

1983



The
Yellowstone
INSTITUTE

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Period No. 104
Detroit, MI 48206



WELCOME

to the Yellowstone
Institute!

The vast majority of visitors to Yellowstone confine themselves to roads and automobiles and pass through the park so quickly that many of them fail to appreciate and understand the real significance of Yellowstone and its adjoining wildlands, which together comprise one of the largest intact ecosystems remaining in the continental United States.

The Yellowstone Institute, a non-profit, tax-exempt organization, was created eight years ago to enhance public understanding of Yellowstone National Park. Through our program of some fifty field seminars, we seek to slow folks down a little and get them to take time to understand and appreciate where they are and what is going on around them.

Operating in conjunction with the National Park Service and under the auspices of the Yellowstone Library and Museum Association, the Yellowstone Institute helps hundreds of people each year experience the natural wonders of this area — its abundant wildlife, fabulous thermal features, rich history, and expansive wilderness. Past participants have ranged in age from seven to eighty-three and have come from all fifty states and many foreign countries.

Join us for one of our 1983 seminars and participate in an outdoor laboratory unexcelled anywhere on earth. We think you will find study in such a setting to be a unique and highly rewarding experience.

Rick Reese

RICK REESE
Director





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GENERAL INFORMATION

TUITION AND REGISTRATION

Tuition fees are listed in the description of each course and cover tuition only. Additional fees for cabin accommodations (\$5 per night) and college credit will be charged for persons who select those options. Unless otherwise specified, the tuition fee does not include lodging, meals, transportation or cost of course materials if any.

Registration is made by completing and mailing the attached registration form along with the tuition fee (and cabin fee if applicable) to the Yellowstone Institute. It is advantageous to register early, since upon receipt of registration forms and fees, the Yellowstone Institute will mail students a Yellowstone National Park entrance fee and campground waiver, a list of equipment to bring, and pre-course study materials and reading lists. All courses are limited to fourteen participants unless otherwise specified.

Participants who cancel their registrations at least two weeks prior to the opening date of a course will receive an 80% refund of the tuition fee and a full cabin refund. Cancellation less than two weeks before the course will not be refunded unless we are able to fill the vacancy from our waiting list.

LOCATION AND ACCOMMODATIONS

Unless otherwise noted, courses are conducted out of the National Park Service facility at the historic Buffalo Ranch adjacent to the Lamar Ranger Station in the beautiful northeast portion of Yellowstone National Park. (Sign on road says "Lamar Station", see map.) There are fourteen sleeping cabins and a separate building which contains kitchen facilities, classrooms, bathrooms and showers. The facility, though clean and quite adequate, is fairly simple and

life there has been affectionately described by former participants as "indoor camping." There are two beds in most cabins, others have three, and one has four; they have no plumbing and are unheated. Each person must provide his/her own sleeping bag. The main building, located next to the cabins, is heated, has modern bathrooms and showers, and a modern kitchen where people do their own cooking. Please reserve cabin space when you register (including space for the night before and/or night after if desired). The cabin fee is \$5 per night. For part of the season cabins may be available without reservations, but this cannot be guaranteed and will be on a first-come basis. Cabin space for family members of course participants may be available. If you want to request such space, please indicate that on your registration form and we'll send you a notice regarding our policy. Although residency at Lamar is optional, participants and instructors from past years have found that this living situation contributed significantly to their learning experience.

Unless otherwise specified, participants must provide their own food. Basic cooking and eating utensils are provided. There are stoves and refrigerators in the kitchen but space is limited and people are asked to keep meals fairly simple.

For those who choose not to stay at Lamar, the closest motel or cabin facilities are at Roosevelt Lodge (11 miles), Silver Gate (19 miles), Cooke City (23 miles), and Mammoth and Canyon (both about 30 miles). Park campgrounds are also available at Pebble Creek (9 miles east) and Slough Creek (7 miles west). Participants who stay in park campgrounds will have user fees waived, but campsites cannot be reserved and campgrounds often fill early each day. Camping and recreational vehicles are not allowed on the grounds at the Yellowstone Institute facility. (List of nearby lodging facilities will be sent on request.)



COLLEGE CREDIT

Many of the courses may be taken for academic credit. If a course is available for credit, it will be noted at the beginning of the course description. The amount and type of credit varies from course to course. An explanatory sheet detailing the number of credits available for each course, registration costs, and the name of the accrediting institution will be sent to all participants who indicate on their registration form that they are enrolling for credit. Persons enrolling for credit may be required to take an exam, submit field notes, or both. In some instances, a post-course paper or field work may be required.

Institutions granting credit for Yellowstone Institute courses include the University of Montana, the University of Idaho, the University of Wyoming, Ricks College, and Brigham Young University. Each of these institutions charges a registration fee to enroll (usually about \$20). This fee is in addition to the tuition charged for the course. Registration forms for academic credit will be provided on the first day of the course, and participants are responsible for completing and mailing the forms.

COURSE CANCELLATION POLICY

If fewer than eight persons are enrolled one month prior to the opening date of a course, the course may be cancelled. Participants will be notified immediately and a full refund will be promptly mailed. It is essential that we have an address and a phone number where you can be reached one month prior to the course so we can notify you in case of a

cancellation. There is a place on the registration form to include that information.

