SEND FOR OUR FREE CAMPMOR CAMPING & CLOTHING CATALOG

Campmor's FREE catalog is overflowing with equipment and clothing for those interested in the outdoors and all at DISCOUNT prices.

CAMPMOR
P.O. Box 700-AB4
Saddle River, NJ 07458-0700
Phone (800) 230-2151

Eureka!
PEAK
Woolrich
Columbia
Slumberjack
U.S. DIVERS
BLACK DIAMOND
SIERRA DESIGNS
Lowe
OR
Camp Trails
THE NORTH FACE
JANSPORT
RHODE GEAR
NIKE
SILVA
EASTPAK
duofold
Outdoor Products
gregory

STOP... And Listen To The Birds!

Bird Bug™

WILDLIFE MONITOR

(microphone patent pending)

HEAR the outdoor excitement, LIVE in your home year round! 6" Dish Microphone uses the same principles of a high power parabolic reflector, picking up nature sounds from hundreds of feet away with superb clarity. Easy to use! Complete with indoor amplifier/speaker, outdoor dish microphone with 50 feet of cable.

Send for the BIRD BUG-2 $99

Include $7.50 for Shipping, AC Adapter Optional-$12.00

NATURAL TECHNOLOGY INDUSTRIES
P.O. Box 582, Youngstown, Ohio 44501 216-629-7583

Hear The Birds Sing!

calls our "underdog landscape." At its heart, Manning's book is a valiant attempt to spring the great grassland from "civilization's trap." —*Camille LeFevre*

WHAT THE EXPLORERS SAW

Hiking with Lewis and Clark

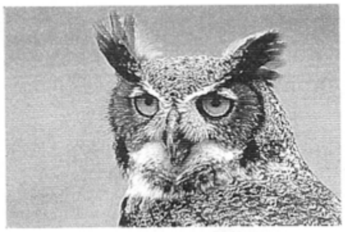
To Daniel B. Botkin, those who count the tree rings of North America's natural history surrender too often to the recurring pipe dream of a lost Arcadia. Like historians of kings and empires, natural history's chroniclers often fall for the idea that in some distant past a world existed in which life was free of strife, blessed by perpetual natural bounties. That assorted ecological villains—frontier buffalo hunters, strip miners, clearcutters, and the like—have used this idyll to justify their own rapaciousness is hardly news. But according to Botkin, others who should know better—biologists, wildlife managers, hydrologists, meteorologists, and foresters—have succumbed to the same sylvan myth.

Botkin, who holds a Ph.D. in ecology, feels the Arcadian breezes whenever he hears alleged experts talk about "normal" local temperatures (when they really mean the average temperature over an arbitrary and limited period), rivers at "equilibrium" level, or the "natural" level of buffalo populations. Such formulations, he says, disregard nature's essential fluidity. More to the point, they assume that before the Europeans arrived, North America was a shining Bierstadt landscape of ecological innocence, unaffected by human actions.

To remedy such thinking, Botkin offers *Our Natural History: The Lessons of Lewis and Clark* (Grosset/Putnam, $25.95), a first-person narrative that augments his own thoughts on the expedition with visits to sites along its route and interviews with various experts.

In 1804 Meriwether Lewis and William Clark, both U.S. Army officers, were charged by President Thomas Jeffer-

GIVE A HOOT! BE OWL-WISE ON THE WORLD OF BIRDS



If you have a serious interest in building a full knowledge of birds - The Cornell Laboratory of Ornithology is your source. Our "Bird Biology" home study course touches all bases in the bird spectrum and our experts are your constant guides.

From migration to evolution, flight to nesting, behavior to feeding, physical makeup and habitat. . .you'll learn it all. Information is free. To be the owl in your flock - act today!

Write To:
Home Study Course, AN5
Cornell Lab of Ornithology
159 Sapsucker Woods Road
Ithaca, NY 14850

SUPERB COLOR SLIDES of NORTH AMERICAN BIRDS FOR RENT

Here at Cornell's Lab of Ornithology we maintain one of the finest bird slide libraries in existence. Most leading photographers work with us - many exclusively.

