, gaping, and even flying noises that emit sound complementing a display. Designed for birders with little, if any, experience in bird sound identification, students in this class will learn how to identify the sounds of at least 50 species of birds. People will learn sounds to different degrees, depending on their ability to hear high and low pitches. Field trips will be the major emphasis with a chance for individual skills development. If you feel you can identify birds by sight, but are interested in identifying more birds by the sounds they make, then this course is for you. Class will begin on Friday, June 24, at 7:30 pm.

YELLOWSTONE NATURE DETECTIVE WORKSHOPS

(Ages 6-9)

June 25, Plants & Butterflies: 615**July 9, Mammals: 705****July 23, Birds & Rocks: 724****August 13, Geysers: 814****August 20, Entomology: 821 \$25 (Member's fee \$20)****Instructor: Deb Ihli****NEW****Limit: 15**

June 25, Plants & Butterflies: 615 This course includes a day of hiking in the Mammoth area, identifying trees, shrubs, grasses and wildflowers, and observing regrowth in natural fire areas. Children will make a flower press for use in collection of plants outside the park. We will also observe different species, patterns, colors and characteristics of butterflies. Students will learn techniques for collection and identification. Meets at the Children's Fire Trail, 7.5 miles east of Mammoth.

July 9, Mammals: 705 This course includes a day hike exploring the habitat and food habits of Yellowstone mammals. The students will be introduced to animal tracking and make plaster casts of tracks near Obsidian Creek. This course begins at Beaver Lake Picnic area.

July 23, Birds & Rocks: 724 This course will begin with observation and identification of birds by sight and sound. We will begin in the Yellowstone Lake area. Next we will hike a rim of the Grand Canyon of the Yellowstone, discuss and identify geological formations and rocks of Yellowstone Park.

August 13, Geysers: 814 This course includes a day of hiking and geyser gazing. Students will develop an understanding of geothermal activity, what geysers are, how they work and how they change over time. This day begins at Old Faithful Lodge.

August 20, Entomology: 821 This course includes legal wading in hot spots, and identification of stream life, including bugs and fish found in the Yellowstone river systems. We will begin at the 45th Parallel. Students should bring or make arrangements to have a life jacket, wading shoes, and apparel that can get wet.

Students should bring sack lunch, water bottle and snacks.

BUTTERFLIES OF GREATER YELLOWSTONE: 616**June 25-26****\$85 (Member's fee \$75)****Instructor: Robert Anderson, Ph.D.**

Credit available (U or G, 1 semester hour, ISU)

Butterflies are animals of unexcelled beauty and aesthetic appeal. Their diverse colors and patterns have inspired many a naturalist, both amateur and professional. The biotic sensitivities of butterflies to local environments and microhabitats have resulted in a rich array of genera, species and subspecies. Indeed, many—especially those that survive in confined or compressed habitats—are rare or endangered and on the verge of extinction. The Greater Yellowstone Ecosystem supports nearly 130 species of butterflies, many of which can delight our vision in subtle ways as their presence passes between blue birds and bison. Participants will discover the butterfly bounty of Yellowstone and its environs while observing their numbers, variety, flight characteristics, food requirements, life cycles and other attributes.

BEETLES, BUGS, & DAMSELFLIES: 617**June 27-29****\$125 (Member's fee \$115)****Instructor: Robert Anderson, Ph.D.**

Credit available (G or U, 1 semester credit, ISU)

Insects and other arthropods are the most abundant, varied, and widespread animals in Yellowstone Park. Their total biomass exceeds that of all the bears, birds, and bison combined, and yet they go unrecognized as they suck sap, pollinate flowers, kill trees, feed fish, and recycle deadwood and carrion. Various macro- and microhabitats comprising the park system will be surveyed and characterized in terms of the resident arthropod assemblage, with a focus on the significance of these animals to aesthetics and the park's ecological equilibrium.

JOHN COLTER: THE DISCOVERY OF YELLOWSTONE NATIONAL PARK: 618**NEW****June 27-30****\$177 (Member's fee \$167)****Instructor: Fred R. Gowans, Ph.D.**

Credit available (G or U, 2 semester hours, BYU)

Through map and primary sources the course will provide an in-depth study of the life and travels of John Colter. His controversial journey of 1807, which brought Colter into the present day boundaries of Yellowstone National Park, will be the focal point of the class.

The four day session will include two major field trips, including visits to "The Three Forks of Missouri" and the Sunlight Basin, providing the students with the opportunity to travel and observe the landscape in which Colter's remarkable adventures transpired. *Fee includes \$10 for handouts to be distributed in class.*

FAMILY HORSEPACKING: WEST SLOPE I: 619**June 27-30 (see description on pg 10)****NEW****LAKES OF YELLOWSTONE BY CANOE: 620****June 27-July 1 Shoshone Lake, Ylston Backcountry****\$330 (Member's fee \$320)****Limit: 12****Instructor: Scott Wood**

Credit available (U or G, 1 semester, RC/BYU)

This five day canoe trip across Lewis Lake and into magnificent Shoshone Lake, the largest wilderness lake in the lower 48, will provide interpretation of the lake environment and instruction on low-impact backcountry camping techniques. Canoeing skills such as strokes, portaging, safety and tripping (how to pack a canoe) will be studied and American Red Cross canoeing certification may be earned if desired. Class will start from the Lewis Lake campground boat dock on the morning of June 27. *Fee includes all canoeing equipment, group camping gear, and food.*



Photo by Don Nelson

1994 SUMMER FIELD COURSES

JUNE-JULY-AUGUST

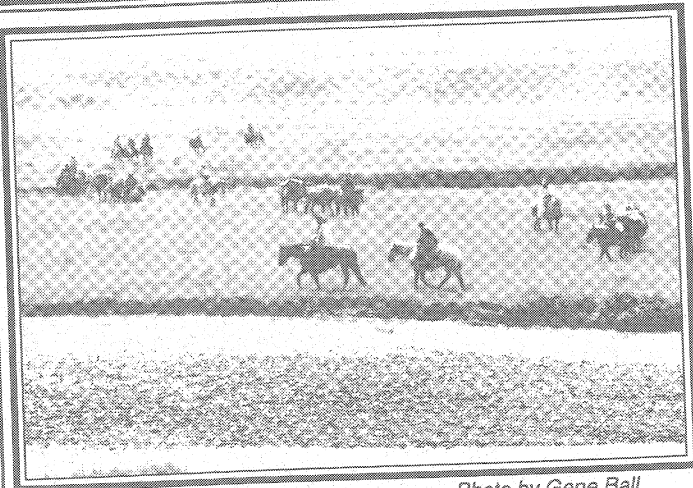


Photo by Gene Ball

WILDERNESS HORSEPACKING

June 30-July 3, Springtime Flora & Fauna: 621
 July 10-14, Teton West Slope: 707
 July 15-19, Traditional Nez Perce Trail: 713
 July 19-23, Indian Trails: 718
 July 23-27, Nez Perce Trail: Alternate Route: 725
 August 1-5, Trapper Trails: 804
 August 5-9, The Washburn Expedition Trail: 807
 August 10-14, Bechler River Canyon Trail: 812
 August 15-19, Over the Top - the Tetons: 817 **NEW**
 August 24-28, The Gallatin Corner: 825 **NEW**
 Limit: 12 per class except #621 which is limited to 10
 Instructor: Richard Clark, Ph.D.

FAMILY HORSEPACKING PROGRAMS:

June 27-30, West Slope of the Tetons I: 619 **NEW**
 July 6-9, West Slope of the Tetons II: 704 **NEW**
 August 10-13, Yellowstone's Southwest Corner I: 811
 August 17-20, Yellowstone's Southwest Corner II: 820
 Limit: 8 per class
 Instructor: Cory L. Clark

4-day class (619, 621, 704, 811, & 820): \$420
 (Member's price \$410)
 5-day class (all others): \$525 (Member's fee \$515)

Along with its specific theme, each of these courses are intended to emphasize low-impact use of pack stock in the backcountry. Courses are participatory rather than catered trips where participants learn use and care of pack and riding horses and how to camp and travel in the wilderness without damaging the fragile country. Fee includes horses, camping equipment and food. Participants must provide their own sleeping bags. Due to park management policies, trip locations may change on short notice due to backcountry conditions.

The four day **June 30-July 3 Springtime Flora & Fauna** class will start at 1:00 pm the first day at the Institute and spend the first day preparing for the trip and will include instruction in the natural history of Yellowstone. The horsetrip begins the next morning and over the next three days explores the Hellroaring country in and around the Yellowstone River, an area of bountiful wildlife and colorful displays of wildflowers.

The **July 10-14 Teton West Slope** trip will emphasize the special concerns of horseback trips through the fragile alpine ecosystem found along the west slope of the Tetons. Multiple use of our forests will be emphasized.

The **July 15-19** course will explore the probable route taken in August 1877 by Nez Perce Indians while pursued by the U.S. Army. To this day, their exact route through one of Yellowstone's most remote areas is unknown. It was wild and rugged then and remains so today.

The **July 19-23** session will explore portions of Indian routes through Yellowstone, such as the Bannock Trail. The ride will take participants through sections of the upper Lamar Valley, Mirror Plateau, and Pelican Creek and provide a chance to examine the effects of the Clover-Mist fire of 1988.

The **July 23-27** session will explore an area that has interested historians as a possible Nez Perce route. The ride will loop through portions of the Pelican Creek and Broad Creek areas and end near Canyon.

The **August 1-5** course follows a route used often and by several different brigades of trappers during the fur trade era. The trip will begin at the Turpin Meadows trailhead south of Yellowstone and travel through the Teton Wilderness to Two Ocean Pass, through the Thoroughfare country, up the Yellowstone River, traversing the east shore of Yellowstone Lake, with a boat ferry across Yellowstone Lake to Bridge Bay.

Starting with a boat ferry from Bridge Bay across Yellowstone Lake, the **August 5-9** course will follow a portion of the original Washburn Expedition trail along the east and south shores of Yellowstone Lake through country that is still much as it was in 1870 when Washburn's party rode through it.

The **August 10-14** trip takes place in the seldom-traveled Bechler Canyon country between Old Faithful and the southwest corner of the park which features lush meadows and scenic canyon waterfalls.

The **August 15-19** trip will emphasize the special concerns of horseback trips through the fragile alpine ecosystem found along the west slope of the Tetons. At times the route passes through 10,000 foot elevations with spectacular views of the Tetons—including striated walls, tarn lakes and braided streams.

The **August 24-28** trip is based in the northwest corner of the park. This trip is for the seasoned and well-experienced rider who is looking for adventure. The route will be dependent on local conditions.

Family Horsepacking Programs: 619, 704, 811, 820 --

The first day on all trips will be an "education" day at the "family camp" at Fox Creek Pack Station in Teton Valley, Idaho. The curriculum on this first day will include some basics in horse riding, wildflowers and our forest plants, wildlife that we might see, forces that shape the earth's surface, and basic backcountry camp skills. All children must be accompanied by an adult.

For descriptions of the **June 27-30 and July 6-9 West Slope of Tetons I & II**, see July 10-14 Teton West Slope description above.

For descriptions of the **August 10-13 and 17-20 Yellowstone's Southwest Corner I & II** see Aug 10-14 Bechler description above.

WARS & WORDS OVER WILDLANDS: 701

July 1-2 \$85 (Member's fee \$75)

Instructor: Bill Lang, Ph.D.

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

THE FLIGHT OF THE NEZ PERCE THROUGH YELLOWSTONE-1877: 702

July 3-4 \$85 (Member's fee \$75)

Instructor: Bill Lang, Ph.D.

This course will trace the path of the fleeing Nez Perce as they raced to sanctuary in Canada. Pursued by the army in the summer of 1877, they passed through some of the roughest terrain in Yellowstone Park. Readings, slides, and on-site visits to historic points along their route will be included in the course.

INTERPRETING YELLOWSTONE WITH "RANGER TED": 703

July 4-6 (see description on pg 8)

FAMILY HORSEPACKING: WEST SLOPE II: 704July 6-9 (see description on pg 10) **NEW****YELLOWSTONE NATURE DETECTIVE WORKSHOPS: 705**July 9, Mammals (see description on pg 9) **NEW****WOLVES OF YELLOWSTONE: THE MISSING LINK: 706**

July 9-10 \$105 (Member's fee \$95)

Instructor: John Weaver, Ph.D.

This course will focus on the wolf as the major missing link in the Yellowstone ecosystem. The ecological role of the wolf as a major predator of large ungulates will be examined as well as the historical and present status of wolves and their habitat in the park. The course will also explore the issues, options and strategies associated with restoration of wolves to Yellowstone. *Course fee includes \$20 for a large resource manual assembled by the instructor.*

"If a picture is worth a thousand words, then the presence of a live animal is worth a thousand pictures."



