

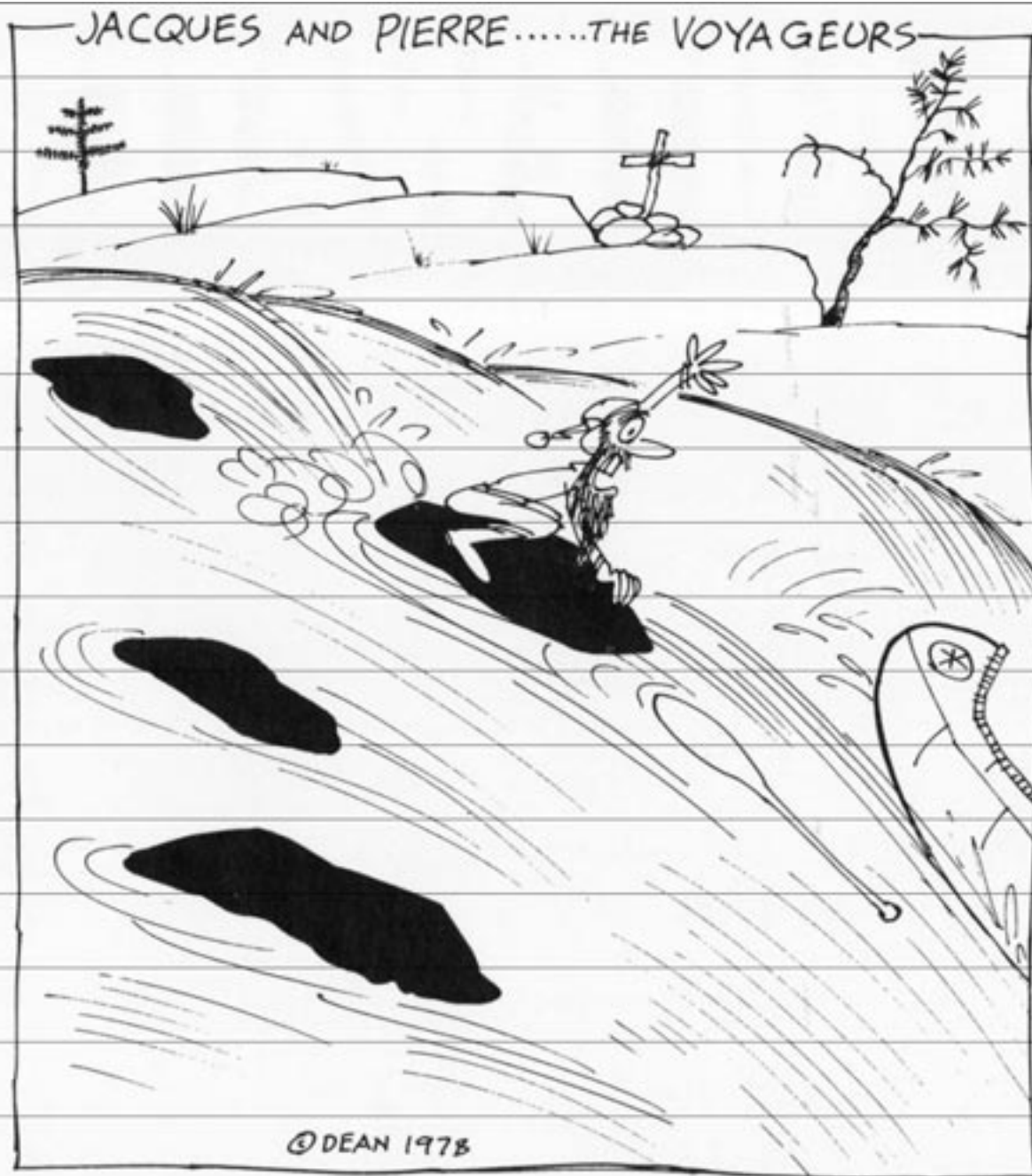
American

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the Journal of the American Whitewater Affiliation



MAR/APR/MAY 1978 Vol. XXIII, No. 2



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American **WHITEWATER**

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MAR/APR 1978

Vol. XXIII, No. 2



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Whitewater
Affiliation

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Contents

ARTICLES

Moose-Back Riding	Carl Lundgren	52
Keeper of the Flame: The ARCC	Steve LaPrade	63
River Rights: Look to the Grand	Pete Skinner	65
Rollin' on the River	Iris Sindelar	69