HIKING, WEATHER AND PHYSICAL CONDITION

Courses will be conducted primarily in the field, but lectures, slides, lab work, discussion, and other activities will be conducted at Lamar. Participants should be in good health. Most courses will require at least some hiking at higher elevations. With the exception of the courses on horsepacking, backpacking, biking, the Nez Perce horsepack, canoeing, and winter courses, most of the activity will not be inordinately strenuous. If you have questions about this, please let us know and we will discuss it with the instructor. Since most of your time will be spent outside, please come prepared for mountain weather. It can snow anytime in Yellowstone and cold temperatures are possible even during summer months. Sturdy footwear, warm sleeping bags and clothing, and other personal equipment are the responsibility of the participant.

The Yellowstone Institute does not provide health and accident insurance for participants. Please read and sign the liability waiver on the registration form.

TRANSPORTATION

Participants must arrange for their own transportation to and from Yellowstone and are responsible for getting to the course location on the first day of the course. Vans will be provided for all travel associated with the courses.

**For Further Information Write or
Phone:**

DIRECTOR'S OFFICE:

555 South Roberts
Helena, Montana 59601
(406) 443-0861

AFTER JUNE 1:

The Yellowstone Institute
Box 515
Yellowstone National Park, Wyoming 82190

(307) 344-7381 Ext. 2349 (Mammoth office)
or
(307) 344-7749 (Yellowstone Institute facility at Lamar)

The Yellowstone Institute is a non-profit, tax-exempt organization. Contributions to the Institute and its parent organization, the Yellowstone Library and Museum Association, are tax deductible.



ZOOLOGY

Grizzly Bear Biology, Ecology, and Management

Z-1 June 12-16

\$185

College credit available. (1 semester or 2 quarter hours)

This course will deal with a variety of considerations relating to the ecology and management of grizzly bears in the Yellowstone ecosystem. Primary emphasis will be on management, but other subjects include history, reproduction, behavior, population characteristics, food habits, home range, denning, habitat use, management guidelines, recovery plan, and bear-man conflicts. Approximately equal time will be spent in classroom and field studies.

***Steve Mealey** is currently a land management planning specialist with the U.S. Forest Service and holds degrees in forestry, fish and wildlife management, and political science. During the 70's he was deeply involved in grizzly habitat research including work on the Border Grizzly Project and the Yellowstone Interagency Grizzly Bear Study. He has written and published a number of papers including Habitat Criteria for Grizzly Bear Management, Food Habitats of Free-Ranging Grizzly Bears in Yellowstone, Guidelines for Management Involving Grizzly Bears in the Greater Yellowstone Area, and participated in the preparation of the Grizzly Bear Recovery Plan.*

Large Mammals of Yellowstone

Z-2 June 12-16

\$185

College credit available. (1 semester or 2 quarter hours)

The principles of animal behavior as they relate to the ungulates of the Yellowstone ecosystem will be investigated in this course. Elk, bison, bighorn sheep, moose, mule deer, and pronghorns will be observed. Emphasis will be placed on observing and recording behavior accurately, interpreting it properly, and analyzing its importance in ecology and management.

***Ernest Ables, Ph.D.,** is Professor of Wildlife Ecology at the University of Idaho. He has spent the past 12 years conducting research, directing graduate students, and teaching. Large mammal ecology and the ecological aspects of animal behavior are his special interests, which have led him to study a wide variety of species in East Africa, Wisconsin, Texas, Idaho and Yellowstone.*

Fresh Water Insects of Yellowstone

Z-3 June 19-21

\$95

This course will explore the role played by aquatic macroinvertebrates in ecological systems. Topics covered will include numbers, kinds, identification, and distribution of insects in streams and ponds. Subject matter will be related to fishing and artificial flies for the fisherman. This course is scheduled immediately before a one-day course on fly-fying and the three-day course on fishing. We believe these courses will complement each other and suggest that participants consider taking them together.

***George Roemhild, Ph.D.,** is a professor of entomology at Montana State University. He has collected extensively in Yellowstone and in Montana for a number of years, and has major research interests in correlations of aquatic insect species with various water quality indicators.*

Birds of Prey: The Ecology and Management of Raptors

Z-4 June 27-July 1

\$185

College credit available. (1 semester or 2 quarter hours)

This course will examine the large avian predators of Yellowstone. Hunting strategies and success, functional and numeric responses to prey population fluctuations, the role of predation in regulating prey populations, habitat and environmental relations, the role of predation in communities, and the management problems unique to this group of birds will be among the topics addressed.

Michael N. Kochert is leader of the Snake River Birds of Prey Research Project for the U.S. Bureau of Land Management. He began his work on raptors in 1969 as a graduate student at the University of Idaho where he studied golden eagles. He has conducted and directed research in the Snake River Birds of Prey Area near Boise, Idaho since 1972.

Small Mammals of Yellowstone

Z-5 July 18-22

\$185

College credit available (1 semester or 2 quarter hours)

This course will emphasize identification, ecological role and factors affecting the distribution and abundance of small mammals in the Yellowstone ecosystem. Predators of small mammals, their predation techniques and life history will also be studied. Field work will include identification of small mammals and their "sign" as well as live trapping and census techniques. Small mammal and predator behavior will be observed and studied systematically with emphasis

on methods of observing and interpreting behavior.

Donald P. Streubel, holds a Doctor of Arts degree, and is an associate professor of biology at Idaho State University. His teaching experience includes courses in zoology, mammalogy, ornithology, wildlife management and science education. Before receiving his doctorate he was a wildlife manager and instructor in Wisconsin. His research interests include ground squirrel behavior and ecology. He has taught courses for the National Audubon Society and conducts environmental education workshops for teachers.

Wolves of Yellowstone: The Missing Link

Z-6 July 23-24

\$50

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 will the historical and present status of key wolf habitats in the park. The course will also explore the issues, options and strategies associated with restoration of wolves to Yellowstone.