-- Pat Tucker, Wild Sentry
The Northern Rockies
Ambassador Wolf Program

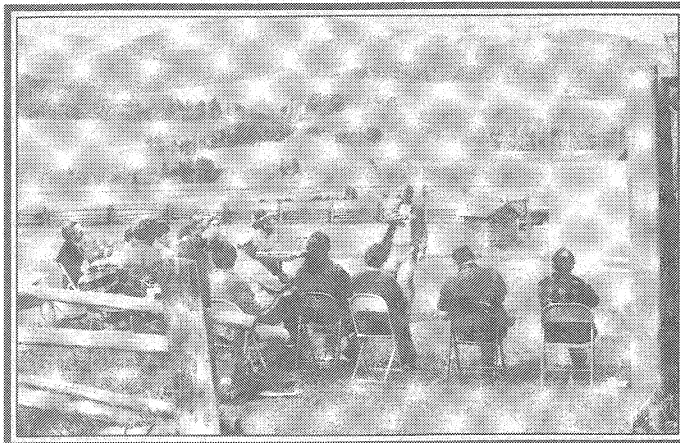


Photo by Gene Ball

HORSEPACKING: TETON WEST SLOPE: 707

July 10-14 (see description on pg 10)

FIRE, ICE & FOSSIL FORESTS: 708

July 11-13 \$125 (Member's fee \$115)

Instructor: John Good

Credit available (U, 1 semester hour, MSU)

This course will introduce participants to the unique petrified forests of Yellowstone and to the Ice Age history of the park which profoundly influenced today's landscapes, flora, and fauna. There will be a discussion of the theory that repeated episodes of volcanic activity buried living forests in ash and mudflows to be slowly petrified by mineral-bearing hot water. Moving to the last two million years, discussion will focus on glacial ice and volcanic explosions. The course will involve a field trip to observe evidence of glaciation and discuss the volcanic history of Yellowstone and the Absaroka and Beartooth Mountains, an all-day hike on Specimen Ridge, and a hike up Mt. Washburn where glacial and volcanic phenomena are visually united.

PHOTOGRAPHING NATURE IN YELLOWSTONE COUNTRY: 709

July 11-14 \$167 (Member's fee \$157)

Instructor: Sandy Nykerk

This four day workshop will begin with the basics of photographic principles including the ethics of nature photography, creative visualization, learning to see the light, metering, exposure and composition. With this foundation, more advanced topics will be discussed, including film and equipment selection, macro photography, and using flash in the field. Classroom lectures and slide programs are integrated with in-the-field shooting to allow maximum opportunity for "hands-on" learning and enjoyment of this spectacular region. Yellowstone's magnificent diversity provides an unparalleled opportunity for learning and expanding photographic skills. Misty early morning scenics, majestic wildlife, the brilliant colors and steamy surrealism of the thermal pools will all be subjects we encounter. Emphasis will be on developing personal vision and creativity combined with technical excellence and an understanding that a really good nature photographer is an even better naturalist.

1994 SUMMER FIELD COURSES

JULY



Photo by Gene Ball

HIKING & CAMPING IN GRIZZLY COUNTRY: 710

July 14-15 Pebble Creek

\$85 (Member's fee \$75)

Limit: 10

Instructor: Bill Schneider

Moderate hikes of five-six miles each day and an overnight in the Yellowstone backcountry will provide the format for this class which will emphasize safety and precautions necessary in grizzly country. The first morning of this course will be devoted to a discussion of the history of bear/man confrontations followed by a discussion of techniques for the prevention of such confrontations including suggestions for dealing with grizzly encounters. Following the discussion, the group will hike to a backcountry campsite up the Pebble Creek drainage. During the remainder of the course the instructor will cover camping techniques and further discussions about the current status of the great bear and its uncertain future. Teenagers accompanied by adults are welcome. *Participants provide their own backpacking gear and food. A complete equipment list will be provided in the student packet.*

EXPLORING THE YELLOWSTONE ECOSYSTEM: 711

July 15-17 Mammoth Hot Springs

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

Instructor: Tom Watson

Based out of Mammoth Hot Springs, this course will look at park geology, wildlife, botany and history in the context of an ecosystem. It will examine Yellowstone's fiery birth, its frozen past and how these events prepared the stage upon which plants and animals act out their interdependent roles. The class will look at geysers and hot springs and many wildlife species and will consider what they are, why they are present in Yellowstone and the threats they face. An abiding interest in nature, not scientific training, is the only requirement. The class will meet from 1:00 pm, July 15 through early afternoon July 17. *Lodging reservations should be made early. Contact the Institute office for lodging and camping information.*

THREE DAYS AT THE BUFFALO RANCH (AGES 8-11): 712

July 15-17
\$125 (Member's fee \$115)

Limit: 20

Instructor: Louise Bruce

This three day stay at the Lamar Buffalo Ranch is especially for children. It provides an exciting time for youngsters to learn and explore in a national park and make new friends. Each day includes a hike to observe wildlife and learn about plants, animals, and the park's

history. Bring your own white or light colored t-shirt to decorate with a personal Yellowstone design. Active days of fun and learning are concluded each evening with games and wildlife films. *Fee includes meals and lodging. Each student must provide a sleeping bag, water bottle, and day pack. A complete equipment list will be provided in the student packet.* Louise Bruce, assisted by two other adults, will lead this class. A class for adults (711) has been scheduled to coincide with this course.

HORSEPACKING: TRADITIONAL NEZ PERCE ROUTE: 713

July 15-19 (see description on pg 10)

FAMILY DAYS AT PEBBLE CREEK: 714

July 17-19

\$75/person (Member's fee \$70)

Instructors: Sandy Nykerk & Jim Garry

Limit: 20

This three day family camping experience will headquarter at Pebble Creek Campground in the northeast corner of Yellowstone. From there we will explore this area's spectacular landscape both in and out of the park. Through hikes, discussions, and games, participants will learn about the geology, wildlife, botany, and history of this very special region. We will also spend some time looking at the effects of the '88 fires to understand why this was such an important process for the Yellowstone ecosystem. Critter watching at dawn will be an option. An evening campfire storytelling session will introduce the mythology and folklore of the Yellowstone country. Children of all ages are welcome, but should be able to walk or be carried by an adult while out on field trips.

Class will begin at 9:00 am on July 17. Families must provide their own food, including picnic lunches in the field. Campsites are available at Pebble Creek for \$6/night and it is recommended that sites be secured by mid-morning. For the non-campers, lodging is available at Roosevelt Lodge in the park or Cooke City, Montana.

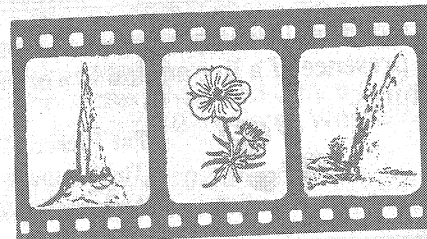
PHOTOGRAPHING THE SCENIC BEAUTY OF YELLOWSTONE: 715

July 18-20

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

Instructor: Pete Houdeshel

This field course is uniquely designed to stimulate all levels of photographers. For the less experienced students there will be extensive opportunities for one-on-one practical instruction in the field. The more experienced photographers will be guided to hikes beyond the roadside turnoffs to explore the great subjects of Yellowstone. Daily slide presentations are designed to be lively and non-technical, concentrating on composition, lighting, lens selection and creative options available in outdoor photography. Special emphasis is placed on spending maximum time in the park learning to "see" and enjoy Yellowstone with a camera.



"Stay on this good fire-mountain and spend the night among the stars. Watch their glorious bloom until the dawn, and get one more baptism of light ... you will remember these fine, wild views, and look back with joy to your wanderings in the blessed old Yellowstone."
-- John Muir, 1901

BACKPACKING YELLOWSTONE THE "LEAVE NO TRACE" WAY

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

July 18-22: 716 & Aug 1-5: 803

Limit: 10

Instructor: Michael Bartley

NEW

These five day courses will offer students the chance to immerse themselves in wilderness in and around Yellowstone National Park. The courses are designed for people who want to go beyond the frontcountry and enter the world where humans are both participants and observers on nature's terms. While much of the instruction and pace of the course is geared toward the beginning backpacker, more experienced hikers are welcome and encouraged to participate.

The main goal of these journeys is to teach the backcountry traveler how to function in relative comfort with minimal impact on the land. We will be using, in part, techniques developed by the National Outdoor Leadership School in conjunction with the federal land use agencies' "Leave No Trace" program. In addition, there will be instruction on nearly every aspect of wilderness travel and camping including equipment, route finding, trail techniques, etc. Furthermore, we will touch on a broad range of topics including but not limited to the region's natural history with special emphasis on biodiversity and habitats in the Greater Yellowstone Ecosystem. *Participants provide their own backpacking gear and food. A complete equipment list will be provided in the student packet.*

HEADWATER WATERSHED ECOLOGY: 717

July 19-21

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

Instructor: Roy Mink, Ph.D.

Credit available (U or G, 1 semester hour, U of MT)

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

The goal of this course is to understand a watershed. Much of our past environmental management strategies have been oriented toward managing a specific resource (such as timber) or species (such as trout) without regard to how that specific entity interacts within the total system. The watershed approach takes into account how each aspect of the ecosystem interrelates with every other. Students will go to the headwaters of a Yellowstone drainage and along the way look at hydrology and stream ecology in order to understand the relationship of various aspects of the watershed. The relationship of several smaller watersheds making one large watershed will also be investigated and a "stream walk" stream survey will be conducted as part of the course. This survey could be used for teachers or citizen groups interested in stream monitoring.

HORSEPACKING: INDIAN TRAILS: 718

July 19-23 (see description on pg 10)

FAMILY DAYS: EXPLORING THE PARK WITH A

FAMILY: 719 \$75/person (Member's fee \$70)

July 20-22 Grant Village

Limit: 20 people

Instructors: Jack de Golia, Louise Bruce,
Alex de Golia, Kyle de Golia

This is a class for families—taught by a family. Two former National Park Service rangers and their seven and four year-old-sons will lead you off the beaten track, sharing their years of experience in Yellowstone. The course is based at the Grant Village group campsite, but families may stay in nearby lodges. The class will include easy walks and even a strenuous hike at a family pace. This class will explore the West Thumb Geyser Basin, hike to points overlooking Yellowstone Lake, hike to special places and learn about plants and animals. You may stay at the Grant Village group campsite starting the evening of Tuesday, July 19. Class begins at 9:00 am Wednesday, July 20, and runs until 10:00 pm on Friday, July 22. *Families must provide their own camping equipment and food.*

ALPINE WILDFLOWERS: 720

July 22-23

\$85 (Member's fee \$75)

Instructor: Wayne Phillips

Credit available (U, 1 semester hour, U of MT)

Wildflowers growing in the alpine tundra above the tree line will be the focus of this course. Participants will make day trips to the high country of the Beartooth Plateau to study the beauty of flowers found only in circumpolar arctic environments and on the highest mountain tops below their arctic home. A variety of alpine ecosystems will be studied including the "krummholz," or windbattered, horizontal pygmy forest, the cushion plants of the boulder fellfields, the lush alpine meadows, and the flowers that spring up behind the receding snowbanks. This is one in a series of four wildflower classes; see also course numbers 609, 727, and 730.

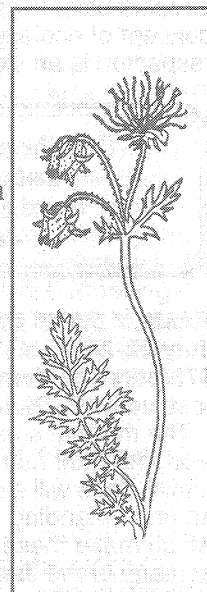


Illustration by
Pam Gontz

GEYSERS, MUDPOTS, & HOT SPRINGS: 721

July 22-24 Old Faithful

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

Instructor: Duncan Foley, Ph.D.

Credit available (U, 1 semester hour, MSU)

The rare, spectacular geothermal features of Yellowstone will be explored in this course. After a short introduction, visits to mudpots, hot springs, and geysers will begin with hikes timed to see several of the less common geysers erupt. The class will meet at the Grand Canyon of the Yellowstone at noon on July 22 and then proceed to the Old Faithful area for a full day of geyser gazing on July 23. Norris Geyser Basin and other sites will be visited on July 24, with class ending early afternoon. No background in geology is required. *Fee does not include lodging. This class will headquarter at Old Faithful. Early lodging reservations are essential. Contact the Institute office for information on lodging and camping.*

1994 SUMMER FIELD COURSES

ENVIRONMENTAL ETHICS: 722**NEW**

July 22-24 \$125 (Member's fee \$115)

Instructor: Tom Watson & Rebecca Schanz

Yellowstone's mountains, seemingly endless forests, its geysers and thermal pools, abundant wildlife, endlessly flowing rivers and waterfalls evoke a variety of feelings in each of us. Are the minerals, lumber, wildlife, and geo-thermal energy in Yellowstone, and its surrounding ecosystems, a commodity or, is there value in that which is not used? The way you answer these questions provides the basis for your individual philosophy for an environmental ethic. The focus of our class will be to consider the different sides of these issues with special consideration given to what is a reasonable environmental ethic. Our examination will take place within the context of Yellowstone National Park. With the help of a wide range of nature writers, experts reflecting various points of view, and through excursions into the field, members of the class will be equipped to determine their own personal ethic related to responsible use of our lands. Aldo Leopold said, "That land is a community is the basic concept of ecology. But that land is to be loved and respected is an extension of ethics."