DEPARTMENTS

Dean's Cartoon	38	Book Review.	72
Editor's Soapbox	41	Classified	73
The Fluvial News	43	Affiliates	74
Upstream	72		

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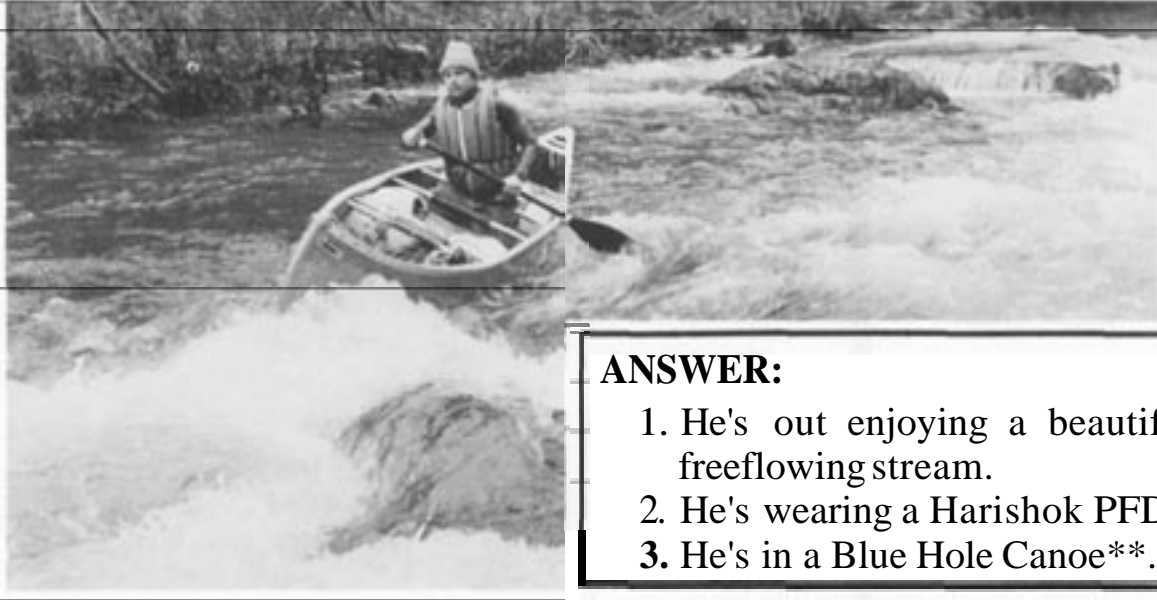
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COVER: Jim Muhlhahn on the Moose River, New York. Jim also did colorprinting on the photos accompanying Carl Lundgren's article, p. 52.. gratis to American Whitewater. Photo by Edie Shiebler.

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EDITOR'S SOAPBOX

Good Style:

The Mark of a Safe Paddler.

Stand on the bank of any river in the country, alongside a rapid of Class II or higher grade and watch a group of paddlers come through. Some will glide through effortlessly, creating a work of conceptual art as they negotiate the drop. Others show somewhat more effort, the strokes remaining discreet instead of blending into a whole. Still others are clearly at their limit, the strain showing on their faces and their arms, betraying the mental battle he is fighting for control of himself. Stand and watch this parade and ask yourself this question: Which of the paddlers passing before you is safe and which is in danger? The answer may seem obvious but bears repeating: The most skillful paddler is the safest paddler.

Each time a story relating the exploits of a local hot shot paddler begins to make the rounds the cries of "Hot Dog!" and "Irresponsible!" are heard throughout the meeting rooms and printed liberally in the newsletters. Certainly, truly irresponsible behavior must continue to be condemned, but Charlie Walbridge made an important distinction between mere foolishness and reprehensible conduct when he stated that a paddler should be allowed to run whatever he chooses so long as he does not make a spectacle of his act to encourage other, perhaps less capable, individuals to emulate his feat. This is a fair and democratic position and yet . . . we still cringe to see obviously unqualified paddlers in places where they do not belong. Many whitewater paddlers do not utilize one concept that would provide a further criterion for deciding when a paddler is within his skill and when he has become

a hazard to himself and to his companions. We need to develop a sense of a quality that might be called 'style.'

