WHY ARE HYDRA TUF-LITE KAYAKS SO MUCH BETTER THAN THE COMPETITION’S?

We think that is a fair question and it deserves a factual answer. So we won’t use a lot of adjectives like good, better, best, wonderful, and terrific. We’re going to give you the facts. You will make the decision.

1) TUF-LITE RESIN: All Hydra kayaks are made from a revolutionary 5th generation (Hexene Copolymer) Polyethylene that we call TUF-LITE. As compared to crosslinked polyethylene, TUF-LITE is stiffer (approx. 30%), has more than twice the ability to absorb impact before breaking, and has greater tensile strength and elongation. It enables us to make a lighter and stronger boat. But best of all, TUF-LITE is easily REPAIRABLE.

2) PATENTED FOOTBRACE: Another exclusive Hydra innovation that is standard equipment on all kayaks is our new footbrace. This unique, one of a kind is designed so that a boot, sock or bare foot cannot be cut or snagged on the brace as is possible with notched models. The Hydra footbrace can be adjusted while seated in the cockpit without the need to pull on rods or wires. The positive lock system doesn’t slip under critical conditions when you need support the most. And it’s available only on Hydra Tuf-Lite boats.

3) COMFORTABLE COCKPIT DESIGN: Hydra has developed an orthopedic cockpit seat that is engineered to ensure maximum comfort and support. It is easier to enter and more comfortable to sit in. Its innovative design prevents unsightly rub lines or wear patterns from developing on the hull.

4) BACK STRAP: The padded, adjustable backband comes as standard equipment on all kayaks to reduce back fatigue. It helps maintain correct paddling posture.

5) REALISTIC PRICES: Yes, our prices are lower. We have faster production equipment — like maybe twice as fast. So our costs are less. And this technologically superior machinery means better quality control at all stages of the process. You get better price and better quality.

6) NEW GRAPHICS: Our bold, new color graphics emphasize Hydra’s sleek hull designs. They are sharp attention grabbers. Heads will turn when you paddle a Hydra Tuf-Lite kayak or canoe.

7) THREE WAYS TO BUY: Hydra Tuf-Lite offers three ways to purchase its boats. You can purchase the hull only or you can purchase the hull and complete kit to assemble and customize your own boat. Or, you can buy them completely assembled.

8) HULL DESIGN: Our hulls were designed by paddlers with impeccable credentials. Tom Johnson’s Swift/Taurus, Ann Dwyer’s Minnow, and Tom Derrer’s 17 foot Sea Kayak are classic designs. They have set standards by which other boats will be measured.

Tom Johnson’s Centaur is the most agile and responsive hull design in a rotomolded decked canoe. It is the best performing C-1 available. Try it. Our C-2 Duet and C-3 are the only rotomolded tandem and triple cockpit decked canoes manufactured in America. The Matador is the hottest, most talked about whitewater playboat on the rivers today. Its superior hull design meets every criteria that experts and discriminating paddlers want. It’s 12 feet of pure paddling excitement.
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Cover Drawing by Ron Walker Graphics
Streamflow Forecasts for the Western States

by
Keith Thompson

The middle and northern Rocky Mountains, Washington and the Sierras are looking pretty dry this year and will see below average or barely average runoff this spring and summer. In contrast, the southern Rockies, Utah and Oregon have been blessed with abundant mountain snowpack, and will likely be experiencing above average runoff. So say the experts after their April 1 snowpack survey of the western states.

It seems that central and southern Colorado will again be good for late-season boating, but not as good as last year. New Mexico is now in the midst of a high-water runoff season, and by press time, much of Utah's plentiful snowpack may already be melted.

Predictions of spring and summer runoff from mountain snowpack in the western United States are made monthly from January 1 through May 1 by the National Weather Service and the Soil Conservation Service. The predictions are reported as a percentage of the 20-year average runoff expected to occur if "normal" weather conditions prevail during the runoff period.

The table below lists streamflow predictions for a number of floatable western rivers.

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<th>STREAM</th>
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<td>Arizona</td>
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<td>Little Colo. R.</td>
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SOBEK ANNOUNCES "THE RIVER OF THE RED APE"

ANGELS CAMP, CA — SOBEK EXPEDITIONS, the world's leading outfitter of adventure travel trips, has announced the newest offering in its list of river adventures around the world: the Alas River, on the Indonesian island of Sumatra in Southeast Asia. The Alas joins with such proven SOBEK classics as the Zambesi in Zambia, the Omo in Ethiopia, the Bio-Bio in Chile and Alaska's Tatshenshini River, all first explored and commercially available through the California-based international travel company. The incredible scenery of Gunung Leuser National Park, the largest in Southeast Asia, combined with thrilling whitewater rapids and an exceptional array of wildlife — including rhinoceros, tigers, long-tailed macaques and the rare large ape of Asia, the orangutan — make the "River of the Red Ape" a worthy addition to SOBEK's pantheon of river adventures.

The Alas springs from the slopes of Gunung Leuser, Sumatra's second highest peak at 12,300 feet, and flows over 200 miles to the equatorial waters of the Indian Ocean. Much of its course is through Gunung Leuser National Park, the richest orangutan reserve in the world. The Alas River was first run in October, 1984, by a team led by SOBEK founder Richard Bangs, in conjunction with the Italian explorer Jacopo Maezzi (first to raft the Blue Nile in Ethiopia, in 1973) and PACTO, the Sumatran tour company.

"I've never seen a river that had so much to offer," said Bangs, who with SOBEK has made over 30 first descents on wild rivers around the world. "We found a treasure trove of primary rain forest, soaring mountains, plunging gorges and incredible wildlife. We feel privileged to exhume this buried treasure, and offer its jewels to the world." Bangs has recently completed work, with co-author Christian Kallen (editor of SOBEK's The Adventure Book), on a full-length book about his wild river experience. Titled Rivergods, the new work will be published this fall by Sierra Club Books, San Francisco.

SOBEK offers commercial trips down the Alas River beginning April 6, and continuing throughout the summer and fall. Two options will be available: a five-day float through the Fantastique Gorge, a narrow limestone canyon in the national park, with departures from Medan, Indonesia (499 land/river cost); and a
13-day Alas River Expedition, which includes visits to two orangutan research and rehabilitation centers and a longer voyage down the rivers of the Alas ($1299 land/river cost, from Medan). For more information or to reserve space, contact your travel agent or: SOBEK EXPEDITIONS, P.O. Box 333, Angels Camp, CA 95222; (209) 736-4524.

Paddlers Invited To Participate In Citizen's Race

(LIBERTY, SOUTH CAROLINA) — Pit your paddling skills against the nation's top-ranked slalom racers at the Citizen’s Race on the Nantahala River Friday, July 12.

Sponsored by Perception, Inc. and the Nantahala Outdoor Center, the Citizen's Race will be held in conjunction with the National Whitewater Slalom Championship. Top slalom C-1 and K-1 racers will run the Citizen's Race course, setting a pace for all other contestants to match or exceed.

"The idea behind the Citizen's Race," says Perception marketing director, Joe Pulliam, "is to provide an exciting, competitive slalom race for novice and intermediate paddlers. We’re expecting a very good turnout."

"The Citizen's Race is a paddler's race instead of a racer's race," says race organizer, Sherry Spurlin of NOC. "It's more for fun, really, than for serious competition."

An awards ceremony Friday evening will honor both the winners of the National Whitewater Slalom Championship and the winners of the Citizen's Race.

The Citizen's Race is a grand prix type slalom race; so paddler's will be penalized only for missing a gate. Any type boat will be allowed with the exception of racing design boats. Any paddler ranked "A" or "B" by the National Slalom and Wildwater Committee in the past three years will not be eligible to compete.

Another Adventure for Travel Leader

ANGELS CAMP, CA — Hard on the heels of its successful first-ever descent of the Alas River in Sumatra, SOBEK Expeditions of Angels Camp, California, has announced plans to tackle no fewer than three wild rivers on the tropical African island of Madagascar. Expedition members have already been selected, and plans are well underway for a six-week series of adventures on the unrun rivers of Madagascar, to begin in mid-April.

Madagascar, the world's fourth largest island, lies off the coast of Mozambique, astride the Tropic of Capricorn south of the equator. It comprises the central land mass of the Malagasy Republic, and although it has been inhabited for at least 2,000 years, it still has remote wilderness and villages nearly free from Western contact. Known as "the Isle of Spice," Madagascar's agricultural produces include patchouli, vanilla, vetiver and ylangylang, all essential crops for the world perfume industry. The round-eyed lemur species, forerunners of the moneys and apes of neighboring Africa, also make their home here.

The SOBEK expedition, led by SOBEK co-founder and vice-president John B. Yost, will arrive in Antananarivo on April 21, and begin its first river exploration two days later on the Ikopa River. Rising on the high plateau of central Madagascar, the Ikopa is a confluent of the Betsiboka, and promises to be an exciting run of Class IV-V rapids (on a scale of I-VI), possible portages, and tributary waterfalls. After approximately ten days on the Ikopa, the expedition moves on to the Mania — pronounced "man-ee-ee-a," but
nonetheless a name of great promise. The Mania will be run for 115 miles from its deeply forested headwaters through palm-fringed gorges to the crocodile-infested swamplands near its mouth.

The final portion of the adventure will be ten to twelve days on the Betsiboka, one of the island’s major waterways, which is located not far from Antananarivo, Madagascar’s largest city. The Betsiboka, like the Mania, flows west off the high mountains toward the Mozambique Channel, and flows through an agricultural region with a gold mining past. The Madagascar expedition is scheduled to end June 3 with return to the United States.

RENDEZVOUS AT THE CONFLUENCE:

![Image of the Confluence in the old exploratory days — present site of Denver.]

An Urban Boating Exploratory in Downtown Denver
by Willy Lynch

On Labor Day Weekend of 1984, a select group of some of Colorado’s best whitewater boaters completed an exploratory decent of the seldom paddled Cherry Creek in downtown Denver. Although rumours of previous trips had been circulated throughout the boating community, no detailed documentation of Cherry Creek was available and our trip is here reported as an authentic "exploratory".