"It is the marriage of the soul with Nature
that makes the intellect fruitful,
and gives birth to imagination."

-- Thoreau, Journal, Aug. 21, 1851

FAMILY DAYS IN THE THERMAL BASINS: 723

July 22-24 Madison Campground

\$75/person (Member's fee \$70)

Instructors: Sandy Nykerk & Jim Garry

The thermal areas of Yellowstone are unique in the world for their number and diversity. For three days, this family class will explore the park's thermal basins, gaining an understanding of the geology and ecological systems which make these features possible. We will spend time at many of the thermal areas, including Norris, Old Faithful and West Thumb. Field trips of one to three miles will be paced for a family experience and will allow ample time to enjoy all of Yellowstone's natural history, including wildlife and botany. Critter watching at dawn will be an option. An evening campfire storytelling session will introduce the mythology and folklore of the Yellowstone country.

Class will be based at the Madison Campground. Children in this course should be at least six years of age. Class begins at 9:00 am on July 22. Participants will carpool for field trips. *Families who camp must secure their own campsites early in the day; the cost is \$8 per night. Participants must provide their own camping equipment and food, including field lunches.*

YELLOWSTONE NATURE DETECTIVE WORKSHOPS: 724**NEW**

July 23, Birds & Rocks (see description on pg 9)

HORSEPACKING: NEZ PERCE ALT. TRAIL: 725

July 23-27 (see description on pg 10)



Photo by Gene Ball

ALPINE ECOLOGY: 726

July 25-28 Cooke City, MT

\$182 (Member's fee \$172)

Instructor: James Halfpenny, Ph.D.

Credit available (U, 1 semester hour, U of MT, or MSU)

The Beartooths, still locked in glaciation, form the northeast bastions of the Yellowstone ecosystem. Traveling from our base in Cooke City, the Beartooth section of U.S. 212, called by Charles Kuralt, "...the most beautiful roadway in America," we will make day trips to this incredible region above tree line. The class will carpool to various locations and explore the patterns and processes of geology, glaciers, peri-glacial features, climate, and plant and animal communities as they combine to form the alpine tundra. Using a hierarchical approach, ecosystem functions over differing time and space scales will be stressed. The interference with modern civilization will also be analyzed. *Tuition includes \$15 for course materials. Students are responsible for securing their own lodging or camp sites in the Cooke City area. A list of options is available from the Institute office.*

WILDFLOWERS OF THE HIGH COUNTRY (LLAMA TREK): 727

July 25-28 Beartooth Backcountry

\$330 (Member's fee \$320)

Limit: 10

Instructor: Wayne Phillips

Credit available (U, 1 semester hour, U of MT)

For this backcountry study of alpine plants and their environment, group gear and food will be transported by llama to a campsite near the high country lakes of the Beartooth Mountains. Participants should be prepared for hikes of four-five miles per day on relatively gentle terrain at an elevation of about 8,000 feet. Wildflowers along the edges of the many lakes, streams, snowbanks and glaciers will be featured, from the alpine tundra to the open subalpine forest. This is one in a series of four wildflower classes; see also course numbers 609, 720, and 730. Enrollees must bring sleeping bag, pad, and pack. *Fee includes group equipment, food and llama packing. A camp tender will prepare meals.*

HYDROTHERMAL SYSTEMS & THE YELLOWSTONE CALDERA: 728

July 25-29

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

Instructors: Duncan Foley, Ph.D., Roy Mink, Ph.D.,
Clay Nichols, Ph.D.

Credit available (U or G, 1 semester hour, U of MT)

The class will present a thorough discussion of the geological evolution of the Yellowstone caldera and the nature and occurrence of hot springs, geysers, and mudpots. Lectures will include discussions of volcanic rocks, caldera cycles, and development of geologic structures that influence the location of hydrothermal systems, the geology of geothermal features and the chemistry of thermal waters. Field trips will visit areas that feature the many types of rocks produced during several stages of the Yellowstone caldera and famous and unusual hydrothermal features that are off the beaten path. The class will have special appeal for teachers of earth science and others with serious interest. A background knowledge of geology will help in understanding many of the topics.

THE ART OF KEEPING A FIELD JOURNAL: 729

July 26-29

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

Instructor: Hannah Hinchman

This course is for the student of nature who wants to deepen his or her outdoor experiences by keeping a journal. During this four day workshop we will explore the sublimity of Yellowstone's rich ecosystems, drawing and writing in the field. We will work both on quick recording and on more extended, reflective studies. By observing the works of some of the great naturalists and artists, we will learn about their techniques and intentions. The emphasis of this course will be less on amassing information and more on finding methods of discovery. Hikes of moderate length can be expected.

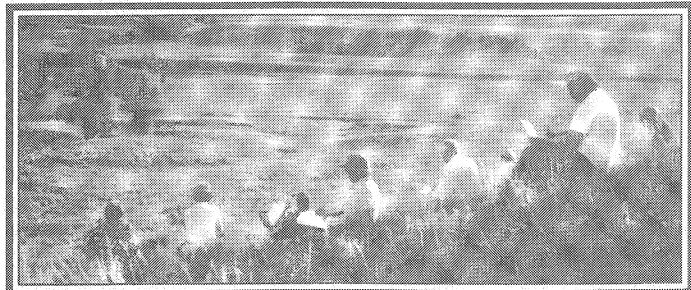


Photo by Don Nelson

WILDFLOWERS OF YELLOWSTONE: 730

July 30-31

\$85 (Member's fee \$75)

Instructor: Wayne Phillips

Credit available (U, 1 semester hour, U of MT)

During this class basic plant classification skills will be developed through botanical walks and short classroom sessions. A variety of forest, meadow and streamside habitats will be studied. Field identification of the trees, shrubs, grasses and wildflowers of northern Yellowstone will be emphasized. Plant ecology, wildflower photography and historic plant uses will also be discussed. This is one in a series of four wildflower classes; see also course numbers 609, 720, and 727.

MAMMAL TRACKING: 731

July 30-August 2 (see description on pg 6)



Photo by Gene Ball

YELLOWSTONE'S WAYSIDE HISTORY: 801

August 1-3

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

Instructor: Aubrey L. Haines

Limit: 25

Students in this course will examine sites and evidence of Yellowstone's human history along or near the park roads. It will consist of day-long field trips from the Institute and several off-road hikes (none exceeding three miles, round trip), with explanation of the significance of the places visited, both at the sites and while traveling between them. Discussions will cover the whole range of human activity from the prehistoric to the modern uses of the park area. At some locations, the visual perception will be augmented by the use of early photographs.

INTERPRETING YELLOWSTONE WITH "RANGER TED": 802

August 1-3 (see description on pg 8)

BACKPACKING YELLOWSTONE THE "LEAVE NO TRACE" WAY: 803

NEW

Aug 1-5 (see description on pg 13)

HORSEPACKING: TRAPPER TRAILS: 804

August 1-5 (see description on pg 10)

YELLOWSTONE BEFORE THE TOURISTS: PREHISTORIC PEOPLE OF THE PARK: 805

August 5-7

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

Instructor: Susan Hughes, Ph.D.

For at least 10,000 years prehistoric people have visited the area we now call Yellowstone Park. Not only was it a summer playground for indigenous mountain cultures, but also a corridor for travellers between the Plains and Great Basin. Resources such as obsidian, edible plants, fish, and game were important drawing cards. In a field setting we will examine the prehistoric people who inhabited the park, clues of their presence, and how archaeologists study these clues. Field trips will be taken to the Obsidian Cliff quarries, Bannock Trail, and other sites in and around the park.



Photo by Gene Ball

FLY FISHING THE CATCH-AND-RELEASE WAY**August 5-7 less experienced: 806 Limit: 8****August 12-14 more experienced: 813 Limit: 9****\$155 (Member's fee \$145)****Instructor: Richard Parks**

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

The session for the more experienced is for persons who have mastered the basics and will focus almost exclusively on fishing Yellowstone's waters. The instructor will act primarily as a resource person in assisting participants in polishing their skills. Most instruction will be on an individual basis or in small groups. During the two days you are not having the intensive instruction, you will practice on your own and meet with the group for morning and evening discussions.

HORSEPACKING: WASHBURN EXPEDITION TRAIL:**807****August 5-9 (see description on pg 10)****YELLOWSTONE STREAMS THROUGH THE EYES OF A TROUT: 808****August 8-10****\$125 (Member's fee \$115)****Instructor: Tom McMahon, Ph.D.****Limit: 12****Credit available (U or G, 1 semester hour, MSU)**

This class is an introduction to "fishwatching" for anglers and others interested in learning about the behavior of stream dwelling trout and the ways in which they are adapted to their environment. Discussions will focus on diet, habitat use, and sensory perception of trout in Yellowstone streams and will include life histories of the species important in the park and factors affecting their population. On one field trip students will don wet suits and directly observe fish behavior.

CARNIVORES OF THE GREATER YELLOWSTONE ECOSYSTEM: 809**NEW****August 8-12****\$210 (Member's fee \$200)****Instructor: Tim Clark, Ph.D.****Credit available (U or G, 1 semester hour, ISU)**

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

The course will feature guest speakers, lectures, readings, videos, extensive discussion and field trips to the habitats used by many of these species. This course is designed for beginners and advanced students.

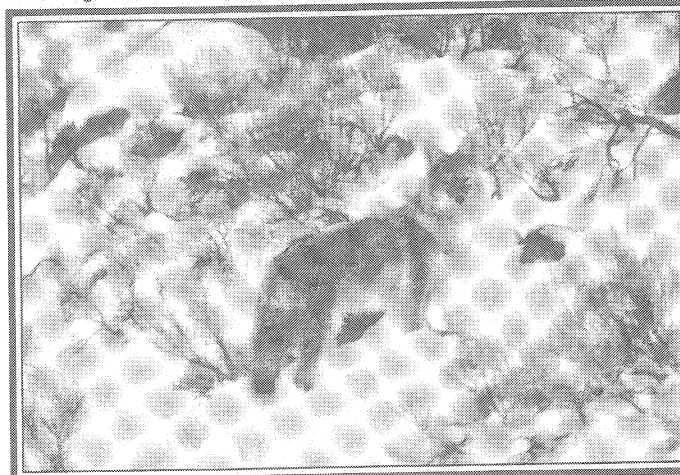


Photo by Gene Ball

BACKPACKING THE BEARTOOTH: 810

August 8-12 Beartooth Mountains,
Shoshone National Forest \$210 (Member's fee \$200)
Instructor: Bill Schneider

The Beartooth Plateau, just northeast of the park, is more than a vital part of the Yellowstone ecosystem—it is also a paradise for hikers. Almost a million acres of high altitude wilderness dotted with hundreds of pristine lakes, much of which is included in the Absaroka-Beartooth Wilderness.

This five day excursion into the Beartooths is led by our ten year veteran instructor of Hiking and Camping in Grizzly Country, Bill Schneider. In addition to the principles of backpacking, the course will cover, in the ultimate classroom, many resource issues related to Yellowstone: grizzly bear management, wolf reintroduction, and fire ecology. There will also be discussions on alternatives to high-tech backpacking equipment. Expect to hike five-eight miles per day at high elevations. Participants should be in good physical shape. Teenagers accompanied by adults are welcome. *Students are responsible for providing their own equipment and food. A complete equipment list will be sent in the student packet.*

FAMILY HORSEPACKING: SOUTHWEST CORNER I: 811

August 10-13 (see description on pg 10)

HORSEPACKING: BECHLER RIVER CANYON TRAIL: 812

August 10-14 (see description on pg 10)

FLY FISHING: MORE EXPERIENCED: 813

August 12-14 (see description on pg 16)

YELLOWSTONE NATURE DETECTIVE WORKSHOPS: 814

August 13, Geysers (see description on pg 9) **NEW**

EPISODIC HISTORY OF YELLOWSTONE LAKE: 815

August 13-14 \$85 (Member's fee \$75)

Instructor: Wayne Hamilton, Ph.D.