Each fall the Army Corps of Engineers releases water from Summersville Reservoir in sufficient quantity to make a run down the lower Gauley a reasonable act. As the water begins its turbulent race through the dam's innards the canyon fills to bursting with a crush of whitewater paddlers of all sizes, shapes and skill levels. A sizeable percentage of this horde consists of first-timers, up-and-coming K-1's and C-1's lured to the remote canyon by tales and guidebook descriptions of the most spectacular river run in the East. They are lured also by the Gauley's most commonly quoted epithet: the qualifying run for the title of Expert. While many veterans no longer consider the Gauley a true expert-level river, the death of Bob Taylor last fall underscored the capacity of the river to extract terrible payment from those who do not treat it with the utmost respect. In a setting of unparalleled beauty and annual water release on the Gauley provides a show of great slapstick humor and, for those concerned with safety in whitewater sport, a rarely equalled ordeal of teeth-clenching anxiety. Many of the paddlers swimming, rolling, and bracing their way down the Gauley have no more business being there than Captain Ahab at a Greenpeace meeting. Yet, so far, all have emerged whole and breathing at the take-out at Peters Creek and careen down the highways toward home with the title "Expert" plastered firmly across the inside of their foreheads. Did the guy who rolled six times and came out of his boat twice really run this river? Where is the dividing line between running a river and merely surviving it? To establish this difference the quality of style must be recognized.

Let's go back to the riverbank on which we stood at the start of this bombast. Watch again as another group of paddlers come through the rapid at our feet. Again, some have grace and power while others must struggle to get through. If asked which is the better paddler we can easily point out our choice. The graceful, confident paddler is obviously the more qualified. As the difficulty of the rapids increases it becomes more and more obvious which paddler is more skillful. While many paddlers are calm and powerful in their strokes in Class II drops, the paddler who maintains a steady stroke and good body position in a Class VI monster is rare indeed. It is the ability to maintain poise that determines whether the paddler has the quality of style. The point at which style breaks down is the point at which a river runner becomes merely a river survivor.

The quality of style should be considered a prerequisite for judging a particular trip a success. Merely finding oneself alive and with a reasonably complete boat at the end of a run is not the measure of mastery of a river. If whitewater sport is to maintain in its maturity the excellent safety record which has characterized its adolescence the standards by which we judge our abilities must be more rigidly defined.

If a paddler flips more than a couple of times during a day's run, then he doesn't belong on the river that day. If a paddler comes out of his boat, he doesn't belong on the river that day. If a paddler is frightened most of the way down a river, he doesn't belong there that day. While flukes may occur and even the best paddlers occasionally find themselves inexplicably swimming through a rapid, these occasions must be regarded as failures, dangerous to the paddler himself and to his companions. Open boaters may protest that this


parameter is unfair to them since a flip in an open boat is an obligatory swim but we must take the view that, for whitewater paddlers, swimming through rapids is unacceptable behavior. Obviously, the paddler who is just learning the sport will have many days where he has spent some time in the water but beginnings are always hazardous in any activity and this will remain true in whitewater paddling.

Any river that can be paddled at all can be paddled without flipping, swimming or being constantly afraid for one's life. These conditions constitute the basics of paddling "in good style." If we are not to continue to watch our friends die in increasing numbers we must learn not to paddle those streams which we cannot accomplish with style.

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Fluvial News

AWA CO-FOUNDER McNAIR RECEIVES SAFETY AWARD



CHICAGO—The Public Safety Conference of the National Safety Council has named Robert Edwin McNair of Swarthmore, Pennsylvania, as the recipient of the 1977 Distinguished Service to Safety Award.

In announcing the award, John P. Fleming, manager of the Safety Council's Public Safety Department, said: "In his many years of distinguished service to the safety movement, Robert Edwin McNair has consistently worked to advance the cause of public safety, particularly in the area of whitewater canoeing.

"If not indeed the father of whitewater canoeing in America, he has certainly been its most energetic and imaginative supporter, teacher and safety advocate.

"Back in 1945, he co-founded a whitewater canoeing club which was

later to stage the first canoe slalom in America.

"He also co-founded, with Eliot DuBois, the American Whitewater Affiliation, a national organization for the dissemination of knowledge on whitewater boating. He later served as the Executive Secretary of that organization and participated in writing its safety code which is recognized by canoe organizations and by state and national parks across the country.

"He taught canoeing for the American Red Cross and was first National Slalom chairman of the American Canoe Assn. With the Red Cross and Buck Ridge Ski Club, he started the biennial Red Ridge College of River Canoeing to teach new safety techniques to other clubs and organizations.