John Weaver is an Endangered Species Biologist for the U.S. Forest Service in Jackson, Wyoming. He holds graduate and undergraduate degrees in Wildlife Science and has published several scientific papers on wolves including a major treatise on "The Wolves of Yellowstone." He is a member of the Northern Rocky Mountain Wolf Recovery Team.



Birds of Yellowstone

Z-7 July 25-29

\$185

College credit available. (1 semester or 2 quarter hours)

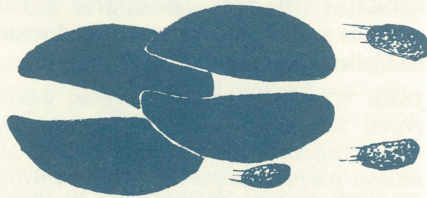
This introductory ornithology field course will emphasize field identification and ecological relationships of birds in the Yellowstone ecosystem. Food chains, adaptations to hydrothermal environments, effects of fire on birds, and habitat selection will be among the many topics discussed during visits to a variety of habitats. Amateur birders as well as teachers, undergraduate and graduate students will find this course extremely informative. Participants must bring binoculars.

Richard F. Follett 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.

Scat and Tracks

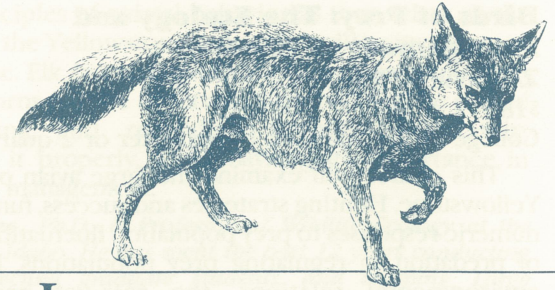
Z-8 August 29-31

\$95



The purpose of this course is to increase the participant's awareness of and ability to identify and interpret animal signs and clues in the field. Subject matter will include basic identification of track patterns, interpretation of such clues as scat, chewings and browse, determining animal identity, direction of travel, diet and habits.

This course will be conducted by a professional trapper from the U.S. Fish and Wildlife Service.



PLANT LIFE

Introduction to Plant Identification

P-1 June 23-25

\$95

This course will introduce participants to the fundamentals of plant identification. Instruction regarding the parts of a flower, inflorescences, fruiting characteristics and the types of leaves, stems and underground parts will be provided. Instruction in the use of botanical keys and the identification of numerous trees, shrubs, and wildflowers will also be featured. There will be additional discussion on the Indian uses of plants and their edible, poisonous and medicinal properties. Persons wanting to expand their knowledge of wildflowers are encouraged to enroll in "Rocky Mountain Wildflowers" following this course.

Wayne Phillips has a degree in forestry and is a range management specialist with the U.S. Forest Service on the Lewis and Clark National Forest in Great Falls, Montana. He has taught plant identification for the College of Great Falls, is intimately familiar with the vegetation of the mountain West, and has authored several botanical articles. Phillips is an avid wildflower photographer.

Rocky Mountain Wildflowers

P-2 June 27-July 1

\$185

College credit available. (1 semester or 2 quarter hours)

Field trips to the northern and central portions of Yellowstone National Park will help students learn to recognize and name at least 75 species of flowering plants from intermountain deserts to alpine meadows. The ecology of flowering plants, floral morphology, and the use of floral keys will be taught. Teachers will appreciate coverage of effective teaching methods. Persons with no botany background are encouraged to take the three-day course on "Introduction to Plant Identification" (June 23-25) as preparation for this course.

Delbert W. Lindsay, Ph.D., has spent a lifetime collecting, photographing, and teaching about flowering plants of the Rocky Mountains. Winters find him teaching botany and working on the 11,000-specimen herbarium at Ricks College in Rexburg, Idaho. He is presently preparing a floral manual for eastern Idaho.

Edible, Poisonous and Medicinal Plants

P-3 August 13-15

\$95

This course will introduce participants to the edible, poisonous, and medicinal properties of the native plants of western North America. Identification techniques will be presented during field trips and classroom sessions. Gathering and preparation of edible plants will be discussed as will the poisonous principles, toxicity and poisoning symptoms of plants. The medicinal properties of herbs will also be discussed and assessed.

Wayne Phillips has a degree in forestry and is a range management specialist with the U.S. Forest Service on the Lewis

and Clark National Forest in Great Falls, Montana. He has taught plant identification for the College of Great Falls, is intimately familiar with the vegetation of the mountain West, and has authored several botanical articles. Phillips is an avid wildflower photographer.



GEOLOGY

Geology of the Yellowstone Country

G-1 June 20-24

\$185

College credit available (1 semester or 2 quarter hours)

This course, conducted in the natural field laboratory of Yellowstone Park, will concentrate on the geological evolution of the area. Topics to be covered include 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.

David Fountain, Ph.D., is an associate professor of geology at the University of Wyoming. He has taught numerous field courses in Yellowstone and Glacier National Parks and has served as a co-instructor in a National Science Foundation course for science teachers. His research interests are crustal evolution and structure which he has studied in Europe, Canada and the South Pacific.

Volcanoes and Fossil Forests

G-2 July 23-24

\$50

This course will introduce the participant to the unique petrified forests of Yellowstone. There will be a discussion of the process through which repeated episodes of volcanic activity buried living forests in ash and mudflows, and mineral-bearing hot water slowly petrified them. The first day of the course will involve a field trip by van to observe and discuss the volcanic history of Yellowstone and the

Absaroka and Beartooth Mountains. The second day will be devoted to an all-day hike on Specimen Ridge.