Cherry Check is famous for being the site of the “Cherry Creek Diggins”, the location where in 1859 adventurous miners came and found signs of gold "color" in small placer gold deposits at the confluence of the South Platte and Cherry Creek. That discovery launched the famous Pikes Peak Gold Rush and eventually led to the founding of the City of Denver and the settlement of the State of Colorado.

Cherry Creek is well known because it winds its way through the heart of downtown Denver and offers a pleasant escape from the city in a quiet park setting. But, unlike the early miners or the city joggers, it was the lure of
undocumented whitewater, not gold or solitude, that brought us together for a rendezvous at the confluence.

Our crew consisted of seven strong and experienced whitewater boaters from all across Colorado. From Boulder, came John Jaycox and John Mattson who had both just returned from a no-carry trip through the famous Gore Canyon of the Colorado River. Also on the trip were three of Colorado's best wildwater kayak racers — Jeff Parker from Ft. Collins and Scott Randolph and Andy Corra from Glenwood Springs who were in town for the grueling Labor Day Denver Day Whitewater Races. The local boys on the trip included kayaker Scott Draper and myself, a transplanted D.C. area C-1 paddler.

We had near perfect conditions for the trip. The weather was just right with temperatures in the 80's and not a cloud in the sky. Water conditions were also just about perfect with what appeared to be an optimal 400 cfs.

The shuttle route ran along Cherry Creek on Speer Boulevard and allowed us to briefly scout the run on the drive. However, several drops were partially or completely hidden from view and we exercised extra caution when paddling these blind locations.

Our put-in was just upstream of the town of Glendale and several miles below the Cherry Creek Dam and Reservoir. This put-in gave us about 8 miles of exploratory boating with ample water being released from the reservoir to maintain an adequate flow all the way to the confluence with the South Platte.

On the maps, Cherry Creek between Glendale and the South Platte looks interesting because it crosses several ecological and social/economic habitats while is quickly falls from the put-in area in Glendale to the take out at the Confluence. The run starts in the relatively "rural" setting of suburban Glendale. After several miles of tree lined banks and quite surroundings, the creek leaves civilization and disappears into a "wilderness" section through the Denver Country Club. Finally, the creek emerges from the wilderness and cuts its' way through an urban corridor — "Hobo Alley" — complete with ten foot high cement walls, through the heart of Denver's downtown and onto the confluence with the South Platte.

On the water, we found the rapids and drops on Cherry Creek to be numerous and evenly distributed throughout each of the segments of the run. The exploratory nature of the run and the intense
nature of the whitewater lived up to all our expectations and the trip was a major success. We highly recommend this run for anyone passing through Denver with a desire for an urban white-water adventure. However, the following comments should be kept in mind while running Cherry Creek.

With regards to whitewater, the most enjoyable and potentially dangerous drop comes within the first few hundred feet of the put-in in the rural terrains in Glendale. This rapid, now known as "Glendale Falls (or 6 Boat Falls) consists of a single drop of about 5 feet. The falls is most easily run on river left, and although it looks bad from above, the drop is a clean straight shot and is easily negotiated. Care should be taken from this point on down through the Rural
section. Small drops of one to three feet are common and several complex drops are found throughout the section. However, all are runnable and are easily scouted from the boat. A single metal pipeline crosses the creek about midway through this section and can be carried or rolled under. In honor of the first person to test the roll vs carry technique, the pipeline has been named "Parker's Pipeline".

Whitewater in the Wilderness section is continuous. However, one rapid made a major impression on all of us and was named "The 18th Hole" (after our golfing spectators from the Denver Country Club). The rapid is near the end of the wilderness section and develops a nice side-surfing hole and playing wave. Also in the wilderness are several river wide low drop with small keeper holes. At the 400 cfs of our run, these drops were not of any consequence. But, at significantly higher flows the holes might get nasty.

Below the wilderness section, the whitewater and the surroundings get a lot rougher. The creek is lined in an 8 foot high retaining wall to prevent flooding and along this stretch, several high bridges cross the creek. Under each bridge you can expect to find a good 1-4 foot drop and more than likely a few wine drinking hobos. The most notable of these drops is about 1 mile into Hobo Alley and was named "3-Boat Falls" after the trio of three kayaks which successfully ran the falls together. Below this drop, the gradient picks up quickly and the creek drops down a long sliding board-like rapid near Denver General Hospital. This is one of the longer and potentially dangerous rapids and is aptly named the "Emergency Room".

The run ends where the South Platte and Cherry Creek join. The confluence area has been renovated by the City of Denver and the Platte River Greenway Foundations. In addition to the bike paths and green parks, the Greenway Foundation has built boat shoots along the river to bypass the numerous and dangerous low head dams. One such boat shoot exists at Confluence Park just upstream from Cherry Creek and is the site of the Denver Days Whitewater Races. Because of the heavy rains this last August, the South Platte was running at a high 2200 cfs when we reached it and the big waves at the bottom of the shoot as well as the nice wide holes in the shoot were a pleasant way to end our Cherry Creek exploratory.

For more information on Colorado's Urban White Waterways (or the famous whitewater of Colorado's High Country), contact: The Colorado White Water Association, 7000 East Arapahoe Road, Englewood, Colorado 80112.
1985 WHITEWATER RODEO SCHEDULE
by Rob Lesser

MAY 19
Clackamus Whitewater Rodeo, Estacada, Oregon. It's a one event show held at one of the most reliable hydraulics in the West — Bob's Hole on the Clackamus River near Estacada. The water is usually emerald green as it flows out of the moss covered Cascade Mountains to Portland. It's Hole-Hog Haven!

Jim Henrick — REI Portland, 1798 Jansen Beach Center, Portland, OR 97217 — Phone: (503) 283-1300

Ric Buhr — Santiam Whitewater Outfitters, 8608 Mt. Angel Highway, Mt. Angel, OR 97362 — Phone: (503) 845-6719

MAY 25-26
Blackfoot Whitewater Roundup, Missoula, Montana. Held on the Blackfoot River near Roundup Bar, this is the first three event rodeo of the season. A slalom runs on Saturday with the Freestyle Championships on Black River, Watertown, New York. This is in large part due to the very active paddling community.

Judy Reese, 336 S. 6th West #2 Missoula, MT 59801 — Phone: (406) 549-2946

JUNE 1-2
Wenatchee Whitewater Rodeo, Leavenworth, Washington. In only its third year, the Wenatchee Rodeo has quickly become one of the major events in the West. This is in large part due to the unique paddling community in Seattle. The slalom race on Saturday is set by Werner Furrer, Jr. and aimed at the learning and enjoyment level rather than defining the expert's edge. There are social functions Saturday night, and the downriver and flatdog events on Sunday. Tumwater Canyon is just upstream of the race site for apres event upper level expert runs. Leavenworth is Tyrolean styled town for the skiers in the winter and beckons climbers to excellent rock walls in the summer. Backpacking in the North Cascades is also possible after the event.

Tim Davis - PWS & Wenatchee Rodeo Committee, 16205 Pacific Highway So., Seattle, WA 98188 — Phone: (206) 245-9385

JUNE 15-16
Stanley Whitewater Rodeo, Stanley, Idaho. The Whitewater rodeo idea started here 10 years ago with the first hole-riding contest on the Salmon River. The setting at the foot of the Sawtooths in the Stanley Basin is the best of any event. The slalom runs Saturday afternoon with a short downriver Sunday morning and the freestyle that afternoon. This weekend usually marks the peak of central Idaho's runoff so there are plenty of rivers to run after the event. Close on hand are the put-in for the Middle Fork Salmon, the Yankee Fork, South Fork Payette, the beauty of Redfish Lake and the Sawtooths, and Sun Valley to the south.

Bozo Cordozo — Idaho Whitewater Assoc., P.O. Box 2889, Ketchum, ID 83340 — Phone: (208) 726-3194

JUNE 22-23
Gallatin Get Together, Bozeman, Montana. This fairly wacky event is a must if it comes off. After two years of fighting heavy snows it took off like a rocket. This year, with the first hole-riding contest Sunday afternoon, and a healthy hole-riding/ender contest Sunday afternoon. Don't expect a long list of prizes, just a rollicking good time in an Old West atmosphere. Call ahead to confirm it's happening.

Mike Garcia — Northern Lights Trading Co., 1627 W Main Street, Bozeman, MT 59715 — Phone: (406) 586-2225

Bozeman Kayak Club — Phone: (406) 222-5086

JUNE 29-30
Animas River Races, Durango, Colorado. Here's another major3 event rodeo in an exciting old West mining town — Durango, Colorado. Nancy Wiley promises a lively weekend from the slalom and barbecue on Saturday through to the wildwater and freestyle events on Sunday. Video of the events will be shown Sunday at the awards ceremony, where you can generally kick back and dance your legs into exhaustion. The town's setting at 6,000' in the beautiful San Juan mountains is special. The Durango-Silvertown narrow gauge railroad is famous nationwide. So, of course, are the two jewels of Colorado whitewater, the Animas and Piedra canyon runs. It should be a great weekend!

Nancy Wiley — Four Corners Marine, P.O. Box 379, Durango, CO 81301 — Phone: (303) 259-3893

JULY 13-14
Colorado Whitewater Festival, Buena Vista, Colorado. 1984 was the first year for a full bore festival and it took off like a rocket. Colorado has always had a strong tradition in slalom and wildwater racing, so Bonny and Jim Stohlquist combined the annual Colorado Cup races with a 2-day freestyle event and had an instant success. All events take place on the Arkansas River near or on the Numbers rapids, one through six. Saturday night will feature a big video/movie party in town. And since Buena Vista has been called the Capitol of Colorado Whitewater, expect some good runs before and after the weekend. It should be a well organized, prize filled event!