Credit available (U or G, 1 semester hour, MSU)

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

By visiting several lakeshore localities each day and evaluating the sedimentary record in detail, you will see and come to understand evidence of early ice margins, stream deltas, abandoned beaches, deepwater deposits, 13,000 year old shoreline vegetation, buried soils, recent volcanic ash, breccias from steam explosions, and much more. You will be joining ongoing investigation, so you will be personally involved in making new discoveries.

WILDERNESS THINKERS & THEIR LEGACIES: 816

August 15-19 \$265 (Member's fee \$255)

Instructor: Scott Wood Limit: 10

This five day Yellowstone backpacking trek will explore the power that wild places have in helping us to understand the value of adventure, the beauty of the natural world, and an appreciation of its inherent spirituality. This year the course will be covering the following books: A Sand County Almanac, by Aldo Leopold; Everest: The West Ridge, by Thomas Hornbein; Refuge, by Terry Tempest Williams and Stickeen: The Story of a Dog, by John Muir. Through discussions and wildland experiences, students will be encouraged to share and develop their own philosophies of wilderness and adventure as they face fears and explore their own limits. The course will take place in the backcountry of the northeast area of the park and will start at 10:00 am on August 15 at the Yellowstone Institute in the Lamar Valley. *Food is included in the tuition and any individual equipment can be rented through the instructor. Good physical condition is recommended.*

"Like winds and sunsets, wild things were taken for granted until progress began to do away with them. Now we face the question whether a still higher 'standard of living' is worth its cost in things natural, wild and free. For us the minority, the opportunity to see geese is more important than television, and the chance to find a pasque-flower is a right as inalienable as free speech."

-- A Sand County Almanac

HORSEPACKING: OVER THE TOP - THE TETONS: 817

August 15-19 (see description on pg 10)

NEW

DRAWING & STORYTELLING FAMILY WORKSHOP: 818

August 15-19 Limit: 20 **NEW**

Adult \$210 (Member's fee \$205) Child \$185 (\$180)

Instructor: E. W. Ross & Patricia Pelletier

This five day workshop is for families (children age six and up) interested in enjoying the varied natural beauty of Yellowstone with other families through structured creative activities centered around storytelling and drawing the landscape. Each day there will be a short hike to a different area of the park, which will be the setting for exploring, drawing, storytelling and picnics. Families will learn fundamentals of drawing the landscape from composition to color and will be introduced to different media and materials. Whether you have never drawn or want to enhance your skills, this workshop will provide an opportunity to develop your artist's eye while appreciating the wonder of Yellowstone's landscape. The stories, which will include Native American myths about the origins of the land and wildlife, will set themes for each day's art activities. Storytelling is a powerful way to engage children and adults to the landscape. Myths are human's earliest way of knowing and describing the world.

1994 SUMMER FIELD COURSES

AUGUST

INTRODUCTION TO FOREST ECOLOGY: 819
August 16-19 \$167 (Member's fee \$157) **NEW**
Instructor: Jim Bouldin

Participants in this course will explore the silvics, ecological dynamics, and management of the forests of the northern Rocky Mountains, with a special emphasis on Yellowstone Park. The course will broadly cover identification, life histories, and forest community types of tree species found in Yellowstone; patterns of disturbance, regeneration, and succession; forest measurement techniques, such as simple population dynamics, important values, growth rates, and site indices; the effects of fire and fire suppression on natural processes of change; and forest-wildlife relationships.

FAMILY HORSEPACKING: SOUTHWEST CORNER II: 820
August 17-20 (see description on pg 10)

YELLOWSTONE NATURE DETECTIVE WORKSHOPS: 821 **NEW**
August 20, Entomology (see description on pg 9)

**WOMEN & YELLOWSTONE—
 A HISTORICAL PERSPECTIVE: 822**
August 20-21 \$85 (Member's fee \$75)
Instructor: Karen Krieger

This course examines Yellowstone as seen by women in the late 19th and early 20th centuries. Using diaries, letters, photographs and other historical resources, the group will discover the variety of experiences encountered by women residents and visitors to the park during its early years. Day hikes will include exploring old tourist sites, cemeteries, and natural features which encourage an understanding of how women interacted with Yellowstone. Day hikes of two-four miles can be expected.

GEOLOGY OF THE YELLOWSTONE COUNTRY: 823
August 20-24 \$210 (Member's fee \$200)
Instructor: David Fountain, Ph.D.
 Credit available (U or G, 1 semester hour, U of WY, or U of MT)

This course, conducted in the natural field laboratory of Yellowstone Park, will concentrate on the geological evolution of the area. Daily travel through the park will introduce you in depth to such topics as volcanic rocks and processes, glaciation, earthquakes and faulting, hydrothermal features, sedimentary rocks and processes, metamorphism and tectonics. Completion of an introductory geology course is preferable but not required.

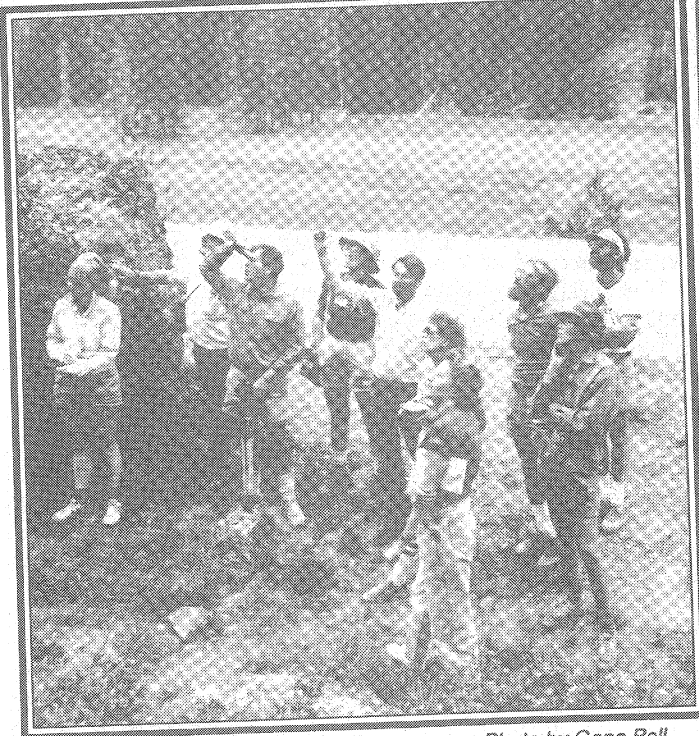


Photo by Gene Ball

**FINDING YOUR OWN VOICE: A WILDERNESS
 WRITING WORKSHOP: 824**
August 22-26 \$170 (Member's fee \$160)
**Instructors: Deborah M. Bond, Ph.D. &
 Dorothy Hinshaw Patent, Ph.D.**

This four day workshop is for anyone who loves nature and likes to write. The course goals are to increase powers of observation, improve descriptive writing skills, deepen personal trust and confidence, and stimulate creativity. Designed to expand our awareness of the natural world in Yellowstone as well as deepen our appreciation of the wildness within ourselves, this class will combine writing and experiential exercises, both indoors and outside, with group interaction and guided field trips. We will spend time at a variety of special spots not often found by the average visitor. There will be ample time to write and encouragement to share and learn from each other. This course begins at 7:00 pm, Monday, August 22.

HORSEPACKING: THE GALLATIN CORNER: 825
August 24-28 (see description on pg 10) **NEW**



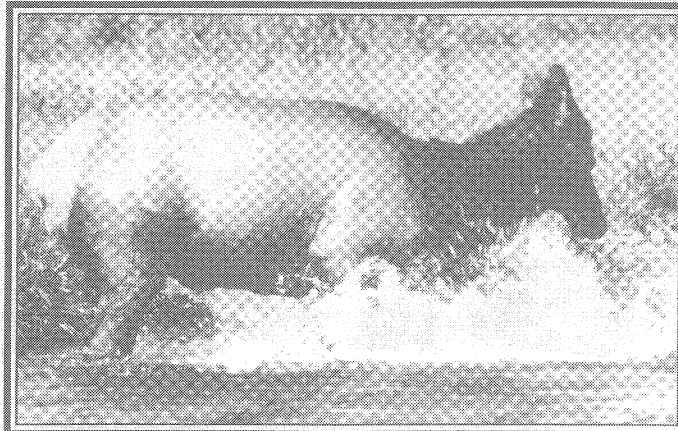
Photo by Gene Ball

AUTUMN SCENIC PHOTOGRAPHY IN**YELLOWSTONE: 901 \$175 (Member's fee \$165)****September 8-11 Old Faithful Area****NEW****Instructor: Kent Miles**

Fall, rich in wildlife and color, peacefully uncrowded, is a favorite time for photographers in Yellowstone. This class will headquarter in the Old Faithful area and is designed to give the more experienced photographer the opportunity for an autumn exploration – from vast scenics to intriguing close-ups. Emphasis will be placed upon the process of translating feelings into a visual form. The objective is to create pictures that will let others feel what you felt during your time in Yellowstone. Class begins at 10:00 am on Thursday and will end by 3:00 pm on Sunday. Activities include lectures, slide and video presentations, and time in the field. *Lodging is available at Old Faithful. Reservations should be secured early.*

*Photo by Gene Ball***AUTUMN WILDLIFE PHOTOGRAPHY: 902****September 11-15 Mammoth Hot Springs****\$210 (Member's fee \$200)****Instructor: Linda DeLay-Joseph**

In this four day class, you will have a chance to photograph Yellowstone's bountiful and diverse wildlife. Based out of Mammoth and scheduled during the height of the elk rut, students will have the opportunity to observe and photograph bugling and breeding behavior. Several different photographic techniques and wildlife approaches will be discussed and utilized during this course as they apply to wildlife ethics and sensitivity to the environment. The basic thrust of the course is towards exploring and developing a "creative eye"; to not just photograph an animal, but to make a statement with your image, whether dramatic or subtle. Composition, lighting, filters and equipment will be addressed through discussions, slides, and video. Class will begin at 4:00 pm on September 11.

*Photo by Gene Ball***WILDLIFE OBSERVATION – FALL: 903****September 15-18 Mammoth Hot Springs****\$127 (Member's fee \$117)****Instructor: Gene Ball**

Against the backdrop of changing colors, fall stages a variety of interesting wildlife activities. Field observation will be the major goal and activity of this introduction to the pre-winter park. Methods of unobtrusive observation and the ethics of interaction with wildlife will be central themes. The flexible schedule will feature early morning and evening field trips, short mid-day hikes, and programs on various wildlife topics plus related issues and controversies. The course will begin at 2:00 pm on September 15 and run until 2:00 pm on September 18. The opening session will cover selection and use of binoculars and spotting scopes for quality wildlife observation. The course will headquarter in the Mammoth/Gardiner area.

FLY FISHING IN THE FALL: 904**September 23-25 Mammoth Hot Springs****\$155 (Member's fee \$145)****Limit: 9****Instructor: Richard Parks**

This fall course is based out of the Mammoth Hot Springs/Gardiner area and is aimed at an audience of people who have some experience with fly fishing, but want to expand and polish their skills. Students will have the opportunity to fish several of the park streams, including the Yellowstone, Gardner and Firehole Rivers. Most instruction will be on an individual basis or in small groups. The class will divide into three groups, with intense one-on-one instruction for each group on one day. During the two days you are not having the intensive instruction, you will practice on your own and meet with the group for morning and evening discussions. *Participants need to secure their own campsite in Mammoth or lodging in Gardiner.*

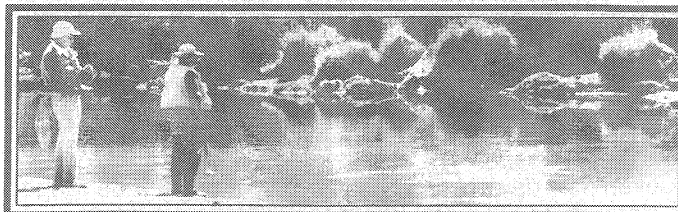
*Photo by Gene Ball*



Photo by Don Nelson

WINTER WILDERNESS PHOTOGRAPHY: 101

Dec 28, 1994-Jan 1, 1995 Canyon Area
\$425 (Member's fee \$415)

Limit: 10

Instructor: Linda DeLay-Joseph

During this class you will be able to bring in the new year while spending four days in the park's interior at the Canyon yurt camp, described on page 22. Explore the startling, diverse moods nature has to offer as you ski, hike and travel by snowcoach to several locations in the Canyon area. This workshop will provide you with an opportunity to observe and photograph a wide variety of subjects, including wildlife, waterfowl, frozen falls, abstracts, and scenics. Learning practical winter photography techniques is an integral part of this course with attention given to composition, lighting, filter usage and developing the creative eye. It is helpful to have introductory level cross-country ski experience since you will be skiing two-six miles each day. Informal lessons will be provided as necessary. You must provide your own photographic and ski equipment. Class will begin in Mammoth Hot Springs at 7:00 pm on December 28. *The course fee covers tuition, all meals, three nights lodging at the yurt camp, round-trip snow coach transportation between Mammoth and Canyon and shuttle service throughout the course.*

BACKCOUNTRY BY SKI: 102

Jan 13-16, 1995 Fawn Creek, Ylstn Backcountry
\$190 (Member's fee \$180)

Limit: 10

Instructor: Scott Wood

Winter in the backcountry provides a challenging yet intensely beautiful and rewarding experience. Taking place over the Martin Luther King holiday weekend, the first night of this course will be held in a large cabin near West Yellowstone, Montana, allowing the group to get acquainted and organized. The next morning you depart by ski into the Fawn Creek backcountry for two days and two nights. Plan on a two mile ski with your pack to and from the campsite. There will be an opportunity to go for a seven mile day ski tour the following day. A wide range of winter skills will be taught in the outdoor setting, includ-

ing travel over snow, food preparation, snow shelter building, cold weather clothing, and the hazards of cold environments. Pre-trip readings, detailed equipment lists and personal contact with the instructor combine to make this course a fun and safe experience. Ski experience is recommended, but not required. Due to the cold, good physical condition is required. *Lodging in the cabin the first night, tents and food are provided as part of the course fee. You may rent other equipment (skis, boots, poles, packs, sleeping bags and pads) from the instructor for \$30 or provide your own, if approved by the instructor.*

HOW MAMMALS SURVIVE WINTER: 103

January 28-29, 1995 Mammoth Hot Springs
\$85 (Member's fee \$75)

Instructor: James Halfpenny, Ph.D.