Erling Dorf, Ph.D., is a retired professor of geology at Princeton University where he taught for 49 years. He is a recognized authority on Yellowstone's petrified forests and knows Yellowstone intimately. Dorf served as a seasonal naturalist in Yellowstone beginning in 1926.

John Good was chief naturalist of Yellowstone National Park for six years. During his distinguished career in the National Park Service he has 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.

Geothermal Geology and Hydrology

G-3 August 16-20

\$185

Enrollment limit: 18

College credit available. (1 semester or 2 quarter hours)

Yellowstone's extensive hydrothermal systems are the focus of this seminar. Geologic, geochemical, and geophysical evidence at various sites is examined to help understand the origin, functioning, and detection of other geothermal systems which may be useful for alternate energy. Geothermal energy development and production are discussed. Some introductory-level geology background will be helpful for this course but is not required.

Clayton Nichols, Ph.D., is manager of the Department of Energy office in Grand Junction, Colorado. He taught geology at Boise State University for five years and has been involved in research and program management related to geothermal energy for fourteen years.

Roy Mink, Ph.D., is a geothermal reservoir engineer for

Morrison-Knudson Co. He is former Branch Chief for Geothermal Energy, Department of Energy. He has had extensive experience in hydrology and geothermal energy at both the state and national level.

Calderas and Hydrothermal Systems

G-4 August 22-27

\$325

Enrollment limit: 18

College credit available. (2 semester or 3 quarter hours)

This seminar will be a technical discussion of volcanic rocks (emphasizing ash flow tuff volcanism), caldera cycles and hydrothermal systems. The Yellowstone caldera will be used as a lecture and field example. The evolution and hydrothermal systems of other calderas will also be discussed. The structural, geochemical, and hydrologic relationships of hydrothermal systems to calderas, and the spectrum of hydrothermal systems, including geysers, will be discussed. A background, equivalent at least to an undergraduate degree in geology, will be assumed.

Dennis L. Nielson received his Ph.D. from Dartmouth College specializing in igneous and metamorphic petrology and structural geology. He had five years experience in massive sulfide and uranium exploration before joining the Earth Science Laboratory at the University of Utah Research Institute. There he has been involved in mapping geothermal resource areas and developing geothermal exploration techniques.

Duncan Foley received his Ph.D. from Ohio State University where he studied the igneous petrology, structural geology, geochemistry, and age dating of a volcanic center in western Nevada. He has done research in geologic aspects of land use planning. His specialty at the Earth Science Laboratory is regional assessment of geothermal resources.

EXPERIENCING YELLOWSTONE

Wilderness Horsepacking

E-1 July 25-29, less experienced riders

E-2 August 1-5, more experienced riders

\$275

Enrollment limit: 12

The major theme of this course will be low-impact use of pack stock in the backcountry. In addition to instruction in the use and care of pack and riding horses, participants will also learn how to camp and travel in the wilderness without damaging the fragile country. A four-day ride through the Yellowstone backcountry will provide participants with experience handling packstock. *Fee includes horses, special equipment and food.* Participants must provide their own sleeping bags. Contact Richard Clark if you have questions about which of the two courses is most appropriate for you.

Richard Clark, Ph.D., is a native of the upper Snake River Valley and has spent eleven years as a professional guide and outfitter in the Tetons and Yellowstone. He is a faculty member at Ricks College in Rexburg, Idaho. 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.

Outdoor and Wildlife Photography

E-3 August 22-25

E-4 Sept. 10-13

\$150

This course will emphasize the practical applications of

photography rather than technical theory. It will cover widely varying climatic and temperature zones and will approach outdoor photography as art. Techniques, use of light, equipment, composition, form, and development of the creative eye will be discussed. There will also be special emphasis on the ethics of, and various approaches to, wildlife photography. Participants must provide their own camera, lenses, tripod, film and any other accessories, and should be familiar with the operation of their equipment.

Tom McBride is recognized throughout the West as a photographer and multi-media producer. He has been commissioned by the Library of Congress for still photography; by United Artists for cinematography; and by Stephen Cross for films released by the British Broadcasting Corporation. His photographs have been featured in a number of national magazines and he was judged Photographer of the Year by the Montana Professional Photographers Association. He has taught many seminars in the United States and Canada and emphasizes environmental sensitivity along with photographic technique.

Backcountry Photography Trip

E-5 July 17-21
\$250

This course will cover all of the subject matter in "Outdoor and Wildlife Photography" (above) but will take place in a backcountry setting. The group will spend five days and four nights in remote backcountry locations shooting infrequently viewed scenes. This trip will be in the Yellowstone Lake area and transportation by boat to a drop-off site will be provided. The trip will involve moderate hiking. Participants must provide their own sleeping bags,

pads and packs. *Fee includes all group equipment, transportation and food.*

Tom McBride is recognized throughout the West as a photographer and multi-media producer. He has been commissioned by the Library of Congress for still photography; by United Artists for cinematography; and by Stephen Cross for films released by the British Broadcasting Corporation. His photographs have been featured in a number of national magazines and he was judged Photographer of the Year by the Montana Professional Photographers Association. He has taught many seminars in the United States and Canada and emphasizes environmental sensitivity along with photographic technique.