For lectures, teaching or even CD-Roms we offer you packaged subjects or custom creations to fit your needs. We can even match slides to sound tapes from our world class birdsong library. Call us at (607) 254-2450 or order our free catalog.

For free inventory list write to:
Visual Services, NA
Cornell Lab of Ornithology
159 Sapsucker Woods Road
Ithaca, NY 14850

Marine Expeditions

AntarcticA
from $2995 including flights

- Expedition Cruising on small, comfortable research vessels.
- Educational programs with expert naturalists and Zodiac excursions.

Marine Expeditions Inc.
(800) 263-9147
or see your travel agent

AEROLINEAS ARGENTINAS

ANGORA≅SPORT
NEW, LUXURIOUSLY SOFT, WARM AND ALL NATURAL
made from
COTTAGORA
"a cuddly, cozy, can't wait to feel it, new textile."

STAY WARM NATURALLY

COZY ALPINE THERMALS
Thin, Soft, Luxuriously Warm
DURABLE!
Preshrunk, throw it in the washer, then in the dryer.
CAREFREE!

Alpine Top only $49.95
Alpine Leggings $42.95

SAVE 15% ON Cozy Alpine Thermals Top & Leggings $78.95

COMPLETELY NATURAL
ENVIRONMENTALLY SAFE
45% ORGANIC COTTON
55% ANGORA

COLORS
Natural White, Black, Dark Sage, Granite, Cobalt, Claret
SIZES
Men's: S, M, L, XL, XXL ≅ Women's: XS, S, M, L, XL
ALSO SHIRTS, SWEATERS & PULLOVERS

TO ORDER ≅ CALL
1 800 79-ANGORA
FREE MULTIWEAR BROCHURE
call or send check payable to:
COTTONANGORA TRADING CO.
1555 Highland Ave., Cheshire, CT 06410
ALL MAJOR CREDIT CARDS ACCEPTED
please add $2.95 per item for shipping/handling

son with exploring the newly purchased Louisiana Territory. Leaving St. Louis in May of that year, the two led an expedition up the Missouri River to its headwaters, in what is now Montana. They crossed the Rockies, then descended the Columbia River to the Pacific Ocean. By the time they returned to St. Louis, they had covered almost 8,000 miles.

The expedition cleared the way for settlement and commerce. But what makes it unique is the volume of scientific records it amassed. Jefferson, after all, had instructed the explorers to keep detailed records of everything they encountered: climate, rivers, rocks, plants, and animals, as well as the languages and folkways of native people met along the way. Before the trip, Jefferson had sent Lewis to Philadelphia for training in natural history, the techniques of collecting specimens, and mapmaking.

The expedition's journals offer a rare glimpse of the presettlement American West. For Botkin, they dispel the myths that shroud the region's past and hamper our own efforts to maintain its ecological vitality. Among the first to fall is the notion that before Europeans streamed in, the West was a realm unshaped by human hands. The expedition frequently encountered—and was often aided by—Native Americans. "Lewis and Clark were traveling in *their* wilderness, but they were also traveling in the Indians' backyards," writes Botkin, "in the Indians' hunting and gathering grounds, along paths familiar to Native Americans. . . ."

Echoing recent assertions by William Cronon, Richard White, and various other environmental historians, Botkin argues that Native Americans had helped to shape the landscape that whites insisted on calling virgin land. Fire, the ability to work wood, and the bow and arrow, he says, constituted three "powerful technologies." He writes, "There is ample evidence that Native Americans greatly changed the character of the landscape with fire, and that they may have had major effects on the abundances of some species through their hunting."