"He also started 'Paddlerama,' an annual training program in basic whitewater canoeing for the Boy Scouts of America.

"To spread knowledge of new techniques for safe travel on fast rivers, he authored *Basic River Canoeing*, which was published by the American Camping Association and is now in its seventh reprint.

"Last year, McNair was awarded the Anheiser-Busch Michelob Schooner Award . . . in recognition for his outstanding contributions in the field of small craft, and for his efforts in the promotion of canoe and kayak safety."

A native of Cambridge, Mass., and the recipient of a Master's degree from Harvard University, McNair is presently an engineer for the Westinghouse Electric Company in Philadelphia, Pa.

The National Safety Council, founded in 1913 and headquartered in Chi-

ago, is chartered by Congress as a non-governmental, non-profit voluntary public service organization composed of both individual and corporate members. The Council is dedicated to the safety of everyone, everywhere through education and the development and implementation of accident prevention programs.

GAULEY RIVER DAM SUNK BY OLD TOPO MAPS

A story to warm the hearts of white-water paddlers everywhere comes to us from Bob Burrell of the West Virginia Highlands Conservancy.

The Army Corps of Engineers has been working on plans to build the world's highest earth-fill dam on the Gauley River in southern West Virginia. This dam would have created a lake whose waters would have extended

upstream to the base of the existing Summersville Dam, submerging one of the great classic whitewater runs of the country and destroying a canyon of extraordinary beauty and solitude. The Gauley River Downriver Race was one of the tools used by environmentalists to halt the project. The struggle raged back and forth for years but now fate has entered the contest and proclaimed victory for anti-dam forces (also known as the Good Guys).

Veteran WVA paddlers are aware that the USGS topographical maps for most of the state are hopelessly out of date. In many areas the most recent maps available were surveyed before the first World War. This was historically interesting but dismaying, particularly when one finds himself in the main street of a town that is no longer even a fond memory. These conditions sometimes made it tough to figure out shuttle routes, but even the darkest cloud has a silver lining and the lining on this particular cumulo-nimbus turned out to be solid gold. It seems that the Corps had also been using these maps for the planning and design of their projected masterpiece. Then the USGS re-surveyed the area and issued a new set of maps reflecting the updated data. And there-in lies our story.

The Corps received their new maps and proceeded to translate their plans to the new topo maps. When all the data had been translated (and doubtless double, triple and quadruple checked) a curious fact was discovered.



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NEW TREASURER NEEDED

After many years of superlative service, Rosemary Gabler is ready to throw in the towel as AWA's treasurer. Person's interested in filling this vital post should contact:

Jim Sindelar
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The planned dam, the world's highest earth fill structure, would soar 200 feet higher than the rim of the Gauley River Canyon. Apparently the cost of redesigning the dam would have ruined the cost-benefit ratio so the entire project has been **SCRAPPED!** Honest.

With the wisdom of hindsight, it's almost a shame it wasn't built as planned. (Take it easy, we said almost). The sight of 200 feet of unsupported dam structure waving gently in the breeze would have made a lovely poster to send to our Congressmen. Oh, well . . .

AMERICAN RIVERS CONSERVATION COUNCIL BENEFIT RIVER TRIPS



Thanks to the generosity of a number of river outfitters, river lovers can explore wild and scenic rivers, and at the same time contribute to the cause of river conservation, by participating in a variety of benefit river trips.

These trips, conducted by experienced eastern and western outfitters, will benefit the American Rivers Conservation Council, the only national organization dedicated exclusively to the preservation of America's free-flowing rivers and streams.

The trips include:

May 15-20: a week-long raft trip on the

Dolores River in Colorado, with Preston Ellsworth's Colorado-River Tours.

May 30 : a one-day raft trip through the New River Gorge, in West Virginia with Jon Dragan's Wildwater Expeditions Unlimited, preceded by an interpretive hike on May 29.

June 16 : a one-day raft trip down the Chattooga River, in Georgia and South Carolina, with Claude Terry's Southeastern Expeditions.

July 6, 7 : 2 one-day trips on the Penobscot and Kennebec Rivers in Maine with John Connelly's Eastern River Expeditions.

Aug. 5-12 : a week-long trip by sportyak on the Green River in Utah with Pay and Susan Conley's Wild and Scenic, Inc.