Bonny & Jim Stohlquist — Colorado Kayak Supply, P.O. Box 291, Buena Vista, CO 81211 — Phone: (303) 395-2421

JULY 20-21
2nd Annual Eastern Freestyle Championships
Black River, Watertown, New York
THE RIVER FESTIVAL
Labor Day, August 31, September 1
(518) 494-3393
JULY 6-7
Salmon River Days, Salmon, Idaho. Idaho has long been nicknamed the Gem State. Well, here's the second level in the Idaho Whitewater Triple Crown! A bit much you say?! You've got to have fun some place...so you might as well make it slalom over the 4th of July. It's a 3 event rodeo plus lots of other festivities organized by the Salmon Chamber of Commerce. The slalom is a gentle one set right in downtown which everyone can enjoy. Saturday night has in the past been the time for the yearly reincarnation of the LOUNGE PRIMATES in North Fork, ID. They're a hot group somewhat led by the infamous Brooks Montgomery and his steaming harmonicas. The downriver and freestyle events run Sunday on the Main Salmon near Shoup — not far from the Corn Creek put-in for the River of No Return run. It's a great place to spend the 4th!
Brooks Montgomery - Salmon River Mountain Sports, P.O. Box 2535, Salmon, ID 83467 — phone (208) 756-3285

JULY 20-21
Payette Whitewater Roundup, Banks, Idaho. This is the crown jewel in the Idaho Whitewater Triple Crown. It's easily one of the biggest and most popular events of the year. Held on the South Fork of the Payette only an hour north of Boise, it draws lots of spectators and paddlers from throughout the West. The slalom course, on slightly pushy class III water, is a rodeo circuit favorite. It's held Saturday with the downriver Sunday morning — this year on a longer course — and the freestyle Sunday afternoon. Saturday night there's a communitywide dance and beer party at Banks. National and local sponsor support is high so the prizes are enticing. Hot springs, good camping, good July weather, and the challenging North Fork of the Payette run close at hand are additional appeals of the Payette Roundup.
Rob Lesser - Idaho Whitewater Association, P.O. Box 1162, Boise, ID 83701 — phone (208) 343-2167

JULY 27-28
Nugget Whitewater Roundup, Gold Hill, Oregon. Held on the well known Rogue River near Medford, Oregon, the Nugget Roundup has been moved to a later date this year to obtain a more normal water level for the hole-riding contest. The flow is dam controlled and warm so there should be ideal conditions this year. Saturday there is a downriver kayak and inflatables race whose finish line is the freestyle hole. That's caused some excitement at past Roundups. The hole-riding is Sunday with good media coverage always on hand. At 1800 cfs it's a great performance hole; at 3500 cfs it's a down right bruiser. The Ashland-Medford-Rogue River boating community is an active one and really behind this event. And plan ahead to take in a performance at the Ashland Shakespear Festival while you're in the area.
Chuck Schlumoburger — Rogue River Outfitters, 8890 Rogue River Highway, Grants Pass, OR 97526 — phone (503) 5823101
Jyme Waidler — Southern Oregon Kayak Club, 38 Renault, Medford, OR 97501 — phone (503) 772-1068

AUGUST 3-4
Trinity Whitewater Races, Big Bar, California. Pop-Til-You-Drop certainly sounds like a good ender spot, which it is. And it was because of this ideal ender hole on the Trinity River in northern California that a freestyle contest was added to the already sanctioned slalom and downriver races a few years ago and another bonafide rodeo was born. The site is upstream of Big Bar on the Trinity — an area of extreme variety and challenge for any whitewater paddler. This is a part of California known for its rivers, mountains, and logging than anything else. Plan to spend extra days on other super runs in the area. The schedule is similar to the other rodeos, but call ahead for particulars. It's a great way to finish out the rodeo circuit.
O.K. Goodwin — World of Whitewater, P.O. Box 708, Big Bar, CA 96010 — phone (916) 623-6588
Fred Williams — Moonstone Mountaineering, P.O. Box 4206, Arcata, CA 95521 — phone (707) 822-2985

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Joan Hildreth flows like a river. "I babble when I'm nervous," she says. "And I still get more nervous than I need to before I run a new river. It's that fear of the unknown, I guess. I tend to chatter and chirp—ask all kinds of questions. I must drive my paddling companions nuts. (Hopefully, they know enough to ignore me.) The funny thing is, though, that I'm fine—and focused—once I'm in my kayak with the sprayskirt on. When I'm actually doing the thing I've been so nervous about it feels good and right. I get that nice rush. Knowing the pattern—nervousness folowed by those good feelings—helps me deal with fear. I'm much more confident dealing with new rivers these days. I wouldn't want to become too confident, though. A certain amount of anxiety keeps me on my toes."

And on her toes is where Joan stays. A tentative whitewater kayaker when she began seven years ago, she is today not only an accomplished big water boater, but something of a river dancer.

"When I first started boating, the better paddlers I saw were men. I drew the conclusion that one had to be physically strong to be good. It was my problem, really, and it amounted to a sort of love/hate relationship with whitewater. Kayaking looked like such a fun, exciting thing to do if one were good. But I didn't think I could ever begin to master the sport, because I wasn't a hulk.

"So I avoided boating. The desire was too strong to fight, though, and I kept getting drawn back in. Talking to more people and gaining experience, I began to realize that being super-strong wasn't
necessary. In that respect, I've learned a lot from my husband, Bill. He's a strong paddler, but he's smooth. It helped me to emulate his style of surfing and hole playing. Roger Belson's smooth style has also influenced me. (Roger's a country doctor in New Hampshire. He introduced Bill and me to bigger water.) I'm not as graceful as I'd like to be yet. But I'm getting there.

Joan is also getting to a larger number of demanding rivers. The list of her whitewater accomplishments runs from New Hampshire's Ashuelot and Contoocook at flood to West Virginia's Gauley and New and Idaho's Salmon (Middle Fork) and Selway at high levels. Clearly, she loves the rush of big water. Even more, she relishes psychological breakthroughs - those pulsing moments when she's running a drop she had previously thought impossible.

"Last year I ran Lower Falls on the Swift River (N.H.) for the first time. The usual put-in for the gorge section is below that. I had never even considered running the falls before. But then I looked it over, it made sense, and I did it. The same piece of water that had seemed 'unrunnable' for me suddenly seemed 'runnable.' I'd begun to assess situations more analytically. It was a special moment.

"My first extended river trips — in Idaho — were exciting, too. We encountered some problems on the Selway because we were with three rafts, two of which flipped. One rafter was badly injured. We chased the rafts and gear. There were tense moments."

Even tenser moments occurred two springs ago on Joan's and Bill's first run of Section IV of the Chattooga.

"We were with a friend who knew the river well, but I still have no excuse. We were booming and zooming. I was on an adrenaline high. I started taking the river too lightly. Before I knew it I was dropping sideways over the twelve-foot ledge at Sock 'em Dog. I don't know if it was because the hydraulic was so powerful or my paddle blade so big (I was using an Iliad at the time, which has too much blade area for someone my size and weight; I'm happier with the Backlund I use now), but when I went over, I was ripped from my boat in no time flat. I recirculated there once, and then flush-

Joan doing a pop-up. Photo by Joe Dwelley.
ed out—and into the hydraulic at the undercut. My boat was there too, at first, but it washed out, so I wasn't recirculating with it. Somehow I was able to grab rock, and that's what saved me. I began pulling myself. I was too disoriented to know whether it was up or down. It turned out to be down. I worked my way to the outside and was shot out in a jet along the bottom. I was in there no more than 45 seconds. I wasn't hurt at all.

"I didn't panic. I thought clearly and tried to do the things I'd heard might help me to escape. I was glad I'd told Bill where the extra car keys were. But I worried about whether he knew how much I loved him. Then my parents—this was happening on their anniversary.

"The experience had a strong impact on me. On the one hand, it made me more careful. I always look over the more difficult drops now. And I went to work on my skills. I decided to do whatever I could to decrease the chances of anything like that happening again. On the other hand, I came out of the undercut more confident. Since then, nothing has bothered me quite as much as it used to."

But then "bothered" is hardly a word for Joan Hildreth to apply to herself. "Concerned" would be more apt. Effervescently emotional, keenly alert, she cares deeply, in a very particular way, for the people and the world around her.

"I think it's most reasonable for people to just be themselves. Putting on any act is ridiculous, as far as I'm concerned. I always try to see people as individuals—to demonstrate the empathy I feel for them. In regard to kayaking, it's an individual sport and people have to be independent. However, it's a group activity, too. I'm aware of the people I paddle with. I care about them. I feel responsible for them. If I'm with a paddler who seems shaky or nervous, I try to watch him or her closely—to be supportive.

Joan's feelings for the river run just as deep.

"I regard it as a privilege to be part of a river. The feeling which results from working cooperatively with the current is unbelievable. It gives me a lift that carries over into all areas of my life. Paddling has made me more confident, comfortable, happy. And I've met so many wonderful people paddling. The camaraderie is special."

A woman who excels in a male-dominated sport, Joan has faced little hostility from the opposite sex.

"Oh, once in a while I'll run into some guy who makes a big deal about my gender—one who'll question my ability to run some drop, even though he's never seen me paddle. And I did once meet a guy who said he'd never 'allow' his girlfriend in a boat. But that's rare. Secure, confident people don't act that way. Most men I paddle with encourage me to try new things. They respect my paddling ability and my ideas about rivers. They enjoy watching me play. They like the idea of seeing a competent woman on the river. It's true that some of the guys may tend to be more sensitive to me than to the other guys—asking me if I'm warm enough or offering to help carry my boat. But I'm sure it's not intended in any negative way."

Joan sees very little, if anything, in a negative way. She speaks glowingly of her childhood. (Born in Rochester, N.Y., in 1955, she grew up there with an older brother and sister.) She describes her parents as gentle and thoughtful, supporting their children in whatever they wanted to do. In Joan's case this
amounted to a great deal of support. She rode a unicycle, played the saxaphone, pitched on the boy's softball team, skated, and hiked. "I was definitely most at home in and on the water, though." She swam, sailed, and waterskied.