The snows of Yellowstone make winter a beautiful season. For the mammals, however, it is a time of harsh reality, with scarce food, deep snow and raging blizzards. In this class you will learn how mammals survive winter. We will explore the subnivean (below snow) world of mice, voles, and weasels and study the scavenger food web supporting coyotes and mountain lions. Analysis of the nutritional needs and energy balance of antelope, deer, elk and eagles will be examined. Morning lectures will be followed by afternoon drives to observe and photograph animals in winter. Short field exercises to explore the subnivean and track mammals will necessitate warm clothes. No skiing or snowshoeing will be necessary for this program. *Participants need to secure their own lodging reservations in Mammoth or Gardiner.*

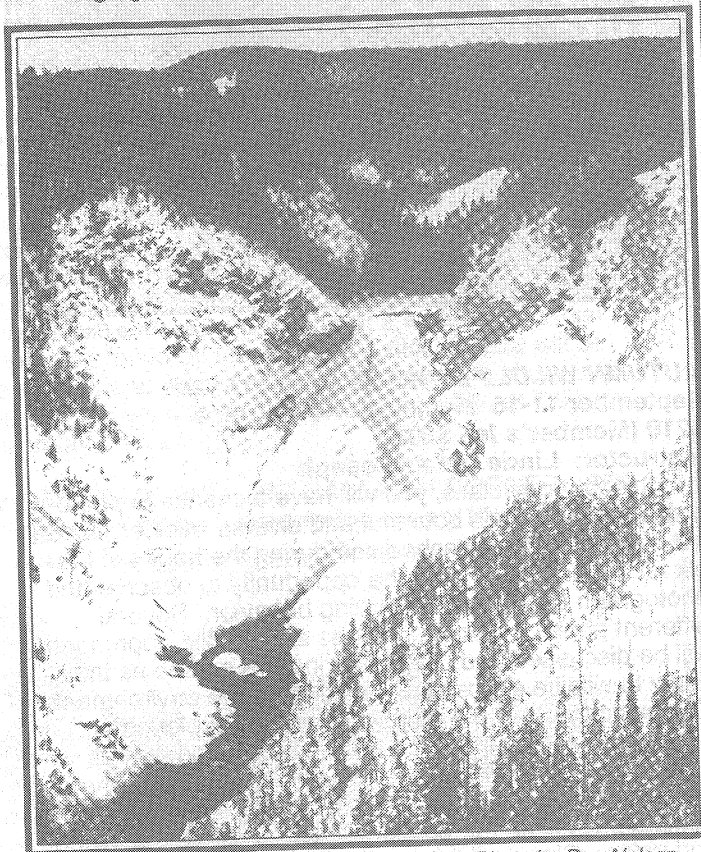


Photo by Don Nelson

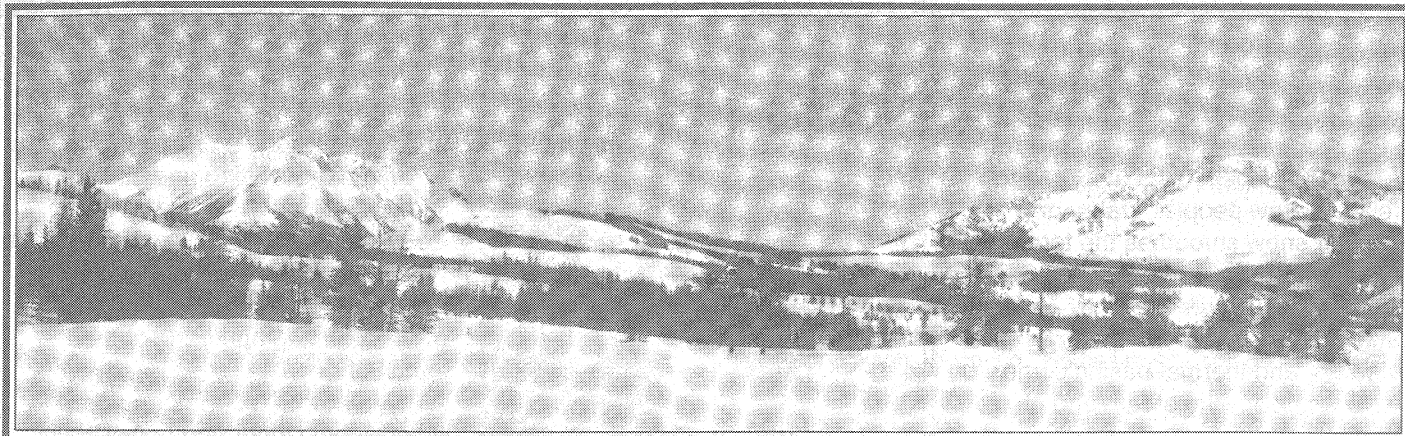


Photo by Don Nelson

EXPLORING YELLOWSTONE IN WINTER: 104

Jan 28-Feb 5, 1995 Mammoth/Old Faithful

\$825 (Member's fee \$815) Limit: 16

NEW

Instructors: Jim Guenther & Don Nelson

Yellowstone Park is the heart of one of the finest natural areas in North America. As a cross-country skier you will have access to the park's winter vistas, geyser activity, and abundant wildlife, accessible to relatively few visitors each winter season. Warm thermal areas temper winter's grip and attract wildlife. Bison, elk, mule deer, bighorn sheep, and snowshoe hare are often spotted, along with pine marten, river otter, bald eagles, pine grosbeaks, and red crossbills.

We will spend time in the Mammoth and Old Faithful areas as we explore the influence of winter and thermal features in the Mammoth Terraces and Lamar Valley; and the Upper Geyser, Biscuit, and Lone Star Geyser Basins.

You will learn about snow as a substance and how it affects the lives of animals and plants, how and where snow develops and why it changes over time, how avalanches influence backcountry travel, and how to maintain human comfort in winter environments. Outdoor equipment and cross-country skiing techniques will also be discussed and demonstrated. Distances covered on skis vary from three to nine miles per day with elevation changes of 750 feet, making for leisurely skiing. In order to enjoy the program fully, basic cross-country ski experience is necessary. *The course fee includes eight nights lodging in Mammoth and Old Faithful, round trip snow coach, and natural history and ski instruction.*

"Where the forest murmurs there is music: ancient, everlasting. Go to the winter woods: listen there, look, watch, and the 'dead months' will give you a subtler secret than any you have yet found in the forest."

-- Where the Forest Murmurs

YELLOWSTONE'S WINTER WORLD: 105

February 17-20, 1995 Canyon Area

\$425 (Member's fee \$415)

Limit: 10

Instructor: Don Nelson & Michael Bartley

This course starts at Mammoth, but is based out of the remote Canyon yurt camp. Immersed in a winter environment, this course is a detailed introduction to the field of snow ecology. Through "classroom" discussions and interpretive ski tours, you will learn about snow as a substance and how it affects the lives of animals and plants, how and where snow develops and why it changes over time, how avalanches influence backcountry travel, and how to maintain human comfort in winter climates. Most of each day will be spent on skis in the field analyzing snowpits, building a quinzhee snow shelter, and interpreting changes in plants and animals. You can expect a maximum of three-seven miles of skiing per day. There will also be unstructured time for exploring and skiing on your own.

It is helpful, but not necessary, for participants to have introductory level cross-country ski experience. Informal lessons will be provided as necessary. *The course fee covers tuition, all meals, three nights lodging, and round-trip snow coach transportation between Mammoth and Canyon and throughout the course.*

WINTER WILDLIFE & ATMOSPHERIC SCENICS: 106

February 22-26, 1995 Mammoth Hot Springs

\$270 (Member's fee \$260)

Instructor: Linda DeLay-Joseph

While based out of Mammoth Hot Springs, students will have five days to photograph and explore the dramatic, subtle and mysterious moods of Yellowstone's snowscapes, as well as the wildlife that abounds in the northern part of the park. Bighorn sheep, elk, bison, and waterfowl congregate in the area, making observation and photography fairly easy. Learning winter photographic techniques, fine-tuning technical aspects, and exploring new ways of thinking, seeing and photographing will be the emphasis of this course. Throughout the course, students will travel by ski, van or snowcoach to various locations. *Participants need to secure their own lodging reservations in Mammoth or Gardiner. A snow coach trip to Norris Geyser Basin is included in the tuition fee.*

WINTER GENERAL INFORMATION

A Winter Welcome

As the seasons change and winter moves in, Yellowstone country is transformed into a beautiful snowscape, offering the visitor rewarding experiences available to relatively few people. Deep, dry powder snow smoothes the terrain into a gently rolling world of nearly perfect cross-country skiing. Elk and bison congregate for easy viewing, and thermal basins come alive with billowing steam and ghost trees.

This fresh, invigorating winter world creates a whole new place and time for photography, nature study, and backcountry adventure. The Yellowstone Institute conducts courses this time of year so that you can learn about this wonderful season and all it has to offer. We have several courses designed to meet a variety of interests and preferences, whether you lean toward staying within easy reach of hotel comforts, prefer the challenge of backcountry travel and snow shelter camping, or like the idea of compromising with the Canyon Yurt camp.

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

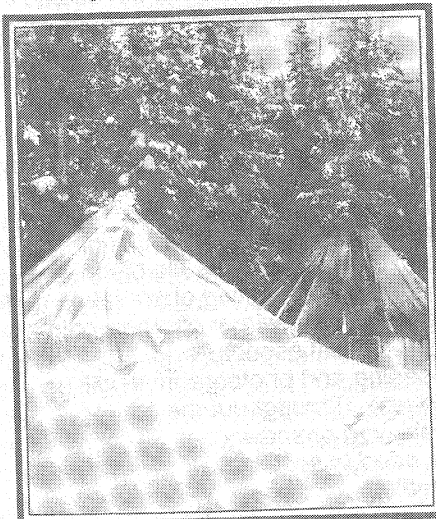


Photo by Don Nelson



Photo by Don Nelson

Mammoth Hot Springs Area

Several of the Institute's courses will be based out of the Mammoth area close to excellent skiing and wildlife viewing. The historic Mammoth Hotel, with its adjacent dining room and lounge is open throughout the winter. It is a full-service facility with cross-country ski rental, an ice skating area, hot tubs, snowcoach tours, gift shop, and a general store. Classroom meetings will take place in a Park Service conference room. Lodging reservations should be made as soon as possible. Call TWR Services at (307)344-7311 for reservations.

The small town of Gardiner, Montana is located five miles north of Mammoth. There are a number of restaurants, gas stations, gift stores, laundromats, and a grocery store available. A list of accommodations is available from the registrar.

Camping is available in Gardiner and at the Park Service campground in Mammoth.

Canyon Yurt Camp

The Yellowstone Institute will conduct two of its winter courses, "Winter Wilderness Photography" and "Yellowstone's Winter World," in a very unique setting and situation at Canyon Village, near the center of Yellowstone National Park. During the summer months the Canyon area is one of the busiest in the park, attracting hundreds of thousands of people to the Grand Canyon of the Yellowstone and the magnificent Upper and Lower Falls of the Yellowstone River. In the winter, however, without the usual accommodations available, the area becomes a quiet and peaceful haven for winter enthusiasts.