Canoeing the Lakes of Yellowstone

E-6 August 15-20
\$225

Enrollment limit: 12

Academic credit available (1 semester hour)

This six-day canoe trip across Lewis Lake and into magnificent Shoshone Lake will provide instruction in such canoeing skills as strokes, portaging, safety and tripping (how to pack a canoe). Low impact backcountry camping techniques will be discussed and practiced and interpretation of the lake environment will be provided. American Red Cross canoeing certification may be earned by those who want it. *Fee includes all canoeing equipment, group camping gear, and food.*

David J. Thompson is Supervisor of the Family and Youth Outdoor Program at Ricks College in Rexburg, Idaho. He has a degree in recreation and ten years experience in the recreation field. He is the former State Trails Coordinator for the State of Idaho and is a certified Red Cross canoe instructor trainer. He will be accompanied by an experienced assistant.



Fly Fishing the Catch-and-Release Way

E-7 June 24-26, more experienced

E-8 August 5-7, more experienced

E-9 August 1-3, less experienced

\$100

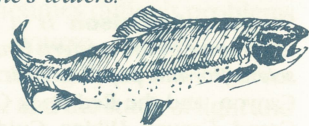
All three sessions of this course will emphasize the special nature of Yellowstone fishing — its fabulous abundance of native fish and the very special regulations and fishing philosophies which have enabled park managers to protect and maintain a superb sport fishing resource. The course for less experienced 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. Approximately half the course time in this first session will be spent away from the water practicing casting and other techniques.

The sessions for more experienced persons are for those 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. All three courses are strictly limited to twelve persons. The instructor will work intensively with four persons each day. During the other two days of each course, instruction will be primarily in morning and evening groups.

The June 24-26 course for more experienced persons will be taught in the area around Madison Junction and will concentrate on the Madison, Firehole and Gibbon rivers. Participants in this course will be responsible for their own accommodations. The August 1-3 and August 5-7 courses will center at the Yellowstone Institute facility in the Lamar Valley.

Please note that a course on fresh water insects (see page 10) and one on fly tying (below) are scheduled immediately before the June 24-26 fishing course. A fly tying course is also scheduled on the day between the August courses.

Richard Parks is the manager of Parks' Fly Shop, a family business that has been in Montana for nearly thirty years. Richard is highly respected as a fly tier, a teacher and a river guide, and is intimately familiar with Yellowstone's waters.



Fly Tying the Yellowstone Patterns

E-10 June 22

E-11 August 4

\$35

This course will cover fly tying in a one-day intensive program. Participants must provide their own materials and tools. The course will emphasize techniques and problem solving.

Richard Parks is the manager of Parks' Fly Shop, a family business that has been in Montana for nearly thirty years. Richard is highly respected as a fly tier, a teacher and a river guide, and is intimately familiar with Yellowstone's waters.

Yellowstone on Foot: Backpacking the Parklands Wilderness

E-12 July 30-August 3

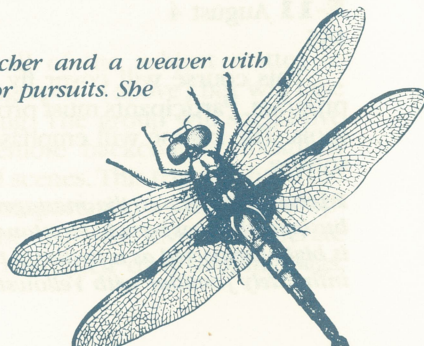
\$195

Enrollment limit: 10

This course, conducted by a husband-wife team, will provide participants with a thorough introduction to backpacking in Yellowstone. Items of discussion will include camping ethics, equipment, bear precautions, navigation and map reading, food selection and preparation, and sanitation. Participants will actively practice the skills they learn as they hike for five days through Yellowstone's backcountry. *Fee includes all food and group camping gear.* Participants must bring sleeping bag, pad and pack.

Stewart Aitchison is a field biologist with thirteen years experience in the western United States. He has authored over fifty scientific and popular articles as well as the book *Oak Creek Canyon* and the *Red Rock Country of Arizona* and *A Naturalist's Grand Canyon Hiking Guide*. He has taught courses for the *Museum of Northern Arizona*, *University of California*, and *Florida Southern College*. He has a degree in zoology from *Northern Arizona University*.

Ann Kramer is an art teacher and a weaver with a wide experience in outdoor pursuits. She bikes, jogs, runs rivers, and delights in the Yellowstone wilderness.



Biking Yellowstone

E-13 September 8-11

\$140

Enrollment limit: 10

This course will feature four separate one-day bike tours from Lamar. Touring technique and safety will be stressed along with interpretation of the natural history of Yellowstone.

Much of Yellowstone's "Grand Loop" plus areas northeast and northwest of the park will be covered. Participants should have at least moderate experience and be capable of cycling 50 miles a day in mountainous terrain.

Bill Schneider has a degree in wildlife biology and was editor of the *Montana Fish and Game Department's Montana Outdoors* for nine years. He is editor of *Wild America*, published by the *American Wilderness Alliance*, and author of *Where the Grizzly Walks*. He is an avid bicyclist and publisher of the *Bicyclist's Guide to Yellowstone National Park*.

Hiking and Camping in Grizzly Country

E-14 July 16-17

\$50

The first morning of this course will be devoted to a discussion of the history of bear-man confrontations in the national parks followed by a discussion of techniques for the prevention of such confrontations including some suggestions for dealing with grizzly encounters. The remainder of the weekend will involve an overnight hike into the Yellowstone backcountry where camping techniques will be demonstrated and discussion will

continue about the current status of the great bear and its uncertain future. Participants must provide their own backpacking gear and food.