Today, Joan lives in Bridgewater, Mass., with her husband Bill, who is as avid a paddler as she is. ("He's sensitive, gentle, sweet, funny, thoughtful, intelligent, comfortable with himself, secure, independent, genuine, affectionate, and open." I guess she likes him.) She has been cruising in a Dancer, with which she is reasonably pleased. Her recent purchase of a Squirt has her quite excited. Hot dogging appeals to her ("I still have to get better at hand surfing and other paddleless stuff"), although she has some reservations about hot dog contests ("It might take the fun from playing if I knew I was being scored—but I'd like to try it"). She and Bill may be on a three week trip—either in Colorado or northern California—as you read this.

A full-time clinical social worker and a part-time graduate student in accounting, Joan's life on dry land has been rather full.

"I'm planning a major career switch. I hope to soon be working at W.I.L.D./W.A.T.E.R.S. (an outdoor center in Warrensburg, N.Y.) doing marketing, accounting, instructing, trip-leading—whatever needs to be done. I want to be able to make a career out of something I love. Work should be fun."

The primary definition of "career" is "a course through life." Joan Hildreth already has a career she loves.

### PATCHING PLASTIC

I have a Mirage that I've been paddling for about four-and-a-half years, and last summer I put two holes in the hull under the seat. I couldn't afford to buy a new boat, but I'm too addicted to paddling to stop, so I tried to find a way to patch it up.

First I took the boat to Dave Brown. He told me to buy a new boat. I couldn't do that right then, so out of necessity, I figured out my own system for patching plastic boats.

Materials needed: contact cement (Weldwood); Kevlar cloth; blue and yellow epoxy ribbon, which you can get at most drug or hardware stores.

First, contact cement two or three layers of Kevlar over the inside of the boat, covering the hole by two or three inches all around (four to six inches in diameter), just like putting patches in a glass boat. Second, do the same thing on the outside of the boat.

This was the extent of my patches for awhile, but the outside patches got scraped off so I tried the epoxy ribbon over the Kevlar on the outside. This worked very well. I found that if I hit a lot of rocks, the epoxy would scrape off, usually leaving the Kevlar intact. All I had to do was replace the epoxy before my next trip.

The epoxy ribbon works well for patching holes in the noses of plastic boats. Just push it into and over the hole, then cover that with an old tennis ball (thank god for tennis balls) and tape that into place; the water that was getting into your boat will be stopped dramatically.

Even with the patches you will find that you can no longer treat your plastic boat like a plastic boat, however. I still tried to do pop-ups in impossible places but had to try not to hit as many rocks when paddling.

I used a patched-up Mirage for almost a year during which time I paddled the upper and lower Gauley, the Blackwater, the middle fork of the Tygart, lower Big Sandy, Rock Creek, Goshen Pass, and Little Falls at close to nine feet.

Finally I broke down and bought a new boat.

Jim Mallard
Tom climbs out of his boat already introducing us at Tom and Jerry of cartoon fame. He keeps up a continuous babble about "how nice to be here... good weather... great water level" and on and on and on. I slide around and grab my camera. This is going to be a great experience!

Idaho boaters Bob Lesser and John Wasson are joined by Dave Mamby of the UK and Mick (Hoppy) Hopkinson of New Zealand for a film project by British film-maker Leo Dickinson. Rob and John, both participants on American Sportsman and well-known adventure paddlers, need little introduction. Dave and Mick were among the first party to run the Dudh Kosi River in Nepal. Mick also ran the Blue Nile in Africa. Leo was responsible for filming "Canoeing Down Everest," the film of the Dudh Kosi expedition and the book and documentary "Filming the Impossible." Tom Whittaker, an ex-patriot Brit and professional outdoor educator and myself are here in the role of production assistants read ("grunts"). At the same time I am to record the whole production on 35mm film for Rob.

We're on the Murtaugh section of the Snake River to film some spectacular kayak surfing. Then it's off to the Milner Gorge and some of the biggest water in the West. From there, we go to the North Fork of the Payette and the Ultimate Play Wave on the South Fork.

Cameras are mounted on boats, shots are set up from the shore and Peter McPherson, co-producer and cameraman, floats down through rapids to film three boats surfing from water level. Peter's a cool dude. We drag a rope above the surf waves and while he holds on we ferry him out into position — he lets go and floats through, makes the shot and goes back to smoking skinny cigars and working on his tan (something of a rarity in Britain).

The surfing is spectacular. The water is huge and Leo scurries about getting up shots of two and three boaters on the same wave. Wasson surfs smoothly with no paddle for what seems like forever. Not much for me to do so I take lots of photos.

The Milner Gorge is impressive. Huge waves and drops for a solid mile. "Hoppy" is so nervous about the big water he almost falls in at the top. As soon as he's in the current though the technique and experience that made him a world class racer shows through. Not bad for a guy who hasn't been in a boat for two years.

They all run the gorge two to three times. Each time is worth a season of thrills for me and I get so excited I forget to let up on the motor-drive of Rob's camera. Let's see — 7 frames per second — three minutes a run — I'd say I shot a half case of film that day. Leo shoots over 4000 feet.

That afternoon we're at the hotel and Leo discovers he's lost his Rolex. Tom and he paddle up to the surf waves while I wait. I get a ride on a boat and beat them. Got it! Hmmmmmm — search your soul Jerry it would finance a trip to Alaska; I look at it and see Everest '75 inscribed on the back. He got it free but it means quite a bit to him. What's that? Yahoo!! I've found a set of scuba tanks. Stenciled on them is R LESSER — they left these and didn't even know it. I ride back, tell Leo the time and about the tanks. This should be worth a great dinner guys — it was and in the end my conscience was clear.

After a night in the country bars of Twin Falls, we head back to Steve Parks' house to crash. Parks is colorful (outrageous) local bluegrass artist who helped explore the Murtaugh section in the early 70's. About 3 am we are alerted by a scream and a shout. Parks has come home late and backed up over Hoppy's leg, right over his foot and up his calf. He's not hurt (it's only a Datsun) but he won't dance for awhile. "It wouldn't have been bad except for the bleeding exhaust pipe in my mouth!"

The fun and spills of the Snake give
way to a relaxing but productive day at John’s house rigging for shots of the UPW. We rig a Tyrolean over the river and arrange a seat so the cameraman can be centered over the wave just inches from the water. The boaters do endos, hand surf and dance for the camera. The river is in full flood and the wave/hole is easily 4-5 feet high. It’s incredible to watch the local boys cavort in it.

Off to the North Fork for “hair boating” — Hound’s Tooth, Cruncher and Juicer — all classics drops in a river where the rapids seem to form one long rolling — boiling run. I drive while Leo does some “dolly shots” from the top of the truck and we follow the boaters along the river.

Later that evening Tom and I return from boating on the South Fork to come back to a solemn group. The impossible has happened; 8000 feet of film was sent to Los Angeles for processing, and a fork lift truck ran over some of it on the way to the lab. The mood was, to say the least, not as it had been. More like a funeral now.

I had only been in the film industry a week but I knew a cue when I saw it. Exit Tom and Jerry. “What do you think of the Lochsa, Tom?”

“Right youth, we’re gone.”

POSTSCRIPT

The film wasn’t totally damaged and only a few shots had to be redone. The film was shown as part of a thirteen-episode series on adventure sports for the BBC. Rob saw the show in Britain this spring — American television will probably never air it. I got myself a 8mm camera and a director’s hat. Maybe I’ll call my first film “Spuds on the Rocks.”

Contact Rob Lesser about where to get the video. P.O. Box 1162, Boise, ID 83701. (208) 343-2167, or Gravity Sports (801) 485-3702.

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THE SPRAY

KAYAK SAFETY QUIZ

by Chuck Kutscher

1) You’re swimming a rapid with your boat, and you see an unavoidable strainer (a tree emerging from the water) directly ahead. You should

a) swim downward as deeply as possible to flush through underneath

b) lift one leg and both arms and climb as high as possible onto the tree

c) grasp around the center of your boat with both arms and use it for buoyancy.
2) You've been enjoying the scenery on an easy Class II stretch when you suddenly see a four foot dam only 50 feet ahead. The current is too swift to allow you to get to shore in time, and there are no eddies. You should
   a) paddle as close as possible to the nearest end of the dam, then paddle hard forward
   b) take the drop sideways and reach your paddle downstream to catch the flush-through current
   c) exit your boat immediately to increase your chances of washing through.
3) You're leaning on a downstream scull as you sit sideways in a hole and decide that it's time to move on. You try reaching the downstream current and then try to use a combination of a scull and a forward (or backward) stroke to exit out the side, but the hole has other ideas. How do you get out?
   a) Use a sweep stroke to face upstream, then peel out as you would in an eddy
   b) Exit your boat and use the proper technique for swimming out of a hole
   c) Turn upside down and hold your paddle vertically downward to catch the flush-through current.
4) You're out of your boat and recirculating in a nasty hole. You should
   a) dive deeply just when the current has moved you to the maximum upstream position and swim out downstream along the bottom
   b) swim upstream and climb onto the rock which is creating the hole
   c) same as a) but first remove your life jacket to allow you to dive deeper.
5) A person is unconscious and stranded on a rock. You decide to swim after the victim with a safety rope attached. The rope should be looped around your
   a) wrist
   b) waist
   c) chest under your armpits.
6) You toss out your throw bag to a swimmer. You should attempt to
   a) land it upstream of the swimmer
   b) land it downstream of the swimmer
   c) hit the swimmer in the head with it.
7) A swimmer has been submerged for a considerable time in ice-cold water. You consider giving artificial resuscitation. The longest anyone has ever been under cold water and successfully revived without brain damage is
   a) eight minutes
   b) twenty minutes
   c) forty minutes

ANSWERS TO KAYAK SAFETY QUIZ

The following are the answers to the quiz. (We realize, however, that issues like these are always subject to debate.)
1) b.
   A strainer is dangerous because it can hold a swimmer underwater. You should therefore face the strainer and climb as high as possible onto it. The Ohio State River Rescue Manual (yes, they do have white water in Ohio) recommends lifting one leg and both arms.
2) a.
   If you absolutely cannot avoid going over a dam, you should try to paddle hard forward to punch through the reversal. Being close to either shore has two advantages. First, the reversal may be broken near the shore. Second, it makes it easier for others to rescue you if you become trapped.
3) c.
   In a strong hole it will be impossible to turn your boat around with a sweep stroke, and you should exit your boat only as a last resort. If you cannot exit the hole sideways, you should hang upside down and hold your paddle down deep to catch the downstream current. Ron Watters, author of The White-water River Book, observes that boaters using this technique often don't hang down long enough.
4) a.
   The key here is to work with the current and not fight against it. Your goal should be to get into the deep downstream current and swim with it to escape. If this doesn't work, try to look for a throw bag thrown from shore. Removal of your life jacket was once advocated by some, but the latest thinking is that it probably
wouldn't help much in a powerful hole, and by the time you got out you might really need it to keep you afloat.