In conjunction with Yellowstone Expeditions, this extraordinary experience begins with a 35 mile snowcoach ride from Mammoth Hot Springs to Canyon Village. At the destination you will find your rustic lodging and eating accommodations. The kitchen and dining facility consists of two heated, 15 foot diameter yurts - rigid, yet portable shelters used by nomadic people. Sleeping units for two people are simple, yet comfortably heated wooden and canvas structures on platforms. There is a heated pit toilet on location and also a park restroom with running water within one-fourth of a mile.

Food, bedding (sleeping bags), and snow coach transportation are included in the tuition fee.



Photo by Don Nelson

INSTRUCTOR PROFILES

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

Robert Anderson, Ph.D., (*Butterflies of Greater Yellowstone; Beetles, Bugs, & Damselflies*) is an entomologist and professor of biological sciences at Idaho State University. In addition to general and medical entomology, he teaches courses in general and invertebrate zoology, and parasitology. He has published works in applied ecology and medical entomology, and most recently completed research on the biology and ecology of the Idaho sand dunes tiger beetle.

Gene Ball (*Wildlife Observation - Spring; Wildlife Observation - Fall*) was director of the Yellowstone Association and Institute from 1985-88 and is now a free-lance educator and writer living in Meeteetse, Wyoming.

Michael Bartley (*Backpacking Yellowstone the "Leave No Trace" Way; Yellowstone's Winter World*) has been Field Manager at the Yellowstone Institute since 1992, and for the past two years has co-taught "Yellowstone's Winter World". He is a two-time graduate of the National Outdoor Leadership School who has led numerous hikes in the Grand Canyon and Rocky Mountains. A naturalist, historian, ursophile, and long-time backpacker, he combines a passion for wilderness with practical know-how in sharing his knowledge of the Yellowstone region.

Deborah M. Bond, Ph.D., (*Finding Your Own Voice: A Wilderness Writing Workshop*) former psychotherapist, now artist/writer/teacher, inspires others to connect with the wisdom of the natural world, both within and without. She offers a variety of writing workshops and has been an affiliate professor at the University of Montana. In the past year her watercolors accompanied by her poetry have been shown in several galleries.

Jim Bouldin (*Introduction to Forest Ecology*) has a degree in wildlife management from Ohio State University and a Masters in plant biology from the University of California, Davis, where he is a Ph.D. candidate. He has done extensive field work and lab work. He teaches a forestry course at UC Davis.

Louise Bruce (*Three Days at the Buffalo Ranch; Family Days: Exploring the Park with a Family*) has a degree in recreation management. She has extensive experience in outdoor and environmental education through work with nature centers, schools, and camps and at Yellowstone and Grand Canyon National Parks. For eight years she has taught at the Institute. She is president of the Montana Wilderness Association and works at the Patagonia Outlet in Dillon.

Cory L. Clark (*Family Horsepacking Programs*) has been involved with horsepacking in Yellowstone and the Tetons for the past ten years. He is a trained backcountry guide and is particularly good with families.

Richard Clark, Ph.D., (*Wilderness Horsepacking trips*) is a native of the upper Snake River Valley and has spent over a decade as a professional guide and outfitter in the Tetons and Yellowstone. He is a faculty member at Ricks College. His wealth of outdoor experience has been augmented with academic preparation in biology and botany at Utah State University, the University of Oregon, and Brigham Young University.

Tim Clark, Ph.D., (*Carnivores of the Greater Yellowstone Ecosystem*) is Professor Adjunct, Yale University and on the Board of Directors of the Northern Rockies Conservation Cooperative, Jackson, Wyoming. He has taught and carried out ecological and policy research for over 20 years in the GYE and internationally. He is interested in holistic, interdisciplinary problem solving in the conservation of species and ecosystems. He has published over 200 papers and several books and monographs. He is a former Director of the Yellowstone Institute and has taught at YI since 1976.

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

Jack de Golia (*Family Days: Exploring the Park with a Family*) is the Public Affairs Officer for the Beaverhead National Forest in Dillon, Montana. For six years he was an interpretive naturalist in Yellowstone, in charge of the environmental education program. He has written two books, one about Everglades National Park and one about fire and was a founder and first president of the Montana Environmental Education Association. Joining Jack and his wife, Louise Bruce, for the Family Days class are their sons **Alex de Golia** and **Kyle de Golia**. Alex de Golia, age seven, first came to Yellowstone from the hospital in Livingston, Montana when he was five days old. He brings his unique perspective of Yellowstone that only a fast moving little kid can! Kyle de Golia, age four, is a native of Montana, an expert observer, animal imitator, and lover of dinosaurs.

Linda DeLay-Joseph, B.S. and B.F.A. (*Autumn Wildlife Photography; Winter Wilderness Photography; Winter Wildlife & Atmospheric Scenics*) teaches photography in California at the Palos Verdes Art Center, Museum of Science and Industry and Cerritos College. She is a published photographer and writer, with recent work published in "The Territory Ahead," "Wyoming Wildlife," "SRF Engagement Calendar," "Zoom Magazine," "The Explorer," produced by the Cleveland Museum of Natural History, and a photographer's guide, Photographing the Ghost Town of Bodie.

"It is the peculiarity of knowledge that those who really thirst for it always get it."

-- The Life of the Fields

INSTRUCTOR PROFILES

Jeanne M. Eder (*Native American Religious Beliefs in Yellowstone Park*) was born on the Fort Peck Indian reservation in Montana, is an enrolled member of the Sioux tribe and is currently working on a Ph.D. at Washington State University. She has completed work on the use of the Star Quilt among Sioux and Assiniboine women and has produced a one-hour monologue on a traditional Hidatsa woman named Waheenee, Buffalo Bird Woman.

Duncan Foley, Ph.D., (*Geysers, Mudpots, & Hot Springs; Hydrothermal Systems & the Yellowstone Caldera*) teaches geology at Pacific Lutheran University in Tacoma, Washington. He has worked throughout the western United States and Guatemala on volcanoes and geothermal systems and has taught Institute classes for the past 15 years.

Richard Follett (*Birding Yellowstone; Birds of Yellowstone*) is author of Birds of Yellowstone and Grand Teton National Parks and Birds of Crater Lake National Park. He is a specialist on the birds of Yellowstone where he worked seven years as a ranger-naturalist and compiled the park's bird checklist.

David Fountain, Ph.D., (*Geology of the Yellowstone Country*) is a professor of geology 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 is editor of the journal "Geology" for the Geological Society of America. His research interests are crustal evolution and structure which he has studied in Europe, Canada, the northwest Pacific Ocean, and the Rockies.

Jim Garry (*Bears: Folklore & Biology; Bears: Bones, Signs & Stories; Family Days at Pebble Creek; Family Days in the Thermal Basins*) is both a naturalist and a folklorist. His degree as a naturalist is from the University of Michigan as is his M.S. in environmental communications. He has worked on numerous wildlife research projects, primarily for Texas Parks and Wildlife. He is the founding director of Great Plains Lore and Natural History, Inc. and is the author of the newly released This Ol' Drought Ain't Broke Us Yet (But We're All Bent Pretty Bad).

John Good (*Fire, Ice & Fossil Forests*) was chief naturalist of Yellowstone National Park for six years. During his distinguished career in the National Park Service he served as superintendent of Acadia and Everglades National Parks and assistant superintendent of Yosemite. He holds a Masters Degree in geology and is a Fellow of the Geological Society of America.

Fred R. Gowans, Ph.D., (*John Colter: The Discovery of Yellowstone National Park*) is a professor of western American history and is the director of the Native American Studies Program at Brigham Young University. He has been a consultant for historical films on mountain men and is the author of Rocky Mountain Rendezvous, Mountain Man and Grizzly, and A Fur Trade History of Yellowstone Park: Notes, Documents, Maps.

"The most beautiful thing we can experience
is the mysterious.
It is the source of all true art and science."
-- Albert Einstein, What I Believe, 1930

Jim Guenther (*Exploring Yellowstone in Winter*) is Director of Wind River Field Seminars, an organization specializing in outdoor education programs throughout North America. In 1979, as a National Audubon Society employee, he traveled to Yellowstone to lead his first winter ecology trip, and has returned with groups ever since. As an interpretive naturalist he blends keen observation, a sense of wonder and a little humor into his trips.

Aubrey L. Haines (*Yellowstone's Wayside History*) is a retired National Park Service historian and is author of a two volume history, The Yellowstone Story, and a number of other books and articles on the park. His working familiarity with the area covered the period from 1938 to retirement in 1969.

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

Wayne Hamilton, Ph.D., (*Episodic History of Yellowstone Lake*) is a research geologist with the National Biological Survey and adjunct assistant professor at Montana State University. His research involves measuring and mapping the subsurface geothermal systems in boundary areas subject to nearby geothermal development. He is also active in research at Yellowstone Lake, using records of lake levels to reconstruct a caldera deformation history.

Hannah Hinchman (*The Art of Keeping a Field Journal*) has kept an illustrated journal for 24 years. She has a B.F.A. from Portland School of Art, Maine, and shows her watercolor "illuminated journal" pages at various galleries. She is a columnist for "Sierra" magazine and her book, A Life in Hand: Creating the Illuminated Journal, published by Peregrine Smith appeared in the fall of 1991. She received a 1994 Literary Fellowship from the Wyoming Arts Council.

Dorothy Hinshaw Patent, Ph.D., (*Finding Your Own Voice: Wilderness Writing Workshop*) is the author of more than 75 science and nature books for children. She is a recipient of the Eva Gordon Award (American Nature Study Society), Golden Kite Award (Society for Children's Book Writers) and Golden Kite Honor Award. Recently, she has expanded the range of her writing, with the natural world always providing inspiration.

INSTRUCTOR PROFILES

Pete Houdeshel (*Photographing the Scenic Beauty of Yellowstone*) has worked as a free-lance photographer for the past 20 years, living in California, Hawaii, and Utah. For 10 years he produced photo essays for the award winning "New Worlds Magazine." He has been featured by "Outdoor & Travel Photography," "Aloha," "National Geographic Traveler," "Utah Highways," and "Salt Lake City" magazines with clients that include Hallmark Cards, Marriott and Hyatt Regency Hotels, the PGA, Delta Air Lines and the Salt Lake City Olympic Committee. When not out with his camera, he flies jets for Delta Air Lines.

Susan Hughes, Ph.D., (*Yellowstone Before the Tourists: Prehistoric People of the Park*) is a student in archaeology at the University of Washington and an archaeologist with the Wyoming Bureau of Land Management. She has taught archaeology and geology at Northwest College in Wyoming and conducted ongoing research and fieldwork in Northern Plains prehistory. Recent research includes the excavation of two Northern Plains bison kill sites, bone studies, and the evolution of prehistoric projectile point weaponry.

Deb Ihli (*Yellowstone Nature Detective Workshops*) owns and operates Mama's Cache Outdoor Shop in Bozeman, Montana. She has taught in both public and private schools over the past 15 years, has a B.A. in sociology and recreation and M.S. in special education. Being a native Montanan with a nine year old daughter, she has a love and appreciation for children and the out-of-doors.

Karen Krieger (*Women & Yellowstone -- A Historical Perspective*) has her Masters Degree in american studies from Utah State University and works for the Utah Department of Natural Resources directing cultural programs in Utah's State Parks. She has worked in museums (including the Buffalo Bill Historical Center in Cody, Wyoming) and historic sites, published articles on women in wilderness, led outdoor trips for women and conducted nature hikes for children and adults.

Bill Lang, Ph.D., (*Wars and Words Over Wildlands; The Flight of the Nez Perce Through Yellowstone-1877*) is research director of Center for Columbia River History in Vancouver, Washington. He has taught at Carroll College, the University of Montana and Montana State University. He has written many articles on Yellowstone history and is co-author of Montana: Our Land and People and editor of The Centennial West, and A Columbia River Reader.

John Martin (*Yellowstone Birds of Prey*) is currently the Chief of the Conservation/Preservation Division at the U.S. Army Dugway Proving Ground, Utah. His research leading to a M.S. in wildlife and range resources was based on northern harrier habitat utilization. He continues to study raptor ecology, habitat use, and their prey in his present position.

Sunny Mavor (*Wild Edible Plants & Medicinal Herbs*) is a practicing medical herbalist in Bozeman, Montana. She is the founder and president of Herbs for Kids, Inc. and travels nationally to teach about the joy and safety of herbal medicine.

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

Tom McMahon, Ph.D., (*Yellowstone Streams Through the Eyes of a Trout*) is an assistant professor of fisheries in the biology department at Montana State University. He has been an avid "fishwatcher" in freshwater and marine environments throughout western North America. For the past 10 years, his research specialty has been the ecology and behavior of trout and salmon.