Bill Schneider has authored *Where the Grizzly Walks, the Hiker's Guide to Montana*, and two dozen feature articles on grizzlies including recent articles in *Backpacker* and *Montana Magazine* on hiking in grizzly country. He has a degree in wildlife biology and was editor of the *Montana Fish and Game Department's Montana Outdoors* for nine years. He is currently editor of *Wild America*, published by the *American Wilderness Alliance*.

Finding Your Way with Map and Compass

E-15 July 28-29

\$50

Proper use of map and compass is an essential outdoor skill, not only for safety, but also as a means of opening otherwise unknown backcountry to a person. Participants in this course will learn to read a topographic map, use a compass, and combine both skills to find their way across unfamiliar terrain. Maps and compasses are provided.

Jim Lenertz has been a seasonal park naturalist in Yellowstone since 1967 and has been instrumental in developing National Park Service compass and backpacking programs. He has a master's degree in biology and has served on the faculty of Arizona Western College for the past 19 years.

Getting into Yellowstone: An Introduction to the Animals, Plants and Geology of the Park

E-16 August 4-7

\$140

Participants in this course will spend four days with

special instructors whose experience and background in Yellowstone is unmatched. Together the four, who are retired or off-duty park service naturalists, have 60 years of national park experience. Each day will focus on a special aspect of Yellowstone and each aspect will be related to the others to provide an excellent overall introduction to the "real" Yellowstone.

Yellowstone in Watercolor

E-17 August 16-20

\$160

College credit available. (1 semester hour)

The unique terrain and conditions of the Yellowstone country present unusual and sometimes difficult problems for watercolor painting. This course explores those problems and techniques for addressing them. It also covers basic considerations of watercolor and the study of light and values. The course is open to beginners and advanced watercolorists alike, but some painting experience will be helpful. Students may provide their own equipment or purchase it at cost from the instructor.

Bill Chapman has been self-employed as a professional artist for over twenty years. He has designed and illustrated many of the publications and interpretative exhibits of Yellowstone National Park, and is recognized throughout the region as a fine artist who excels in a variety of mediums. His art has been shown widely in the intermountain west and at his *Juniper Studio* in Gardiner, Montana. Bill has taught art to a variety of age groups and skill levels and has delighted students in his past courses at the *Yellowstone Institute*.

Night Skies Over Yellowstone

E-18 July 25-28

\$95

This course in observational astronomy will study Yellowstone's night sky. Subjects of field observation and discussion will include identification of stars and constellations, star lore and legends, and identification of exotic stellar remnants and other celestial objects. Daytime discussion of stellar evolution and other topics will set the stage for the nighttime activities.

Seth Jarvis is a staff member of the Hansen Planetarium in Salt Lake City, Utah where he directs science demonstrations. He specializes in space science and astronomy presentations and has conducted courses throughout Utah. He is a graduate of the University of Utah and completed NASA training in science education.



HISTORY

Early Exploration in Yellowstone

H-1 June 25-26

\$50

This course will review the earliest attempts to map and chart the Yellowstone wilderness, from James Stuart's trip in the 1860's to the famous Hayden Survey of 1871-72. The course will focus on the explorations of 1869-71 which led to the creation of the park. Readings, maps, historic photographs, and on-site visits to areas first visited by explorers will be included in the course.

Bill Lang Ph.D., is currently editor of Montana the Magazine of Western History in Helena, Montana. He has served on the history faculty of Carroll College, the University of Montana and Montana State University. He has written numerous journal articles on the history of Montana and is author of Montana: Our Land People.

Yellowstone's Historic Photographers

H-2 July 30-August 3

\$185

This course will examine the works of early-day Yellowstone photographers William H. Jackson (photographer for the 1871 Hayden Survey of the Territories), and F. Jay Haynes. A majority of the course time will be spent in the field, returning to many of the same sites shot by Jackson and Haynes to re-photograph their famous scenes.

Ron Wall has been re-photographing the works of the pioneer photographers of the West for the past 5 years. He has paralled over one thousand early-day photos primarily of William H. Jackson and F. Jay Haynes in Yellowstone, the Tetons, along the Oregon Trail and throughout Montana. He has taught geography and Montana history in Billings, Montana since 1968.

The Flight of the Nez Perce Through Yellowstone — 1877

H-3 August 14-15
\$50

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.

Bill Lang, Ph.D., is currently editor of Montana the Magazine of Western History in Helena, Montana. He has served on the history faculty of Carroll College, the University of Montana and Montana State University. He has written numerous journal articles on the history of Montana and is author of Montana: Our Land and People.

On the trail of the Nez Perce

H-4 August 16-21
\$350
Enrollment limit: 10

To this day the route of the Nez Perce through one of the most remote areas of Yellowstone is unknown. It was in an area so wild, so rugged that the army refused to enter it in

pursuit. It remains today as it was in 1877.

From a camp on Yellowstone Lake, the Indians hoped to cross the Absaroka Mountains to the Stinking Water River (now the North Fork of the Shoshone) and safe refuge. Travelling for six days on horseback, participants in this course will attempt to determine where the Nez Perce went and what happened to them during those ten mysterious days between August 28 and September 6, 1877.

Persons joining this trip should be sure to take the two day course on the Nez Perce which is scheduled immediately preceeding this course. Participants must provide their own sleeping bags. *Fee includes horses, all group equipment and food.*

Bill Lang, Ph.D., is currently editor of Montana the Magazine of Western History in Helena, Montana. He has served on the history faculty of Carroll College, the University of Montana and Montana State University. He has written numerous journal articles on the history of Montana and is author of Montana: Our Land and People. He has recently completed a soon-to-be published bibliographical study on American conservation literature. This trip will be outfitted by **Richard Clark** who conducts our horsepacking courses. He has a Ph.D. in botany.