5) c.
Some authorities recommend never trying a rope to a rescuer. If used, it should be attached in a fashion that allows the rescuer to escape from it if necessary. When looped around the chest under the armpits, the force on the rope will act to keep the rescuer's head above the water. It's a good idea whenever working with a rescue rope to carry a sharp, securely sheathed knife so that the rope can be cut free if it should become a danger.

6) c.
In using a throw bag, your objectives should be to get it as close as possible to the swimmer so that he doesn't have to work to get to it and also to make him aware that it's there. Noted river safety expert, Charlie Walbridge, recommends trying to hit the swimmer in the head with the throw bag. This achieves both objectives. (To actually hit the swimmer, you have to lead him a bit, since he'll be floating downstream while the bag is in the air.) Being hit in the head with a soft throw bag will be the least of the swimmer's discomforts, particularly since he'll have a helmet on.

7) Due to the lowered metabolism rate, victims have been known to survive after being submerged under ice-cold water for as long as 40 minutes! Such cold water conditions are not unusual in kayaking. Everyone realizes that spring runoff comes from freshly melted snow, but even in the summer the water these days is typically released from the bottoms of very deep reservoirs. So artificial resuscitation can work on river victims who have been under a long time. And as long as we're on the subject of cold water, don't forget the wet suit to safeguard against one of the biggest dangers of kayaking — hypothermia.

**LUGBILL WINS ANOTHER**

CCAer Jon Lugbill is one of the six winners in the 'Search for Champions II' sponsored by Wheaties. He will be featured on the company's cereal boxes during the next year. Jon has won three straight World Championships in C-1 slalom racing, and his total of six gold medals has not been equalled in the sport. Chosen out of a field of 1000 athletes in this competition, Jon joins a select company - Joe DiMaggio, Ted Williams and even Ronald Reagan who was Wheaties announcer of the year in 1934. ACA, which sponsored Jon, gets a nice cash award.

**BIG-TIME RACING**

Jon Lugbill, along with Davey Hearn and a number of others from this area, is currently training hard for the US team trials for the 1985 World Championships in Germany. The wildwater team trials will be held on the upper Farmington River, New Boston, Conn. on April 19-21. The slalom team trials will be run on the man-made course called East Race in South Bend, Indiana, April 27-28. (The Worlds will be run on another man-made course in Augsburg.) The white-water open canoe National Championships will take place on the West River, Jamaica, Vt., May 11-12. The wildwater Worlds will be run at Garmisch, Germany, and the slalom Worlds at Augsburg, June 13-16. Slalom and wildwater Nationals will be held at Bryson City, NC on July 8-11, and the poling Nationals at New Hope, PA on the Delaware on July 13-14.

For those a bit older who still have a few good races left in them, the first World Masters Games will be staged in August in Toronto, Canada. This is, we gather, largely flatwater, plus marathon racing. Women will be broken into four age groups, from 30-35 to 45-plus, men in six age groups, from 35-39 to 60-plus. The Canadians have budgeted over $37,000 for the events; there is an entry fee ($20 for the canoeing races). Anyone interested can write World Hdq. Masters Games, PO Box 1985, Postal Section P, Toronto, Canada M5S 2Y7. The actual dates Aug. 9-13.
WASHINGTON, D.C.: In the second part of an October "double-whammy" against rivers (see related story on Gauley), the U.S. Forest Service has proposed that certain rivers be deleted from the Nationwide Rivers Inventory.

The Inventory is a listing, prepared by the National Park Service, of 1500 river segments (totaling 61,000 miles) which appear to have the qualities making them eligible for the National Wild and Scenic Rivers System. The Inventory was intended to be a sort of "farm system" for the national system, a list from which rivers could be nominated for national designation.

The Inventory has languished since its 1982 publication, even as hydro projects, roads and other activities degrade the rivers. The estimate for one state is that 25% of the rivers listed on the inventory are in jeopardy.

The Forest Service proposal is to temporarily declare certain rivers as "unsuitable" for national designation, which would then make them available for various detrimental management activities: mining, road-building, timber harvesting and dams. Then, to quote the Forest Service, "rivers...will be recommended for removal from the Inventory only after development activities...have modified the river corridor values to the extent that the river is no longer eligible for wild and scenic river consideration."

"This creates a process, and even incentives, for removing rivers from the Inventory without a corresponding initiative to add rivers to the Inventory or use it as a basis for additions to the National Wild and Scenic Rivers system," said ARCC's Chris Brown. "We will be seeing our precious remnant resource - the 2% of America's river qualified for the Inventory - whittled away even further."

ARCC and other groups are challenging the Forest Service proposal and asking that a public process be undertaken to consider additions to as well as deletions from the Inventory.

FIVE RIVERS DESIGNATED WILD & SCENIC

The closing days of the 98th Congress saw 308 miles added to the national Wild and Scenic Rivers system. The five new rivers, including California's magnificent Tuolumne, represent the first congressionally-mandated additions to the national system since the 1980 passage of the National Parks and Recreation Act in 1978. Four rivers were also designated for study for the national system.

The Wild and Scenic Rivers Act, enacted in 1968, establishes a national policy of complementing development of the nation's rivers by preserving other selected rivers or segments of rivers possessing outstandingly remarkable natural, historic, and recreational qualities for the benefit of present and future generations. For the first time since 1980, Congress has done just that.

The addition of the Tuolumne to the system stands out as a major victory for ARCC and the entire conservation community. The Tuolumne has long been considered the national test case of Congressional will to live up to its mandate as spelled out in the Wild and Scenic Rivers Act. By designating the Tuolumne, in the face of great pressure from the development lobby, this Congress has shown that it can live up to that mandate. Also designated this year were the Illinois and the Owyhee in Oregon, the AuSable River in Michigan, and the Verde in Arizona...
WASHINGTON, D.C.: A shocking new policy has been declared by the U.S. Department of the Interior: that Wild and Scenic study rivers where studies have not yet been released are no longer protected.

The policy immediately affects the Gauley, Yampa, Cache La Poudre, and some 30 other rivers presumed to be protected from water projects by the Wild and Scenic Rivers Act. The 6-year study period for these rivers expired Oct. 1, 1984.

In the Oct. 15 letter to Senator Robert Byrd (D-WV) concerning the Gauley, Interior Department Assistant Secretary Roy Arnett states: “Since the Gauley River study period has expired, and the report has not been submitted, it seems that FERC (Federal Energy Regulatory Commission) could now process hydroelectric applications for development on the Gauley...”

ARCC is challenging Interior’s position through direct communications with the Department and encouraging Congressional oversight. A court case is also possible.

The Wild and Scenic Rivers Act provides for two protected periods for rivers under study for the national system. After Congress designates a river for study, the National Park Service, Forest Service, or Bureau of Land Management are given a length of time (usually between 3 and 6 years) to complete the study. Then, when the President submits the study to Congress, a 3-year clock starts ticking. The river remains protected while Congress considers its fate. If Congress has not acted after 3 years, most of the river’s protections expire.

At issue in the Interior Department’s position is the period between when a study is finished and when it is submitted to Congress. Supporters of the Wild and Scenic Rivers have always presumed that rivers remained protected until the study was sent to Capitol Hill, regardless of how long it might take to complete.

"Interior’s position is ludicrous at best, very cynical at worst," said ARCC Conservation Director Chris Brown. "It invites the agencies to delay completing the studies in controversial situations. There’s no question but that it undercuts Congressional intent. The only explanation that I can make is that it’s an attempt to cover up the embarrassment of finding highly qualified rivers unacceptable for the national system. But a policy like this will only compound the embarrassment!"

The recent policy withdrawing protections is the latest in a long line of administration actions unfavorable to the Wild and Scenic Rivers System. Five river studies were completed and actually printed during the Carter administration but have never been released, allegedly because former Interior Secretary James Watt let it be known that there would be no positive recommendations for Wild and Scenic. Funding for rivers programs has also seen drastic cuts in this administration, and the former rivers and trails division in the National Park Service has been split apart ad stripped of its title.

The withdrawal of protection may be the green light for pending development proposals on the Gauley and other rivers to move forward.
PATIENT CARE ON THE RIVER
by Les Bechdel and Slim Ray

"We had put together a good rescue and I was congratulating myself as we neared the end of the evacuation trail. Then, while sliding the litter over a fallen tree, he cut his finger and started to go shocky on us.

Our patient had broken his leg in Corkscrew Rapid on the Chattooga. The rescue was quick and minutes later we had him on shore with an air splint in place. He was obviously in pain but was staying in control. We got the emergency backboard and in half an hour were carrying him down the rocky banks of the river.

What we failed to do was to instruct our patient how to protect himself while being transported in a litter. When we slid him over the log we hadn't noticed that he was gripping the edge of the litter. The injury to his finger sent him over the threshold of tolerance and he began losing the stoic control he had been exercising. His respirations became shallow, he wouldn't respond to our comments and had poor color. He was at the point of going into shock. With great effort he brought himself back but it was close, too close. We were lucky and it was another lesson in patient care."
If a person is in danger on the river the most immediate concern is to get them out of the water and to safety. At the moment of rescue, however, a victim becomes a patient, and in this article we'll discuss some considerations about taking care of this victim who is now your patient. It is not our intent to cover first aid procedures in detail but we do want to highlight some thoughts on post rescue care that should concern any rescuer.