Kent Miles (*Autumn Scenic Photography*) is a professional photographer from Salt Lake City who specializes in travel and location photography for advertising, corporate communications and editorial use, and in selling fine art prints. Twenty-five years in photography have literally taken him around the world making evocative images of people and places. His stock is available through FPG International. One of the strengths of his work is the use of abstract design to reinforce the emotional content of his pictures. Kent is a graduate of the prestigious Art Center College of Design in Pasadena. His is a past president of the Salt Lake chapter of the American Society of Media Photographers (ASMP).

Roy Mink, Ph.D., (*Headwater Watershed Ecology; Hydrothermal Systems & the Yellowstone Caldera*) was a manager of geotechnical science with Morrison-Knudsen Engineers and is now Director of the Idaho Water Resource Research Institute with the University of Idaho. Dr. Mink has been working in water quality aspects of several Idaho watersheds and through his position with the Idaho Water Resource Research Institute supports multiple watershed studies throughout Idaho. He also has extensive experience in geothermal systems, was formerly chief of the geothermal energy branch of the U.S. Department of Energy at Idaho Falls, and has worked on national geothermal programs with the DOE and for a private firm on a geothermal power project in Guatemala.

Don Nelson (*Exploring Yellowstone in Winter; Yellowstone's Winter World*) has been the Yellowstone Institute Director since 1991 and has taught cross-country skiing, snow physics and winter ecology for 20 years for schools and organizations, including the Audubon Society, where he worked for 10 years as a regional representative, adult camp director, and instructor.

Clay Nichols, Ph.D., (*Hydrothermal Systems and the Yellowstone Caldera*) is deputy assistant manager for Projects and Energy Programs at the Idaho Falls office of the Department of Energy where he manages programs at the Idaho National Engineering Laboratory and many universities. He has also worked on national geothermal programs for the DOE.

INSTRUCTOR PROFILES

Sandy Nykerk (*Family Days at Pebble Creek; Photographing Nature in Yellowstone Country; Family Days in the Thermal Basins*) is a naturalist and photographer based in Gardiner, Montana. Her work has been published in many calendars, books, and journals and she teaches photography and natural history workshops around the country. Also active in environmental issues, she was a member of the board of the Greater Yellowstone Coalition for seven years.

Ted J. Parkinson (*Interpreting Yellowstone with Ranger Ted*) served 37 seasons as a ranger-naturalist in Yellowstone and has delighted thousands of children with his informative, inspiring nature walks. As a special faculty member at Brigham Young University, he has taught environmental biology and natural history. He is the author of the "Ranger Ted" conservation programs presented throughout northern Utah.

Richard Parks (*Fly Fishing the West Side; 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 thirty years. Richard is highly respected as a fly tier, a teacher and a river guide and is intimately familiar with Yellowstone's waters.

Patricia Pelletier, (*Drawing & Storytelling Workshop for Families*) is a storyteller, artist, teacher and is Artistic Director of the Fluid Measure Performance Company. For the past 15 years she has been performing traditional myths from around the world as well as her own stories for both children and adults. She received her M.F.A. from the School of the Art Institute of Chicago where she is currently an adjunct associate professor. She also teaches a summer multi-arts program for children that combines storytelling, visual arts, theater, and music. She directs a Family Workshop for artists and their families at Ox-Bow Summer School of Art at Saugatuck, Michigan. She is married to E. W. Ross and they have two sons, Dylan, 10, and Liam, six. Their best vacations have been spent with other families.

Wayne Phillips (*Wild Edible Plants & Medicinal Herbs; Alpine Wildflowers; Wildflowers of the High Country (Llama Trek); Wildflowers of Yellowstone*) is an ecologist with the U.S. Forest Service on the Lewis and Clark National Forest. He has taught plant identification for the College of Great Falls, is intimately familiar with the vegetation of the Mountain West, writes botanical articles, and is an avid wildflower photographer.

Harold Picton, Ph.D., (*Bears: Folklore & Biology*) is a professor of wildlife management at Montana State University. He has directed a number of graduate student studies of the Yellowstone grizzly, co-authored several scientific papers with members of the Interagency Grizzly Bear Study Team, and is a member of the grizzly bear committee of The Wildlife Society.

E. W. Ross (*Drawing & Storytelling Workshop for Families*) has an M.F.A. from the School of the Art Institute of Chicago and has taught at S.A.I.C. since 1980. For the past ten years he has taught landscape drawing at Ox-Bow, an artist's colony and summer school of art in Michigan. His work has been shown at the University of Chicago, Northern Illinois Univer-

sity, The University of Minnesota, The Atlanta College of Art and The Maryland Institute College of Art, as well as in galleries in Chicago. He is the recipient of an Artist's Fellowship from The Illinois Arts Council. In addition he has directed an intergenerational art program at S.A.I.C. for the past 12 years.

Rebecca Schanz (*Environmental Ethics*) has a degree from Montana State University in science education. She is a former junior high/high school instructor of geology, biology, ecology and environmental sciences. She was also employed with the Forest Service as a wilderness ranger, trail crewman and Director of Youth Conservation Corp camp. Rebecca has an inherited and continuing passion for the Yellowstone ecosystem and Yellowstone National Park and believes the welfare of the human soul lies in one's ability to experience nature and wildness.

Bill Schneider (*Hiking & Camping in Grizzly Country; Backpacking the Beartooths*) is the author of Where the Grizzly Walks, The Hiker's Guide to Montana, and dozens of magazine articles on grizzlies. He has a degree in wildlife biology and was editor of the "Montana Outdoors" for nine years. He is currently a publisher with Falcon Press of Helena, Montana, a company specializing in hiking guides and other outdoor books.

Don Streubel (*Mammals Great & Small*) holds a Doctor of Arts degree in biology and is a professor of biology at Idaho State University and is the author of Small Mammals of the Yellowstone Ecosystem. He was director of the Yellowstone Institute from 1989 through March 1991.

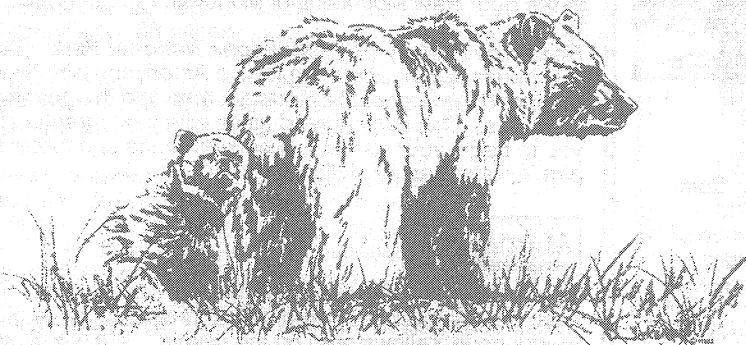
Tom Watson (*Exploring the Yellowstone Ecosystem; Environmental Ethics*) has spent the last 14 summers studying geology and ecology in the Greater Yellowstone Ecosystem, most recently as a Yellowstone Institute instructor, and a presenter for the National Wildlife Federation Summit programs. During the school year he teaches biology and geology in California.

John Weaver, Ph.D., (*Wolves of Yellowstone: The Missing Link*) is a wildlife researcher with the Northern Rockies Conservation Cooperative in Missoula, Montana. He holds graduate and undergraduate degrees in wildlife science and has published scientific papers on wolves including a treatise on "The Wolves of Yellowstone." He was a member of the Northern Rocky Mountain Wolf Recovery Team and studied wolves in Jasper National Park for his Ph.D.

Scott Wood (*Lakes of Yellowstone by Canoe; Wilderness Thinkers & Their Legacies; Backcountry by Ski*) has 19 years experience in outdoor education, is an instructor at Ricks College, and a doctoral candidate at the University of Utah. He is a certified Red Cross canoeing instructor, a certified backcountry ski guide and has extensive avalanche experience.

"Man is constantly adding to his knowledge
of the world, but to do any good
it must be shared -- by the people."
-- Alistaire Cook

BOOKS, MAPS and PAMPHLETS



about Yellowstone National Park

Wildlife drawing above and those throughout this brochure are from the *Western Wildlife Portfolio* by James Jokerst and are available under POSTERS AND PRINTS on page 30.

Books by Institute Instructors

A Life in Hand, Hinchman. This is an illustrated handbook for discovering yourself through writing and drawing. Also included is a blank journal for you to illustrate and fill. ... \$19.95

Bears of Yellowstone, Schullery. Considered a classic, this book is a great overview of the complexities and difficulties of endangered species conservation. Broken down into three parts you learn the natural history of bears, past management philosophies, and the lore and magic of bears. 318 pages. \$12.50

Birds of Yellowstone, McEneaney. Written by Yellowstone's leading bird biologist, this is a practical guide to the birds here and where to find them. 171 pages. \$12.95

Field Guide To Tracking Mammals In North America, Halfpenny. Given an outstanding review by the New York Times, this is more than just a field guide. You can learn to understand tracks, interpret clues, and read the trails that animals have left behind. \$13.95

Mountain Man & Grizzly, Gowans. An illustrated collection of early observations and stories about the great bear. Hardcover, 210 pages. \$14.95

Mountain Time, Schullery. A series of thoughtful essays with Yellowstone as the subject. Mr. Schullery is funny and insightful as he examines the controversies and compromises that surround the ideas of what wilderness is in our time. 221 pages. \$6.95

Small Mammals of the Yellowstone Ecosystem, Streubel. Concentrating on the small mammals of the Yellowstone ecosystem, this book covers over fifty-three animals and has an introductory chapter on habits and behavior. 152 pages. \$12.50

Yellowstone Vegetation, Don Despain. This book brings together the author's many years of research with comprehensive reviews of vegetation types, distribution, and the natural forces that influence plant succession. 239 pages. \$14.95

Winter: An Ecological Handbook, Halfpenny. Starting with snow physics this book focuses on ecology during the cold months. Selections include advice on avalanche danger, snow shelters, and winter equipment. 272 pages. \$16.95

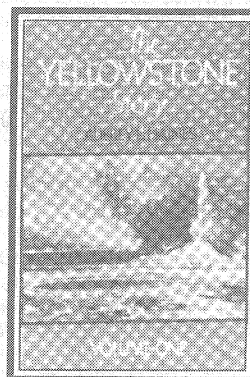
Books by Institute Instructors [cont.]

Yellowstone Boardgame, DeGolia & Zarki, board game created in Yellowstone, for ages eight to adult, 2 to 4 players. Educational introduction to problems facing wild herds and predators, includes 28 page color booklet. \$9.95

The Yellowstone Story, Haines, two-volume history classic on Yellowstone Park with black and white photos.

Volume I traces the buildup of knowledge of the Yellowstone area gained from Indians, fur trappers, prospectors and explorers. Covers the enactment of federal legislation to establish the world's first national park. \$12.95

Volume II is a record of the first hundred years of the park. Traces construction of park roads and facilities, visitor activity and experiences from stagecoaches and tents through autos and hotels. \$12.95



Plants

Strickler's Wildflowers of the Rocky Mountains, Strickler. This is a three book series. **Forest Wildflowers, Prairie Wildflowers, and Alpine Wildflowers**. In all three books the author describes each wildflower according to family. There are beautiful photographs, line drawings, and a glossary of botanical terms to help identify species quickly. 112 pages each. \$8.95 ea

Plants of Yellowstone & Grand Teton, Shaw, 160 pages of color photos and descriptions of park vegetation from trees to flowering plants. \$8.95

Audubon Pocket Guides, available: Western Birds, Rocks & Minerals, Butterflies, Flowers, Mushrooms, Animal Tracks, and Western Trees. See under Birds & Insects. \$8.00 ea



Videos

Geysers of Yellowstone, Finley-Holiday Film Corp. Compiled from several years of filming, this 45 minute video presents a complete picture of geysers, hot springs, mud pots and how they work. Tour the geyser basins of Yellowstone and receive an education on these fascinating thermal features.\$24.95

Yellowstone: High Country Treasure, Landis, 78 Minutes. An excellent introduction to the park ranging from rare wildlife footage to mesmerizing sequences on mudpots.\$29.95

Catch Me If You Can, Trailwood-Landis Productions. In this video you see excellent footage of young animals (predators and grazers) playing. You learn that play actually teaches and sharpens the skills these animals will need for adult life. A great gift for children. 46 minutes.\$24.95

Yellowstone: Imprints of Geologic Time, Terra Productions. Winner of seven medals including: best travelog and best photography; this video takes the viewer on a spectacular journey through the colorful geologic story of Yellowstone. 27 minutes.\$29.95

The Wolf, A 30 minute video narrated by Robert Redford in which we see the wolf, his history, habits and the role he plays in America's national parks.\$24.95

Elk of the Northern Herd. Filmed entirely in Yellowstone, this 28 minute video provides an indepth look into the life of a herd throughout the changing seasons. Produced by Trailwood-Landis Productions.\$24.95

Yellowstone in Winter, Bayer, 60 minutes. A fascinating video about Yellowstone in the frigid months.\$24.95

Yellowstone: The Unfinished Song. This 20 minute video presents the story of the fires and the park's natural recovery. The film has extraordinary scenes of animals adapting to the fires. Wonderful video for teachers and parents.\$19.95

History

The Flight of the Nez Perce, Brown. This author reviewed military records, journal accounts, and personal testimonies to write this exact and candid study of the flight of the Nez Perce. 480 pages.\$13.95

Mountain Men & Fur Traders of the Far West, edited by Hafen. This volume brings to the reader brief biographies of eighteen representative mountain men. Some of the selections are Jedediah Smith, Kit Carson, Nathaniel Wyeth, and Old Bill Williams. 401 pages.\$10.95

Colter's Hell and Jackson's Hole, Mattes, 88 page story of trapper days in Yellowstone and Grand Teton National Park, with drawings and maps.\$2.95

Yellowstone Place Names, Whittlesey. Retrieving his facts from government records, tourist narratives, and newspaper articles, the author introduces us to the fascinating histories of more than 650 place names. This book is illustrated with reference maps and historical photos. 178 pages.\$11.95

History [cont.]