YELLOWSTONE AND ITS NEIGHBORS

The Yellowstone-Teton Connection: Two Parks, One Ecosystem

Y-1 August 9-16

\$375

College credit available. (2 semester hours)

Enrollment limit: 20

Though dramatically different in some aspects, these two parks are also intimately interrelated as we will see as we explore the natural history, geology, and human history of these two special areas. Participants will spend four days in Yellowstone at the Yellowstone Institute followed by four days in the heart of Jackson Hole at the Teton Science School. The course will be heavily field-oriented, combining the instructional expertise and resources of both organizations. Participants should be prepared to hike several miles each day. *Fee includes food, lodging and transportation.* (Write or call for more information about complete course agenda, topics and instructors.)

Autumn on the Western Boundary: Gallatin-Yellowstone-Island Park

Y-2 September 18-24

\$360

Participants in this course will spend two days each at three different locations in and around Yellowstone. At each location, field trips will be conducted to help the participant understand the natural and human history of the area and

the relationship between Yellowstone Park and surrounding lands. The course will begin at the Yellowstone Institute, then move to the historic Railroad Ranch at the Harriman State Park in Idaho and conclude at the Lone Mountain Ranch in Montana's Gallatin Canyon. Fee includes all food, transportation and lodging which will range from gourmet and luxury at Lone Mountain to simple and rustic at Yellowstone and Harriman State Park.

ENVIRONMENTAL EDUCATION

Interpreting Yellowstone: Environmental Education with "Ranger Ted"

T-1 July 4-5

T-2 July 18-19 [optional additional day on 20th]

T-3 August 8-9

\$50

College credit available. (1 semester hour)

Participants in this course will join the instructor in five different environmental education nature walks and programs. Special themes which will be developed include the kinship and interdependence of all life, predator-prey relationships, and wilderness ecosystems. Educational goals and techniques will be discussed and demonstrated, and participants will learn first-hand how to provide effective field instruction for children. The course will be especially appropriate for teachers of kindergarten through eighth

grade. Children of course participants are welcome to attend the nature walks for no charge, but the total group size will be limited to forty and children's places will be allotted on a first-come basis. Advance registration is suggested. If you register for the July 18-19 session, please note if you want to sign up for the additional day on July 20th. This will be a day hike to Avalanche Peak and will cost an additional \$25.

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

Environmental Education for Teachers

T-4 July 18-22

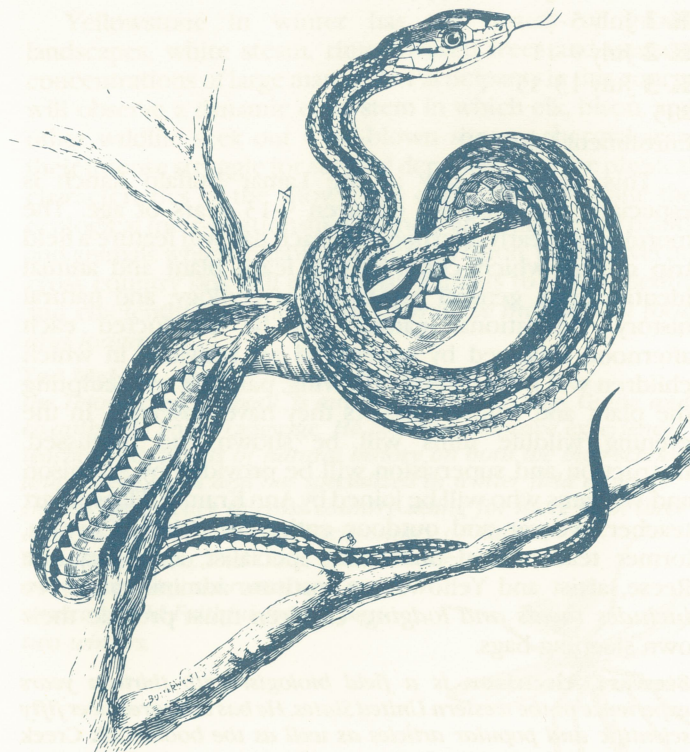
\$185

College credit available. (1 semester or 2 quarter hours)

This course will demonstrate the use of Yellowstone as an instructional resource for teachers. Through active participation in environmental education activities, students will learn techniques for teaching animal and plant ecology, astronomy, aquatics, earth sciences and natural history. Designing outdoor education sites and nature trails will also be included in the program. The course is for all teachers, kindergarten through high school, who are interested in implementing outdoor activities in their instructional programs.

Gary Hall, Ed.D., is the science education specialist for the State of Montana Office of Public Instruction. His specialty is

utilization of the natural setting as an outdoor classroom. He has authored several articles on environmental education and has conducted workshops on the subject for elementary and secondary teachers.



CHILDREN'S COURSES

Three Days at the Buffalo Ranch

K-1 July 5-7

K-2 July 9-11

K-3 July 13-15

\$85

Enrollment limit: 20

This three-day stay at the Lamar Buffalo Ranch is especially designed for children 9-13 years of age. The morning and early afternoons of each day will feature a field trip during which children will learn plant and animal identification, general principles of ecology, and natural history. Educational games will be conducted each afternoon followed by supervised art activities in which children will be assisted in drawing, painting and sculpting the plant and animal subjects they have observed. In the evening wildlife films will be shown and discussed. Instruction and supervision will be provided by Aitchison and Williams who will be joined by Ann Kramer, Flagstaff art teacher, weaver and outdoor enthusiast, Cindy Christin, former teacher and publishing specialist, and Mary Lee Reese, artist and Yellowstone Institute administrator. *Fee includes meals and lodging*; children must provide their own sleeping bags.