**THE INITIAL CONTACT**
A contact rescue is a hands-on approach by the rescuer, and is usually the only means of rescue for an unconscious victim. There is no rope between rescuer and victim.

When making a contact rescue, the rescuer must be wary of the conscious victim. He may be in severe pain or have just had a closer brush with death. A distraught victim in the water may make a desperate lunge for the rescuer or try to climb on top of him.

Similarly, a victim may be stranded on boulders in mid-stream, pinned in a boat or have his foot entrapped. He may have been in that position for some time and his actions may be difficult to anticipate.

When approaching a victim it is a good idea to have a rescue plan in mind. Communicate with the person. Tell them exactly what you are doing and planning and what you want them to do. Ask his name. Ask about injuries, "Where does it hurt?" If you are new to the scene ask if there are others in the party/ Try to get as much information about the accident and the patient's condition as possible. If the patient is conscious and not responding to your inquiries be cautious.

If you have witnessed the accident and know the patient use their name. Be calm and reassuring. Be honest about the situation, remain positive and try to inspire trust and confidence. The first few seconds of interaction may make the difference between a patient that remains cool and one that goes off the deep end.

As we saw in the opening paragraphs of this chapter, a patient's mental condition is critical and should be moni-
Initial contact with patient is critical. Rescuers practice their skills in a mock emergency on the Chattooga.

An insignificant injury or even a seemingly innocuous remark ("God, he looks terrible") overheard by the patient may be enough to send him into shock. If the patient is stationary and out of immediate danger, the primary concern is to stabilize his condition so that it doesn't get worse. The emphasis should be on assessing the nature of the patient's injuries and his emotional state. Do not aggravate the patient's condition by hasty, unnecessary movement. Your initial concern is that the patient is breathing and not bleeding.

A contact rescue that occurs in the water doesn't offer much time for a survey of the patient's condition. If the victim is conscious you can ask about his injuries. If the victim is unconscious and breathing stay on the upstream side of him and keep his head above water. In heavy water position yourself under the patient with his and your feet downstream. Hold him in a bear hug while keeping his face close to yours. The idea is to provide a little extra buoyancy. Once you reach calmer water you can swim the patient to shore using a cross chest carry or by grasping their hair or helmet.

CARDIOPULMONARY RESUSCITATION (CPR)

CPR is a proven lifesaving technique which every whitewater paddler should know. Possibly the most important aspect of CPR is starting it as soon as possible if the victim is not breathing, even if it means doing it in the water when you first make contact.

One of the first steps in CPR is to open the airway by lifting up on the neck with one hand and pushing down on the forehead with the other. This tilts the head back and may cause the patient to start breathing again on his own. You can often do this in the water.

Do not attempt compressions while in the water. Get the patient to the nearest hard surface. This could be boulders in midstream, gear boxes on a loaded raft, or even the hull of a canoe. Do not spend precious moments hauling the victim up a river embankment if you can find a flat place at the water's edge. If you are alone initiate one person CPR until help arrives.
After starting CPR keep doing the best possible job for at least an hour before attempting to transport the patient, since CPR is difficult to perform effectively while moving. In an emergency like this you will feel a real sense of urgency to get the patient to an ambulance or hospital. But don’t jeopardize the quality of your CPR in a rush to evacuate. If the patient has not responded within an hour and medical assistance is not nearby it is unlikely he will survive.

If CPR is successful and the patient begins to breathe on his own he must be handled as gently as possible. Rescuers must stand by to restart CPR at any time. The patient should be kept warm, treated for shock, and evacuated. Under no circumstances should a paddler be allowed back in his boat. If you are forced to spend the night in the field, the patient’s condition should be continuously monitored, preferably by at least two persons. Any person who has had CPR administered should be admitted to a hospital for observation no matter how well they might feel.

Paddlers should be aware of the Mammalian Diving Reflex (MDR) phenomenon. Sudden immersion into cold water (70 degrees or less) sometimes triggers a nerve response that slows the heart rate and concentrates circulation between the brain and heart. Bodily processes are slowed to a barely discernible point: the body is sustained on the oxygen present in the blood and tissues at the time of submersion. To an observer the victim may appear dead: he has very slow and shallow respirations; weak, slow pulse, fixed and dilated pupils, and clammy, white skin.

But MDR victims have been revived without brain damage after being submerged for as long as thirty-eight minutes. So don’t give up on rescue efforts or CPR just because four minutes (the old standard of “clinical death”) have passed. If the victim is young, the water is cold (less than 70 degrees) and clean, and the submersion time is less than one hour, MDR may have occurred and CPR should be initiated as soon as possible.

**HYPOTHERMIA**

Hypothermia is the cooling of the body beyond its ability to maintain a constant temperature. Paddlers are mainly concerned with immersion hypothermia caused by cold water flowing around the body, although wind chill hypothermia can be a factor also.

The best way to deal with hypothermia is to prevent it. Wearing the proper clothing and having the skill to paddle the water you’ve chosen are the first steps. Knowing the warning signs of hypothermia is the next (they are described in detail at the end of this article). When you recognize these signs you must take action to keep matters from worsening.

Hypothermia affects judgement and coordination and is insidious in its effects. A typical case is the paddler who swims once and gets cold, then starts missing his roll and swims again and again, becoming colder and more exhausted each time until he finally becomes hypothermic. Keep an eye on people after they swim. If it happens again right away and they’re shivering, it’s time to suggest a warmup.

What’s the best treatment for hypothermia on the river? In the early stages the patient can walk and that’s exactly what he should do. Walking will rewarm him and get away from the probable cause of hypothermia — the cold water. If possible consider walking out, but don’t let the patient do it alone. Hypothermia is notorious for clouding a person’s judgement, and people have gotten lost on simple trails because of it. At least one and preferably two people should accompany the patient.

When walking do not ignore wind chill, rain and other factors. There have been several fatalities where paddlers have tried to walk out in very poor conditions and never made it. If you carry basic survival gear including matches it may be better, especially if you can find a protected spot, to try to rewarm the victim there while someone goes for help.

Build a fire and if possible get the
patient into dry clothes or a sleeping bag. If these aren't available use extra clothing from other members of the group. Give them a warm, non-alcoholic drink ("snake bite medicine" will only make the situation worse).

This treatment isn't going to work in the second stage of hypothermia (core temperature 95-90 degrees). Hypothermia becomes critical when the body can't rewarm itself without outside help, even in a dry sleeping bag. One solution at this point is to use body heat from the other members in a "human sandwich". Skin to skin contact is necessary for this to work. Another is to heat moist life jackets in front of a fire and wrap them around the patient, exchanging them as they cool.

The more advanced the hypothermia, the less effective field rewarming techniques are. In the advanced or third stage (body core temperature 90 degrees or less) there is a danger of cardiac arrest if the patient is suddenly rewarmed when the stagnant, chemically unbalanced blood from the limbs begins to recirculate.

This stage of hypothermia can generally be recognized by unconsciousness. Field rewarming then becomes impractical and the patient must be evacuated to a hospital. The limbs should be left uncovered and the torso kept warm. As with CPR, don't give up. People have been revived with a core temperature of 64 degrees.

**SHOULDER DISLOCATIONS**

Whitewater paddling can cause a variety of injuries: broken limbs and noses, sprains, cuts, and others. One type of injury that is very common, particularly among kayakers, is the shoulder dislocation.

A shoulder "dislocates" when the ball of the upper arm pops out of the socket of the shoulder. It's usually very painful and under normal circumstances should only be "reduced" (put back in place) by a doctor.

Shoulder dislocations are frequently caused by poor paddling technique. A typical case is when a paddler extends his arm away from his body, rotates it rearward on a brace, turns his head in...
the opposite direction and receives a jarring blow on the paddle. All paddlers should take the time to learn proper paddling technique and methods of avoiding shoulder dislocations.

First aid field treatment is to put a sling and then tie as swath bandage around the body to keep the arm immobilized. The patient should be evacuated, and although they can usually walk, they should not be sent out alone. Pain from a shoulder dislocation can induce shock.

Paddlers venturing into remote areas may want to discuss methods of reducing a shoulder dislocation with their doctor. This is especially true of those who have suffered a dislocation in the past, since they are more likely to have it happen again. The longer the shoulder remains "out" the harder it is to put back in.

Any person involved with outdoor sports should have some form of first aid training. Frequently we are in a wilderness setting and engaged in an active sport where injury is a distinct possibility. Professional help can be hours, days, or even weeks away, which means some training in dealing with medical emergencies is a must. Knowing the techniques of patient care and evacuation can make the difference between a good story and a tragedy.

This article is adapted from River Rescue, by Les Bechdel and Slim Ray, to be published this spring by Appalachian Mountain Club, 5 Joy Street, Boston, MA 02108.

The authors are both long time paddlers. Les, a former U.S. Slalom champion and U.S. Team member, is safety chairman for the Dixie Division of the ACA and has been instrumental in the development of many modern river rescue systems. In association with the Nantahala Outdoor Center he conducts rescue classes and seminars in the U.S. and Canada. Slim Ray's photographs and articles have appeared in numerous outdoor related publications.

In the preceding article, we discussed clothing to combat excessive radiation and evaporation cooling. We'll now examine the gear which is used to control conduction cooling.

Because water is an excellent heat conductor, a body's cooling rate in water is very fast. Obviously protection from immersion cooling is of primary concern to paddlers, even if a few minutes.

In cold water will reduce body temperature to the point where circulation is cut off automatically from the arms and legs, thus rendering them useless in self-help such as swimming, clutching a rope or re-entering a kayak. The two insulators used to control immersion cooling are rubber and air combined in the familiar form of blown neoprene rubber foam. The material is used to make wet suits and drysuits, which are the most common means of reducing heat transfer to a manageable level.

The main disadvantage of both dry and wetsuits is that overheating is difficult to control while you are simply paddling. Although you can add layers of "air" clothing (see preceding article), you can't remove the neoprene layer and still maintain immersion protection.