In the journals Botkin finds object lessons for those intent on returning the West to some hypothetical pre-European ideal. The explorers' notes suggest, for

"Rowell represents an endangered species rarer than many of the animals and birds he photographs so brilliantly—the true adventurer."
—*Chicago Sun-Times*

POLES APART
PARALLEL VISIONS OF THE ARCTIC AND ANTARCTIC

Galen Rowell

POLES APART
Parallel Visions of the Arctic and Antarctic
by Galen Rowell
Rowell takes us on an exhilarating visual journey to the top and the bottom of the world, using his camera to reveal the fascinating differences in these polar opposites.
$39.95 at bookstores or order 1-800-822-6657
UNIVERSITY OF CALIFORNIA PRESS

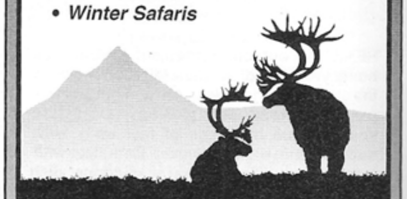
ALASKA
Our 20th Year!

ALASKA WILDLAND ADVENTURES

Natural History Safaris
- Denali
- Wrangell-St. Elias
- Kenai Fjords National Parks
- Kenai Nat'l Wildlife Refuge

Backcountry Lodges
- Denali NP
- Kenai NWR

Exclusive Offerings
- Sportfishing Packages
- Winter Safaris



For Free 28 Page Catalog
800-334-8730
PO Box 389, Girdwood, Alaska 99587

example, that neither buffalo nor grizzly bears were as plentiful as is commonly thought. The expedition reported seeing only 37 grizzlies during its entire trip—hardly the "wall-to-wall grizzlies" of popular imagination. For Botkin, the lesson is clear: There is no "natural" abundance. There is a range of abundances, all of which are natural in the sense that the population was at those levels at some time prior to modern civilization. Wildlife managers, then, should focus less on hypothetical numerical abundances and more on the specific requirements of each species. As Botkin says, "We must understand what it needs from its habitat and the ecosystems within which it lives."

He also admires Lewis and Clark's discipline. The tools of, for instance, their cartography—the sextant and compass—seem quaint to us, and their maps often erred. Even so, Botkin writes, in their step-by-step measuring of the continent, the explorers brought to their work a devotion to detail increasingly missing in modern fieldwork. "Oh, yes," he says, "we have digital devices readily at hand: pocket calculators, handheld field computers, geopositioning satellites, remote sensing maps, and huge computer databases.... But in spite of all the gadgetry, we generally fail to measure what we need to."

Botkin largely steers clear of scientific jargon and never quite names the various experts he criticizes. In fact, however, *Our Natural History* echoes arguments made more directly in Botkin's 1990 *Discordant Harmonies: A New Ecology for the Twenty-first Century.* The author is a leading advocate of "non-equilibrium ecology," a breakaway movement that since the '70s has challenged many of the ideas of G. Evelyn Hutchinson, the brothers Eugene and Howard Odum, and other traditional ecologists. Most important, it challenges their vision of nature as essentially harmonic—in balance and orderly.

Repetition and an annoying pedantry ("in the last chapter, I discussed....") occasionally mar Botkin's otherwise fluid narrative. For the most part, however, *Our Natural History* moves like a bracing hike in the Rockies with a partner who, not unlike Lewis and Clark themselves, is possessed of the scientist's intellectual discipline and the naturalist's sense of wonder.

—*Tom Chaffin*

THE POKE BOAT®
IT'S EVERYTHING A CANOE ISN'T.

A canoe is tippy. A Poke Boat isn't. It's remarkably stable.

A canoe is hard to turn and difficult to keep in a straight line. A Poke Boat isn't. It stays in a straight line, yet is easy to maneuver.

A canoe is heavy. A Poke Boat isn't.

It **weighs only 22 pounds** - built with aircraft strength.

You can buy more than a canoe.

For more information, give us a call.

606-986-2336.

SUMMER
Master of Science in
Environmental Studies

Three intensive summer sessions
leading to the MSES Degree

Environmental issues cut across academic disciplines; so should the training of environmental professionals.