Sept. 4 : a one-day raft trip on the Youghiogheny River in Pennsylvania with Ralph McCarty's Mountain Streams and Trails Outfitters.

Oct. 6 : a one-day raft trip on the Gauley River in West Virginia with Paul Breuer's Mountain River Tours.

In addition, Martin Litton's Grand Canyon Dorries will give a "conservation commission" on trips booked through ARCC on the Owyhee and Grande Ronde rivers in Oregon, and the Salmon River in Idaho. Hank and Sharon Miller's Idaho Adventures will offer the same arrangement for trips on the Middle Fork or Main Fork of the Salmon, the Snake and other Idaho rivers. Class VI River Runners, Inc. is including a small contribution to ARCC in the price charged each customer for its New River and Gauley River trips.

Prices for the benefit trips are the same as those normally charged by the outfitters, and range from \$25 for the **Chattooga** and Youghiogheny trips to \$425 for the Green River excursion. For further information on a particular trip, contact Pat Munoz or Howard Brown, American Rivers Conservation Council, 317 Pennsylvania Ave., S.E., Washington, D.C. 20003. Phone: (202) 547-6900.

NATIONAL MEMBERSHIP CHAIRPERSON NEEDED


AWA membership is down to about 2000. Considering the large numbers of people applying for permits to run the Grand Canyon these days (15,000 to 30,000), we realize that we are not reaching the whitewater public. An aggressive and experienced chairperson is needed to expand our membership beyond the core of readers we have now and have had for the last decade.

We believe that such a chairperson must be familiar with techniques of membership drives and capable of obtaining and implementing low cost professional guidance in this area. AWA will absorb the direct costs of the program. The Directors and staff will review and approve the plan of action and assist in its implementation.

The AWA has already introduced a large number of innovations in the Journal format and the organization's operations. We do not believe, however, that these changes will automatically boost membership. All of this effort will be wasted if our membership slowly dwindles. We need a dynamic and experienced leader to help us bridge the gap between the longtime whitewater **afficionado** who represents our present membership and the exploding numbers of whitewater lovers we know are out there. Your help is vitally needed.

Please contact:

Phil Vogel,
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PRODUCT TESTING MANAGER NEEDED

AWA wants to develop an equipment approval program which will evaluate performance and construction quality of boats, paddles and accessories. As the program is envisioned by the Directors, there will be one person managing a group of testers across the nation who carry out prescribed tests on boats and other equipment and report their findings to the manager.

The manager must (after consultation with industry and boaters) develop performance criteria for each article and prescribe tests to evaluate its performance. The manager will communicate directly with the manufacturer and point out any defects that testers find in the product and allow time for the manufacturer to make any necessary changes. If such changes are made then the product can bear an AWA seal of approval for "whitewater worthiness." If the manufacturer declines to make any changes the tester's findings would be published along with a reply from the manufacturer for the public's consideration.

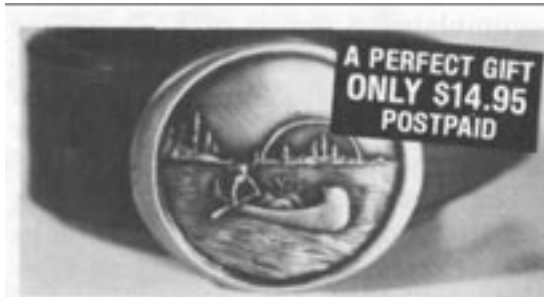
This program is vitally needed by boaters across the country as manufacturers are beginning to flood the market with whitewater equipment, both good and bad. Since whitewater paddlers are more reliant on the quality of their equipment than more casual paddlers parameters for judging whitewater gear must be established as soon as possible.

The program manager must be experienced in whitewater equipment design and construction. He or she must have enough time and imagination to conceive the necessary procedures for evaluation. The manager must be able to develop a network of correspondents across the nation to undertake the re-

quired tests. The manager must be able to convince manufacturers to provide samples of equipment to the program at nominal cost.