Chief Joseph's People and their War, Josephy Jr., 21 pages. This book tells of the flight of Chief Joseph and the Nez Perce from Oregon through Yellowstone to their surrender in the Bear Paw Mountains of Montana.\$1.25

Roadside History of Yellowstone National Park, Blevins, 106 pages. Learn about the Native Americans who lived around Yellowstone, the mountain men and the government explorers. This easy to read guide with photographs allows you to begin your visit at any park entrance and follow the park's history as you follow the road.\$7.95

Mammals

God's Dog: The North American Coyote, Ryden. This book is a result of two years of field research (some of which was done in Yellowstone) on the coyote. We are given a fascinating portrait of animal behavior and over 50 photographs of the coyote. 320 pages.\$14.95

Wild Hunters: Predators in Peril, Hummel, Pettigrew, & Murray. This book examines why the survival of bears, wolves, cougars, and wolverines is important in North America. Illustrated by Robert Bateman, this book is a passionate and reasoned plea for safeguarding our wildlife. 250 pages.\$16.95

Of Wolves & Men, Lopez. This book explores the facts, myths, and realities of the relationship between man and wolf. 308 pages.\$17.00

Great Bear Almanac, G. Brown. Published in 1993 this is the most comprehensive reference on bears available. The information is presented in words, pictures, maps, and charts. Hardcover, 325 pages.\$39.00

Large Mammals, Craighead. Updated in 1992, the booklet contains 31 pages with color photographs of Yellowstone's common large mammals. Included are descriptions of the animals along with information on habitat, tracks, food habits, enemies and reproductive biology.\$1.95

Yellowstone Wildlife: A Watcher's Guide, Wilkinson. With 96 pages and beautiful color photographs, this is a great guide for wildlife fans. The author reveals over 45 animals, preferred habitats, best places to be found, feeding habits and more. 95 pages.\$11.95

Birds & Insects

Peterson Field Guide to Insects, Borror & White. This book contains detailed descriptions of insect orders, families, and individual species. It covers over 570 insect families and has an illustration of each. Size lines show you actual length and a glossary explains the technical terms of insect anatomy. 404 pages.\$14.95

Peterson Field Guides: Western Bird Songs. This edition includes the songs and calls of 522 species of birds. This includes all the most common and vocal birds found in western North America. 3 audio cassettes and book.\$35.00

Audubon Pocket Guides, available: Western Birds, Rocks & Minerals, Butterflies, Flowers, Mushrooms, Animal Tracks, and Western Trees. These smaller versions of the field guides make great gifts. They are handy to carry and priced reasonably enough so that you can buy more than one.\$8.00 ea

Field Guide to the Birds of North America, National Geographic Society. This field guide covers loons to finches and everything in between. The color on the plates is true to life and the maps and descriptions are on the opposite page. 464 pages.\$16.95

Guidebooks, Hiking & Maps

National Parkways. Yandell, Large color pages with maps. Our best-selling photographic and comprehensive guide to the park.

Yellowstone, 80 pages.\$5.95
Grand Teton, 68 pages.\$5.95

Hamilton's Guide. Lystrup, 160 page guidebook to Yellowstone with information on facilities and services. Color photos and maps. Available in April 1994.\$4.95

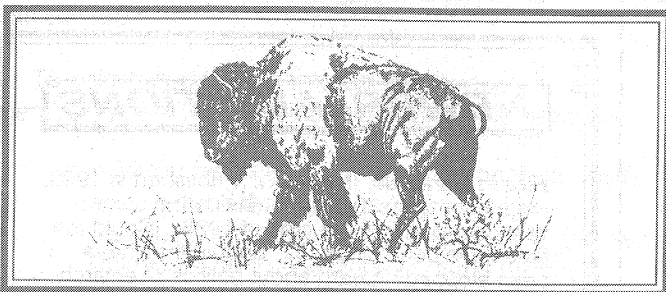
Greater Yellowstone National Forests. Wilkenson. This book describes the six national forests surrounding Yellowstone and Grand Teton. Information is given on points of interest, wilderness areas, recreational opportunities and administrative offices. 104 pages.\$14.95

Yellowstone Trail Map. outdoor, waterproof, illustrated topo map. (1:168,500).\$6.95

Yellowstone Trail map: Quarter Sections, outdoor, waterproof, illustrated topo maps that include backcountry campsites. Order by area of interest; Mammoth, Tower/ Canyon, Old Faithful, Lake(1:83,333) each map \$6.95, Set of four\$19.95

Teton Trail Map. outdoor, waterproof, illustrated topo map (1:78,000).\$6.95

Yellowstone Trails : A Hiking Guide. Marschall, 120 page backcountry guide covering over 1000 miles of park trails. Contains useful information on backcountry use rules and how to hike through bear country.\$4.95

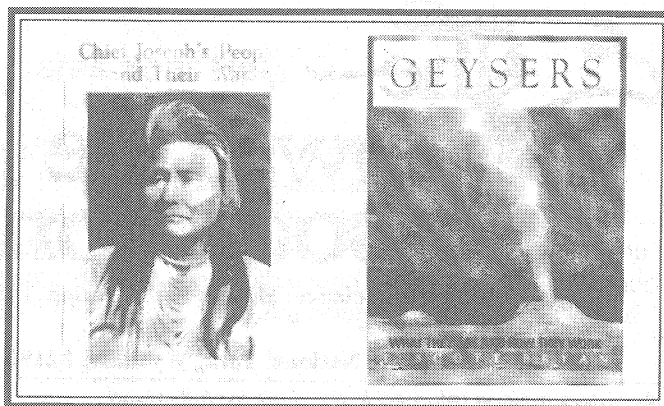


Fish & Fishing

Fly Patterns of Yellowstone. Mathews and Juracek. Written by the owners of Blue Ribbon Flies in West Yellowstone, Montana, this book contains over 40 fly patterns. Not only are you given excellent directions on tying, but also information on where to use the finished product in the Yellowstone area. 84 pages.\$17.95

Fishing Yellowstone Hatches. Juracek & Mathews. Written by the same authors as Fly Patterns of Yellowstone, this covers over thirty-three different hatches. It gives you dates on expected emergencies for the Henry's Fork, Yellowstone, Gallatin, and Madison areas. Also included are pictures of flies.\$19.95

Freshwater Wilderness: Yellowstone Fishes and Their World. Varley & Schullery, color illustrations, 132 pages. A beautiful award winning publication designed for anglers and non-anglers alike who want to know the history of Yellowstone's fishes and how management affects what we see today.\$12.95



Geology

Roadside Geology of the Yellowstone Country. Fritz. Covers geologic formations along all roads in Yellowstone and all major roads leading to the North, East, and West entrances of the park. 149 pages.\$10.00

The Geysers of Yellowstone. Bryan. Black and white photos and maps. Comprehensive guide to over 400 of the park's geysers and geothermal features. 225 pages.\$14.95

Guide to Geyser Gazing. Rinehart, 64 page book on geysers, how they function, locations and other interesting facts. 64 pages.\$1.40

Geologic Map of Yellowstone. US Geologic Survey in cooperation with NASA and the National Park Service. Large map with major deposits, ash and lava flows indicated by color. Fascinating for those with an interest in geology or as a colorful wall display.\$3.25

Field Guide to Middle Rockies and Yellowstone. Parsons. Part of the K/H Geology Field Guide series this book covers the geology of Yellowstone and nearby places. Background information is given along with trip guides. 233 pages.\$19.95

Story of Old Faithful. Marler, 48 pages, color photographs and illustrations. Facts and figures about the famous Yellowstone geyser; charts on frequency of eruptions, height of eruptions, earthquake effects, and more.\$2.50

The Night the Mountain Fell. Christopherson. This is the story of the 1958 Montana-Yellowstone earthquake, one of the most severe earthquakes to ever hit North America. Included are many photos taken at the scene and information on how the quake resulted in what we see today.\$5.95

Recommended For Children

Family Fun In Yellowstone National Park. 49 pages. An informative guidebook with activities for the entire family.\$2.95

The Everywhere Bear. Robinson. A wonderful book filled with games, stories, stickers, and information on bears. 64 pages. Ages 7 through 12.\$7.95

Geysers What They Are & How They Work. Bryan, 23 pages. This is a book of "hows." After establishing just what geysers are, the book will develop the current understanding of how they work, how they differ, and how they change through the passage of time. Ages 8 through adult.\$5.95

Young People's Guide to Yellowstone National Park. Tawney. A guidebook with chapters on geology and animals to be used by the entire family, 143 pages.\$7.95



The Institute Appreciates Your Help

With over 80 classes in 1994 and more than 800 students each year, the Yellowstone Institute has a diversity of needs. Each year many people have generously supported the Institute by donating various items that we have needed. But, we continue to develop new needs as equipment wears out and new classes are established. The Yellowstone Institute is non-profit, and, in fact, our costs exceed our income in most years. Therefore, your gifts and donations are important and greatly appreciated. Donations to our general scholarship fund are always welcome and enable students to attend who may not otherwise be able. Joining the Yellowstone Association as a member is one way to support the Institute and receive some great benefits.

Benefits of Membership

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

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

- A family membership (covering donor, spouse, and children through age 20)
- Discounts on Yellowstone Institute field courses
- Discounts on Yellowstone Institute products
- Tuition credit for late course cancellations
- Institute course information sent by First Class Mail (prior to general mailing)
- A 15% discount on items sold by the Yellowstone Association (in Visitor Centers or by mail)
- Informative newsletters
- Invitations to special members' activities
- Unusual volunteer opportunities
- Association with other individuals with similar interests
- The opportunity to support scientific, educational, and historical programs in Yellowstone National Park
- 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 and efficiently used.

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

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

☐ Renewing ☐ Joining for the first time

Give name as you prefer for Association records:

Mr.
Mrs.
Ms. _____
Name

Address

City

State _____ Zip _____ Phone _____

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

Name	Relationship (spouse/son/daughter)	Age (children only)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Annual Dues:

Associate . . . \$25	☐	Patron . . . \$250	☐
Contributing . . \$50	☐	Sponsor . . . \$500	☐
Sustaining . . . \$100	☐	Benefactor . \$1000	☐

Make checks payable to "The Yellowstone Association"

Charge to: Visa ☐ Mastercard ☐ # _____

Expiration date _____ Signature _____

YI

Clip and mail to the address listed above today!



P.O. Box 117
Yellowstone National Park, Wyoming 82190

ADDRESS CORRECTION REQUESTED



FIRST CLASS

Wayne Phillips
2601 Third Ave. North
Great Falls MT 59401

*Please help by sharing your
Institute catalog with a friend*

Institute office 307-344-2294

Duplicate this form for multiple registrations if necessary

REGISTRATION FORM

[Note: Refund Policy on page 5]

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

Address _____ Please list names & ages of children for family classes

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

Where can you be reached one month prior to the course? Address _____ Phone () _____
How did you find out about the Yellowstone Institute? _____

☐ Check here if you are a current member of the Yellowstone Association or are joining now. (Memberships begin at \$25 - see pg. 31)

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

Lodging:

- ☐ I want to stay at the Institute cabins at Lamar the following nights at \$8/night. Dates _____
☐ My class does not meet at the Lamar facility. See my attached note regarding need for information.
☐ I will make my own lodging or camping arrangements.

Total Tuition Fee(s) _____

Cabin Fee at \$8 per night _____

Membership (optional) _____

- ☐ joining now
☐ renewal

Total Enc used _____

Charge to ☐ Visa ☐ MasterCard

Number _____

Expiration Date _____

Signature of
cardholder _____

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

Release and Assumption of Risk

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 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) _____