Originally made for divers, both wetsuits and drysuits are now produced to be worn for surface sports. The O'Neill Wetsuit Company, which devotes itself exclusively to surface sports, is the leader in the field in terms of comfort and fit. The difference between the two relates to the activity — divers require very little shoulder/arm mobility and a great deal of insulation for extended periods of time, whereas sailors, skiers, surfers and especially paddlers require tremendous mobility and insulation for only short periods of immersion. A diver's suit starts at 1/4"
thick MINIMUM, whereas a paddler’s suit is usually \(\frac{1}{4}\)" thick MAXIMUM. The thicker the material, the better the insulation, but also, the less flexible it is.

In most drysuits rubber or latex is used to keep the water out altogether, and you rely on the air trapped inside the suit to keep you warm long enough for self-rescue. This calls for a loose fit under which you wear air-layering clothes for comfort and warmth. Until recently, drysuits cost three to five times more than wetsuits; cheap drysuits are now close in price to quality wetsuits, but durability and watertightness are questionable. The main drawback to drysuits is the inability to regulate your temperature DOWNWARD. The seals at neck, wrists and ankles allow for no ventilation whatsoever. This means you probably need both a drysuit and a wetsuit. Also, the zipper across the back often needs a second person (or a team!) to help you in and out of your suit! This need not necessarily be a disadvantage since it may give you a perfect excuse to get to know perfect strangers.

A wetsuit must fit like a second skin in order to be effective, not necessarily constrictingly tight, but following the contours of your body with no gaps. As water enters, it is trapped between the skin and suit and warmed until it reaches body temperatures. A "second skin" that is thick and stiff would restrict mobility, so paddlers, who spend very little time submerged and a lot of time imitating windmills, compromise with a quite thin, but flexible, "second skin". We've found that 2mm works well as a basic suit thickness when used in a layered neoprene system consisting of a long john and a jacket or vest. When both are worn, the material thickness in the crucial area of the torso is 4mm. A vest made of even thicker material can be worn without impeding mobility.

The one company to combine the features of the drysuit and wetsuit is O'Neill. They have produced a two-piece drysuit made of neoprene that lets no water through (like a drysuit) but fits snugly (like a wetsuit). What we like about this suit is a) you can answer calls of nature without removing your life jacket or anything else above your waist, and b) you can convert the suit to a milder weather suit by wearing a wetsuit vest instead of the drysuit top!!

So, as you can see, neither the air-layering system nor the wetsuit/drysuit system alone works under all conditions. You have to combine them for the very worst conditions and use your judgment as to which you will favor in better conditions. On a warm day on a difficult, cold river, you would protect yourself against immersion at all costs; conversely, on a cold day on warm or easy water, you might concern yourself mainly with radiation and evaporation.

(Bill and Ann Sweeney are the proprietors of Boats & Paddles in Madison, New Jersey.)

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**Does Your Paddle Fit You?**

A comfortable grip width can usually be determined by holding the paddle over your head with both hands. Bend your elbows at 90° or a little less, so that your upper arms are approximately parallel with your shoulders. With your hands in this position there should be three to five inches between your hand and the blade.

As for specific numbers, the following chart might serve as a guide:

- Under 5'3" - 198-200 cm
- 5'4"-5'5" - 202 cm
- 5'6"-5'7" - 204 cm
- 5'8"-5'10" - 206 cm
- 5'11"-6' - 208 cm
- Over 6' - 210 cm

This is a very general guide and is only a recommendation. Personal choices will vary depending on experience and strength, and body proportions such as torso length, arm length and shoulder width.

Related to the length is the paddle’s weight: longer paddles weigh more, shorter ones less. Weight in a wooden paddle is also related to its layup, i.e.; the
that the shaft carries more of the overall weight than the blades. A paddle with relatively more weight out on the ends feels cumbersome. The shape I am referring to involves variables far less obvious than just the blade profile. Critical to the way a blade feels in the water is its thickness and the surface shape on both the power and non-power faces. Wooden blades, because of the way they are usually shaped, flutter less and slice with better control. Finally, I prefer the flex of a wooden shaft, and prefer the way it feels in my hand, particularly in cold weather paddling.

Choosing the correct weight of a paddle is best done by exercising a little common sense. If you weigh 195 lbs. and like to play in big holes, buy a stout paddle. Chances are you can handle the weight. If you weigh 110 lbs. and wouldn't get within 50 yards of anything vaguely resembling a hole, treat yourself to something lighter. Give serious thought to whether you want to learn to go fast in the gates or whether you want to spend your time cruising and learning to hot dog. If your choice is the latter, your purposes would be better served by something less likely to break.

A quick word on right-hand versus left-hand control. This determines the wrist that will control blade angle. Right-handed people are generally more dexterous on their right, the opposite is true for the left-handed. For this reason it is usually best to choose your paddle according to your natural preference, right or left.

Having decided on length, weight, and control, the questions remaining are more complex and subjective.

For example, should you purchase a wooden paddle or a synthetic one? It is difficult for me to discuss this area without a distinct bias becoming apparent. Best that it be declared openly. I prefer a wooden paddle. What I feel that paddles constructed of wood have to offer are: better balance, more desirable blade shape and flex. By balance I mean that the shaft carries more weight out on

While I do not believe that synthetic paddles are stronger, or less likely to break, they are certainly more maintenance free. There is no worry about chipping the finish, no need to re-finish. They appear to be more readily available, especially second hand from folks who have been paddling more than a year. But obviously I am not the person to round out this discussion.

It's possible to buy a paddle for $29.95. It's also possible to spend $200.00. Realistically, most quality whitewater kayak paddles today are in the $110.00 to $150.00 price range. Within that range, what you should spend depends on answers to questions such as how important is whitewater paddling to you? If you're not sure yet, maybe a less expensive paddle should be your choice until you are sure. It can always serve as a backup later on. You might ask yourself how often you plan to paddle when deciding whether to go the extra cost of a more durable paddle. And, quite frankly, if and when you swim, do you hang on to your gear?

As is true with most equipment, what an individual prefers depends on what he is accustomed to. Given a little thought, and a little help from more experienced friends, a reasonable decision will most likely result. What becomes more important then is getting out there and using that equipment. Whitewater is a sport that becomes more fun and more thrilling the more you participate and advance your skills..
AMC PUBLISHES FIRST COMPREHENSIVE BOOK ON RIVER SAFETY AND RESCUE

According to Charlie Walbridge, American Canoeing Association Safety Chairman, "The skill level of the average paddler today is higher than ever before in all areas but one: the ability to make effective rescues." RIVER RESCUE, available now from Appalachian Mountain Club Books, was written to fill this need.

Finally, river runners have a single, comprehensive source of information on accident prevention and rescue techniques on the river. Written by acknowledged whitewater experts Les Bechdel and Slim Ray, RIVER RESCUE is an indispensable aid for anyone who spends time on the river. RIVER RESCUE is ideal for both self-instruction and for use in teaching programs with its clear, concise instructions and high-quality illustrations of actual rescues and river characteristics. Special chapters are devoted to the needs of rescue professionals and whitewater outfitters.

Inside RIVER RESCUE you'll find information on...
- reading the river
- self-rescue, ropework, and rescue techniques
- trip outfitting and equipment
- organization and leadership
- patient care and evacuation
- CPR, first aid, and hypothermia

Professionals with the country's largest whitewater outfitter, the Nantahala Outdoor Center, authors Les Bechdel and Slim Ray know the value of avoiding accidents on the river and what to do if they happen. Les Bechdel, an NOC vice-president, was awarded the American Red Cross Certificate of Merit for his part in the rescue on Chile's Bio-Bio River recounted in RIVER RESCUE. Bechdel's river expertise includes four national slalom championships, five times representing the U.S. in world championships, and extensive trip leadership including the first whitewater descent in Bhutan. Slim Ray, senior NOC photographer, has paddled, taught, and recorded whitewater trips around the world. His writing and photographs have appeared in CANOE, RIVER RUNNER, CURRENTS, SIERRA, BACKPACKER, and other national publications. Their combined experience, river sense, and painstakingly tested river safety and rescue skills are available now in a convenient format for anyone who uses and safeguards the river.

RIVER RESCUE
Les Bechdel and Slim Ray
ISBN 0-910146-55-1, $9.95 paperback
220 pages, 55 line drawings, 125 black and white photographs
Available today from AMC Books, 5 Joy Street, Boston, Massachusetts 02107, Phone 617-523-0636.

WHITETRIVER HOME COMPANION, Volume II
by William Nealy
168 pages, 8½x11½ (softcover), $8.95

Have you ever wondered how to get muncher in a mega-hole and sustain a shoulder dislocation at the same time? Well, you can find out how, and also how to avoid same in William Nealy’s new volume of river wit and wisdom. He has selected ten rivers from the ‘Appalachian Islands’ and rendered them in that distinctive cartoon style we've seen in his previous four volumes. The James, New gorge, and Shenandoah are well known to all, but fewer have had the opportunity to paddle on the Big South Fork or Wilson Creek, and this book gives the armchair paddler an idea of what he will find. No river guide can describe every detail of the river, but Nealy has admirably rendered the trips and indicated the most likely trouble spots, including some tips on how to successfully run some particularly difficult spots.

The most fun is contained in the first 30 pages, and last 20. He has another 'river trip' story, survival tips (particularly on big, high-flow rivers), the High Brace vs. Low Brace Debate, and others. Mixed in amongst the humor is some serious thought. But beside that, it was interesting to see how often the female paddler comes out on top in this round of whimsicality. Someplace between the dedication and the final pages of the continued on page 36
COLD SUMMER WIND
by Clayton Klein
5½ x 8½, b&w photos, $13.95, 260 pages hardbound

Kazan, Elk, Thelon, Backs & Cochrane, the big rivers of the barren grounds in Canada's far north. For most canoeists these are only a dream; some vision concocted in the mind, but to the father and son team of Clayton and Darrell Klein they became a real life adventure. Paddling over 3,000 miles over a period of several years on different trips, mostly by themselves in a single aluminum canoe, with a plastic dry box and 2-burner Coleman stove they managed to experience the wilderness at its best and worst. There were warm and sunny days when the fish were biting and wildlife close at hand, but seemingly many more days when the ice was thick, the wind strong and cold, and the prime consideration was survival itself. Interesting reading for anyone contemplating a far-north expedition, and containing useful information regarding the rapids, portages and conditions to be encountered along the rivers mentioned above. In addition there are sprinkled among the text little tidbits of trivia on weather, geology and ecology plus a healthy dose of history. Some 30 pages are devoted to the story of the Garry Lake Mission. There is a nice little bibliography for anyone interested in pursuing additional reading.