AWA will initially cover the costs of the program, but we hope the manager will develop self-financing mechanisms for the program. We look forward to hearing from interested parties immediately. Address all correspondence regarding this program to:

Peter Skinner
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Tom Clemow in Knifeedge Rapids. Photo by Karen Maskasky

MOOSE-BACK RIDING

by Carl A. Lundgren

The last 3.6 miles of the Adirondack's Moose River fall, literally, into the Black River at **Lyon's Falls**. The Moose River has always been well traveled by canoeists and kayakists. The South Branch flows quietly, with few exceptions, through an area of the Adirondack Park which is nearly inaccessible, down to McKeever where it joins the North Branch. Running from Old Forge to McKeever, the Middle Branch is a popular open canoe route, the site of many canoe races. The lower Moose traditionally begins at the Route #28 bridge over the Moose near McKeever, New York. Open canoeists are much rarer on

this lower section of the Moose and as the drops become steeper and the holes larger, covered boaters can be severely tested. The iron bridge (second since McKeever) at Fowlersville, marks the usual end to the lower Moose and, sanely, the usual end of navigable water on the Moose.

The entire Moose River is characterized by steep ledge-drop rapids with comparatively long flat stretches between rapids. The rapids on the Moose have a different character than eastern Adirondack rivers . . . such as the Hudson with its boulder-strewn rapids. The ledge nature of the Moose makes pad-

dling very level-dependent: too high and the rapids can become impassable, rendering the river into a series of long flats and short portages. But, below 3 feet on the McKeever gage, the lower Moose becomes almost trivial for covered boaters. The normal covered boating season on the Moose River is spring thaw and fall rainy season, — short and rain dependent. The result is that the Moose has had a mixed reputation — *great* when right, *impossible* when slightly higher, and —'yawn' when at normal level.

Now that I've described the portion of the Moose normally boated, I'd like to discuss the last 3.6 miles of this river. The BOTTOM Moose is that stretch, beginning at the Fowlersville Bridge, and continuing to the Black River. This section of the Moose is not normally attempted by anyone. When I asked knowledgeable Moose River paddlers if the 'Bottom' Moose was runnable, I was met with skepticism about my sanity and questioned about my desires to portage dams and waterfalls, instead of boating.

I realize I have a reputation for being somewhat "crazy," and I do enjoy steep kayaking, but the BOTTOM MOOSE is, to quote West Virginia friends, "BODACIOUS." The "Bottom Moose" is exceptional . . . in all respects. The River is beautiful, some sections perhaps the most spectacular I have boated in the East or the West. The Bottom Moose is either flat or very vertical, which makes 300 feet in 3.6 river miles, impressive. The rapids have all been run, though not at the same level. But even with the beauty and the thrills and the excitement, PLEASE, be aware that the Bottom Moose is dangerous.

This will not be a "how-to" description. Every group who attempts this section of the Moose should treat it like an expert exploratory first run! Boaters should be fully equipped and have throwlines, durable boats, and hard shell hel-

rets; the Bottom Moose is not forgiving. Time is of the essence, the Bottom Moose demands scouting *each* drop, each run, since very small changes in water level can dramatically affect runnability. It took three trips to reduce the 3.6 mile route to eight hours of travel time. The "Bottom" Moose IS runnable, but only at levels near 2 feet on the McKeever gage. However, this level is often encountered even during summer.

When we started down the Bottom Moose late last spring, Jim Muhlhahn, an aggressive boater from the KCCNY, Tom Clemow, an exceptional exploratory boater from Boston, and Joe Maskasky, from Upstate New York, were willing to carry every drop, if necessary. Six hours later we quit; still a mile from the end, but we had had to portage only twice. Two weekends later, fully addicted to the Bottom Moose, we were back; armed with two bushwacking photographers, 4 cameras, throwropes, and an EARLY start. By Sunday evening, we had paddled (or snuck) every drop, made two serious rescues, and taken nearly 300 photographs.

The first falls occurs 400 yards below the Fowlersville Bridge put-in. The Moose River is squeezed toward river left by a wing dam, a remnant of the former Fowlersville Mill on river right. As the dam ends, the Moose slides over Fowlersville Falls, a two stage total of about 40 vertical feet. This 45° sloping falls can *only* be run on the extreme



L. to R. Joe Maskasky, Carl Lundgren, Tom Clemow and Jim Muhlhahn.

river right, essentially scraping on wet rocks. The main current in the center and left of the river form a terminal hole with a 75 foot downstream recirculation influence. This recirculation has been responsible for at least one non-boating fatality.