Stewart Aitchison is a field biologist with thirteen years experience in the western United States. He has authored over fifty scientific and popular articles as well as the books *Oak Creek Canyon* and *the Red Rock Country of Arizona* and *A Naturalist's*

Grand Canyon Hiking Guide. He has taught courses for the Museum of Northern Arizona, University of California, and Florida Southern College. He has a degree in zoology from Northern Arizona University.

Bill Williams is a junior high teacher and has a degree in environmental studies. He has had considerable experience teaching in outdoor education programs for elementary and junior high age children and has been very successful in introducing children to natural history.

NOTE: The course "Interpreting Yellowstone with Ranger Ted" listed under Environmental Education on p.22 is highly recommended for children accompanied by an adult. Children of enrolled course participants may attend for no charge provided there is space.



WINTER IN YELLOWSTONE

Following Yellowstone's First Winter Explorers

W-1 February 20-25

\$250

Enrollment limit: 10

In January 1887, noted Arctic explorer Lt. Frederick Schwatka led the first winter expedition into Yellowstone National Park. The entourage, accompanied by photographer F. Jay Haynes, encountered the worst winter in the history of the northern Rockies but succeeded in completing a remarkable expedition. Now, nearly a century later, this course will follow a portion of the 1887 expedition route. The course will operate out of the Yellowstone Institute facility in the Lamar Valley, and will spend at least one night camping out. Evening lectures and discussions will include slides of the original Haynes photographs of the expedition. Other topics to be discussed include the history of Yellowstone in winter, and winter ecology. There will be a considerable amount of cross country skiing during this course, and participants should have had *at least* intermediate cross country skiing experience and be in very good physical condition. *Course fee includes all food, lodging, and group camping gear.*

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articles on the history of Montana and is author of *Montana: Our Land and People*.

Winter Ecology in Yellowstone

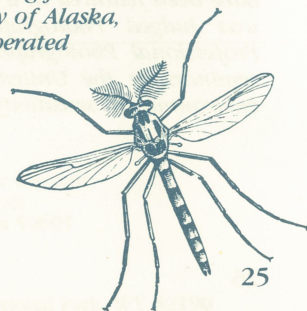
W-2 March 5-10

\$250

Enrollment limit: 12

Yellowstone in winter has the beauty of frozen landscapes, white steam, rime-covered trees and unusual concentrations of large mammals. Participants in this course will observe a dynamic ecosystem in which elk, bison, and other wildlife seek out wind-blown sites or thermal area; their intense struggle for survival depends upon the physical characteristics of the snow. This course will examine the ecological inter-relationships of snow and cold on the plants and animals which inhabit this unique region. Daily travel on cross country skis will enable participants to travel silently and efficiently over the snow. *Course fee includes all food and lodging.*

Ted Majors, founder and director emeritus of the Teton Science School, is author of *Snow Ecology Guide* and co-author of *Snow Language*. He has had extensive experience teaching all aspects of natural history on both the high school and college levels and has specialized in winter field ecology. He has been active in cross country skiing for more than three decades and has skied the backcountry of Alaska, Wyoming, Idaho, and Utah. Ted has operated a cross country ski rental and guide service at Old Faithful for the past two winters.



Winter Photography

W-3 March 12-14

\$150

Enrollment limit: 12

This course is aimed at those who want to learn how to take advantage of the unique photo opportunities which occur during Yellowstone's winter. The course will emphasize the practical applications of photography rather than technical theory. We will approach outdoor photography as art and will discuss use of light, composition, form and development of the creative eye. Special emphasis will be placed on the ethics of winter wildlife photography. Much of the course will involve travel on cross country skis, and participants should have had at least introductory cross country skiing experience. Participants must provide their own skiing and photographic equipment. Course fee includes all food and lodging.

Tom McBride is recognized throughout the West as a photographer and multi-media producer. He has been commissioned by the Library of Congress for still photography; by United Artists for cinematography; and by Stephen Cross for films released by the British Broadcasting Corporation. His photographs have been featured in a number of national magazines and he was judged Photographer of the Year by the Montana Professional Photographers Association. He has taught many seminars in the United States and Canada and emphasizes environmental sensitivity along with photographic technique.



1983 REGISTRATION FORM

Name _____ ☐ Male Date _____
☐ Female

Address _____ ☐ Please check here if this address is
different from where we mailed brochure

City _____ State _____ Zip _____ Phone _____

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

If staying in cabins, please specify which nights _____

How did you find out about the Yellowstone Institute? _____

Please enroll me in the following courses:

Course Number	Course Title	Dates	Tuition Fee	Are you enrolling for credit?
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Release and Assumption of Risk

I am aware that during the courses that I am participating in under the arrangements of the YELLOWSTONE INSTITUTE 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 feature 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 INSTITUTE 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.

Date _____ Your Signature: _____

If under 21 years of age, parent or guardian must sign: _____

Total Tuition Fee _____

Cabin Fee at \$5 per night _____

Total Enclosed _____

Detach and mail to: The Yellowstone Institute
555 South Roberts
Helena, Montana 59601

After June 1: Box 515
Yellowstone National Park, WY 82190



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Yellowstone National Park, Wyoming 82190

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