BARD
Graduate School of Environmental Studies
P.O. Box 5000, Att: Box AU
Annandale-on-Hudson, NY 12504
914/758-7483

Anyone can sell you a binocular.
We'll sell you the right one.

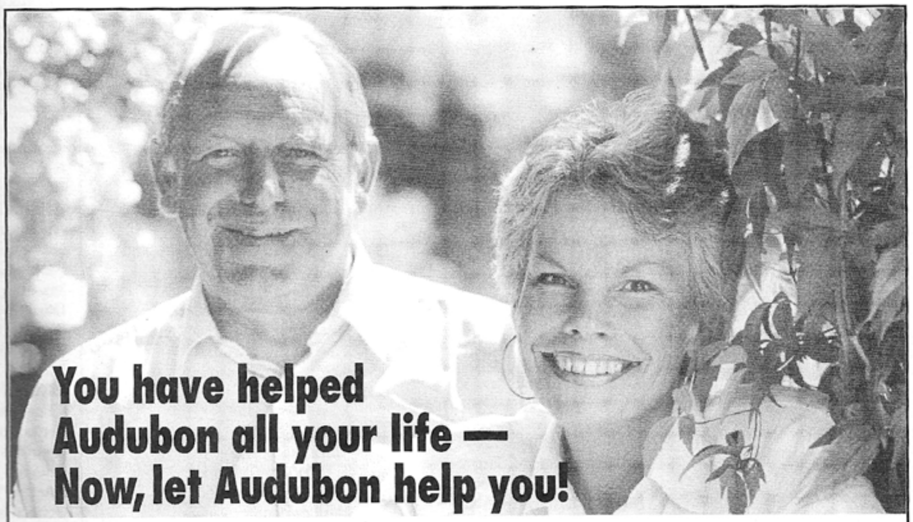
That binocular just might be this Bausch & Lomb 8 x 36mm Custom. Endorsed by the National Audubon Society, the Custom has sharp images and will focus to an amazingly close 7'. It also has a long 19mm eye relief for eyeglass use. A birding best-seller for years, the Custom is one of the hundreds of binoculars we keep in stock. From $49 to $4500, we'll help you pick the nature study optics that are right *for you* – from Bausch & Lomb, Zeiss, Leica, Nikon, Swift, Swarovski, and more.

Call (405) 364-4898 for our free Catalog 95A with 8 pages of information on how to pick the right binoculars and spotting scopes, plus full specifications and your discount prices on the B & L Custom and the more than 150 other spotting scope and binocular models we carry. But call soon, because Bushnell and Bausch & Lomb prices are scheduled to go up 5% to 8% on January 1, 1996.

christophers, ltd.

American Express, Visa, Mastercard, Discover, Optima

2401 Tee Circle, Suite 106, Norman, OK 73069 (800) 356-6603 (405) 364-4898
Hours 10-5:00 CST, Mon. thru Fri. 24-hour FAX line: (405) 447-3337. U.S. sales only. Now in our 17th year.


You have helped
Audubon all your life —
Now, let Audubon help you!

Audubon can pay you back with more than just our thanks. We offer several tax-advantaged plans that will help you invest in our natural world while you earn:

- guaranteed lifetime income with locked-in high return
- higher interest than you can earn at the bank
- substantial income tax savings
- capital gains tax savings
- estate tax savings

Many dedicated Audubon members have found that Audubon's life income gift program is the perfect way to meet their own financial needs while continuing a lifetime commitment to protecting wildlife and wild places. For information on how this investment can work for you, return the coupon. (The minimum investment is $5,000.)

☐ YES, I would like to receive no-obligation information by mail on how to earn lifetime income while supporting the National Audubon Society.

M_______________
Address: _______________
City: _______________
State: _____ Zip: ________

Send to: Wayne Mones, Director of Gift Planning, National Audubon Society
700 Broadway, New York, NY 10003
or call (212) 979-3033