But make no mistake: this is not great literature. There is little in the way of a story line to interest the casual reader and the whitewater devotee will find little which will arouse his passion. The structure is 'wooden', like a third grade reader, which perhaps explains why the publisher is a press in the hometown of the author. But despite these shortcomings, give the author the credit due: a man who not only made his canoeing dreams come true but was able to carry that interest into print and share his experiences with others. Cold Summer Wind has limited appeal but at the same time has a definite place and worthwhile purpose.

by Tom McCloud

CANOE CRAFT
by Ted Moores and Merilyn Mohr
Camden House Publishing, Ltd., Camden East, Ontario, Canada KOK 1JO, (1983)
150 pages, 8x10 ¼”, b&w photos, drawings, $14.95

Whether you have ever paddled one or not, no real canoeist can help but admire the beauty and style of a fine cedar strip canoe. If your admiration becomes desire, then this is the book for you, for it gives extensive directions for building your own strip/epoxy craft. There is an early section on design that explains the advantages and trade-offs of the various styles, and this can be of great help if you should have intentions of modifying a model. Next is a section consisting of the specifications for seven different designs which, with the aid of paper, pencil and skill, you can transform into hardback forms. Equipping a workshop, a discussion of the woods that can be used and also the various resins, glasses and plastics is included. The following chapters give exacting instructions which should lead even the clumsiest carpenter through the boat building process with little trouble. There are many diagrams and photographs which aid the explanation and clarify many questions which could be left unanswered by the text. If you have never worked with fiberglass, the section which describes the application of the glass/epoxy sandwich to both inside and outside surfaces, thus sealing in the wood and greatly strengthening the 'monocoque' hull will be of value to you. Aside from the hull there are other considerations, some of which are purely aesthetic, which go into the finished product, and these are given discussion in the section on fitting out. And lastly, a section on repair of damaged wood or fiberglass.

This book seems to be the complete text of strip/epoxy construction, written in such a detailed and understandable way that it is hard to conceive of away in which it could be improved. This is probably because it is an elaboration of the manual which used to accompany continued on page 36
PRODUCT REVIEW
HYDRA TUF-LITE

After acquiring Hydra in November of 1984 we took some time to think over the challenge we had ahead of us and decided that we needed to do was to introduce new features that have never before been available on kayaks and canoes.

So here is what we have done:

1. Our hulls are made of a plastic resin called TUF-LITE. We liked it enough to add it to our name. This resin enables us to make our boats stronger, tougher, stiffer and lighter than crosslinked polyethylene. And best of all its repairable.

2. We have a notchless footbrace that is designed so it will not cut a bare foot or wear down a protective bootie.

3. Our innovative thigh strap system features padded straps with a pull-up release system that is quick and effective.

4. We have bright new hull colors with bold, eye catching graphics.

So we're back in full swing and under production in our plant in Knoxville, TN. Please give us a call at 1-800-537-888 and let us answer your questions.
Hydra Tuf-Lite's Matador

The Matador is said to be the hottest, most talked about white water play boat on the rivers today. Because of its shorter hull length, twelve feet, this beauty will play in any water you come upon. It is substantially wider than most boats to offer more 'wet area' for added stability. Yet this craft gives ample freedom of movement without the feeling of being cramped. It is at home on any water from the East Coast to the Pecos.

Letters

To The Editor:

To the Editor:

I found Doctor Andy Embick's article well-written—too bad it was written for the last century when great white hunters were in vogue.

Whit Deschner
HCR 88 Box 168
Baker OR 97814

Dave McCourtney,

Keith Thompson asked me to write to you about the meeting that took place between Yellowstone National Park superintendent Ben Clarey and members of the Beartooth Paddlers Society.

After some correspondence between myself and Mr. Clarey a meeting was arranged to discuss the possibility of allowing boating on the rivers of the park. The meeting took place in Billings on Monday the 29th of April. Superintendent Barber and assistant Superintendent Clarey were present as well as eight of our club members.

Mr. Barber was very receptive to the idea of allowing boating in the park. He mentioned that there are precedents in other national parks for allowing boating in recent years. New River Gorge and Redwood National Parks were two examples he cited. We mentioned that we would be interested in anything from class 1 to class 6 water where such use would not conflict with other values of the park. Of course the Yellowstone River was discussed as it has long been the location of illegal runs and is such a prime example of the tremendous quality of the river resource within the park.

We were advised that a committee of park employees would be formed to look into the possibilities. We were also advised that we would be contacted as soon as the committee begins its work and given an opportunity to express our views.

I think that superintendent Barbee and assistant superintendent Clarey should be applauded for addressing an issue that has for too long been ignored and for approaching the issue with an open mind. I would urge all interested parties to write to the superintendent with your comments and suggestions.

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Indianapolis, IN 46220

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Idaho Falls, Idaho 83401

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Dartmouth College
Hanover, NH 03755

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Hagerstown, MD 21740

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Triad River Runners
912 Rollingbend St.
C/O Glenn Creamer
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U of M Outdoor Progress
U. of Montana, MC 164
Missoula, MT 59812

U-Wisconsin Hoofers Club
C/O Mike Sklavos
329 N. Jackson #3
Janesville, WI 53545

Upper Delaware NS & RR
Box C
Narrowsburg, NY 12764

Valdez Alpine Club
C/O Andrew Embick MD
P.O. Box 1889
Valdez, AK 99686

WIMPS
C/O Bill Wang
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Rochester, NY 14624

W-PAFB Outdoor Adventurers Club
C/O Rod D. Joblove
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Z.C.P.F. and C.K.C.
C/O Robert W. Smith
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AWA Save Rivers Project
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Remember AWA donations are tax deductible.

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river dictionary Nealy finds a way to abuse almost every type of paddler but doesn't pick out one for special insult. He maintains an even keel by being an equal opportunity offender.

There is a lot of good information in W.H.C., volume II, and if you've enjoyed William Nealy's previous books, then you'll love this one.

by Tom McCloud

continued from page 32

the Bear Mountain canoe kits, and so has been through the test of use by many amateur builders.

by Tom McCloud

BEGING
WHOLE RIVER CATALOG
Access to Gear

THE WHOLE RIVER CATALOG, published three times a year in AMERICAN WHITEWATER, is an AWA service designed to link up our readers with the best and most convenient sources of boating supply, instruction, and general whitewater paraphernalia. Prices for a full year's participation in the catalog range from only $40 to $90, depending on type of listing. If you know a supplier who would like to appear in the WHOLE RIVER CATALOG, just send the firm's name and address to AWA, Whole River Catalog, 146 N. Brockway, Palatine, IL 60067 and request further details.

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<tr>
<td>13</td>
<td>Alaska Rivers Co.</td>
<td>Box 827, Cooper Landing, AK 99572</td>
<td>(907) 595-1226</td>
<td>Outfitting for rafts, kayaks &amp; canoes in Alaska</td>
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<td>14</td>
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<td>Class VI Whitewater</td>
<td>709 Ready Lane, McCall, ID 83638</td>
<td>(208) 634-4353</td>
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<td>16</td>
<td>Grand Canyon Youth Expeditions, Inc.</td>
<td>R.R. #4, Box 755, Flagstaff, AZ 86001</td>
<td></td>
<td>River expeditions and kayak/raft sales</td>
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<tr>
<td>17</td>
<td>Great Adventures West, Inc.</td>
<td>820 Central Ave., Ft. Falls, MT 59401</td>
<td></td>
<td>Outdoor specialty store</td>
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<td>18</td>
<td>Outdoor Outfitters</td>
<td>Dan Hammock, 3203 Richmond Rd., Texarkana, TX 75503</td>
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<td>19</td>
<td>New England Whitewater Center, Inc.</td>
<td>Box 15, The Forks, ME 04985</td>
<td>(207) 663-4455</td>
<td>Whitewater school/rafting trips—Kennebec</td>
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<td>20</td>
<td>River Paths Outfitters</td>
<td>RD #1, Box 15B, Confluence, PA 15424</td>
<td>(814) 385-3916</td>
<td>Lower Dead, Penobscot</td>
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<td>21</td>
<td>River Runners' Emporium</td>
<td>1295 W. Main St., Durham, NC 27701</td>
<td>(919) 688-2001</td>
<td>Whitewater, backpacking, sales &amp; rentals, clinics &amp; trips</td>
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<td>22</td>
<td>Steamboat Canoe Outfitters</td>
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<td>23</td>
<td>Wildwater Expeditions Unlimited, Inc.</td>
<td>P.O. Box 55, 1 Riverfront St., Thurmond, WVA 25936.</td>
<td>(304) 469-2524</td>
<td>West Virginia Whitewater Tours.</td>
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<td>24</td>
<td>Wilderness Tours</td>
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<td>25</td>
<td>Wild River Outfitters</td>
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<td>Nova/Co Chuck Spalding</td>
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<td>(907) 745-5753</td>
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<td>26</td>
<td>Canoe Magazine</td>
<td>Highland Mill, Camden, ME 04843</td>
<td></td>
<td>America's leading canoe and kayak magazine.</td>
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<tr>
<td>27</td>
<td>Sandpiper Publishing</td>
<td>P.O. Box 5143, St. Albans, WV 29149</td>
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<td>Excellent River Runners calendars.</td>
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<td>Nantahala Outdoor Center</td>
<td>Highway 19W, Box 41, Bryson City, NC 28713</td>
<td></td>
<td>Canoe &amp; kayak instruction, adventure travel trips.</td>
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<tr>
<td>29</td>
<td>Experiment With Travel</td>
<td>281 Franklin St., Box 2452, Springfield, MA 01101</td>
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