Two kayakers since our first run have had serious trouble here, including Jim Muhlhahn. On the second day of our photo weekend, Jim successfully ran the drop on river right, but tipped over in the bottom pool. His kayak was moved upstream into the hole and gradually to river left where the recirculation effect is strongest. Tom Clemow's immediate efforts at pulling Jim out with his kayak were unsuccessful, but fortunately Jim and equipment washed out after 2 to 3 minutes of slow recirculation. Fowlerville Falls is DANGEROUS, please don't ever casually run this area.

Following two small ledges, the Moose turns left and with the same rock formations that create the numerous falls, the river is constricted between the harder rock layers to form a 25 foot wide "Funnel." This drop is actually more difficult than it appears, when scouting, since an impenetrable eddy line blocks the only clean route through the Funnel. The boater rides this sloping eddy line down the chute and 'oil cans' over a boulder at the bottom. Ill-timed rolls or braces readily attested to relative durability of rock compared to body or paddle.

After meandering through a wide gravel bed section and over two small ledges, the Moose enters a short but spectacular canyon. The river has cut a near vertical bed along a continuous layer of harder rock on river left. The resulting 200 foot wall is nearly smooth, without vegetation, starkly contrasting the white water below. The river itself is split by a narrow island of solid rock, into two channels. This is "Knifedge" or "Cliffside" rapids.

The river left channel is extremely constricted and jumbled with large blocks from the adjacent cliff. The runnable channel here narrows to as little as 36 inches! The majority of the river flow moves on the right side of the island and drops about 12 feet in two stages. Routes through here are not obvious and vary with river level, but the beauty of this area makes scouting an enjoyable diversion.

The cliff is a tempting climb and not impossible, but the return trip is much more formidable. Jim and I spent 45 minutes seeking a route back down and ultimately were forced to hike up and around to reach river level again.

Following a brief pool, the Moose widens and turns and falls over Upper Lyonsdale Falls. The mill at Lyonsdale is visible at the base of this 2 stage 15 foot rapids. This is a delightful rapid. We've run it many ways but water levels are critical and scouting will obviously be necessary.

From the base of Upper Lyonsdale, the Moose widens again into a pool behind the dam impoundment for the mill. The river is again split in two channels (really three if the power canal entrance and spillway is counted) by an island which forms the center of the river-wide dam. The dam is on the crest of a multistage 40 foot falls, Lower Lyonsdale. Best landing point is the island itself, nearer the right channel. Access to either shore is also possible since there is a bridge directly over both halves of the dam. The right channel was run including the dam, but only after MUCH scouting and, as described later, not terribly successful. A dry river inspection of the left channel this past summer revealed the presence of several debris-choked caves draining from the bottom or side of two separate pools. This factor alone rules the left channel unrunnable, even though it can look tempting.

The smaller right channel slides 8 feet over a concrete dam, complete with exposed pipe and re-bar, down a wide chute to pile upon the face of a rock wall. This 4 foot high pillow drains right and left forming a narrow T. Because of the water velocity, a kayaker has a very short span of time after running the initial dam to get oriented and turned right or left to brace into the pillow. We learned that failure to make that turn cleanly could be disastrous. After Tom Clemow and myself ran this drop without problem, Jim Muhlhahn jammed in the T. The nose of his boat jammed against the rock face while the stern pinned to the right side of the entrance chute. Kayaker and boat literally disappeared as water broke over Jim, still upright and bracing. As a precaution,

throw ropes were already out, as they were for each rapid, and we were able to quickly pull Jim out. His boat and paddle stayed; pressed to the head of the T. After rescuing Jim's paddle and boat, now with 3 inches of nose ground off, we continued. Joe wisely carried, as have the 4 of us since.

The only real play spot, with surfing waves and two small holes, follows the second drop of Lower Lyonsdale Falls, adjacent to the paper mill and some 40 feet below the upper pool level. Lower Lyonsdale Falls is exquisite, but the presence of man-made obstructions; dam, bridge, and mill, make it extremely hazardous to paddle.

With Lyonsdale Dam marking the midpoint of the BOTTOM MOOSE, the best and worst still remain. On our

Jim Muhlhahn becomes pinned in Lower Lyonsdale Falls. Note the water piling up on his back. Photo by Edie Shiebler.



photographic expedition weekend, our two non-paddlers hiked, ran, climbed, and waded to photograph every major rapid on the Bottom Moose. Shooting almost 300 shots, Karen Maskasky, and Edie Shiebler enjoyed the Bottom Moose as much as the four boaters. In the tradition of good photographers, they continued to shoot even as Jim pinned in Lower Lyonsdale Falls, resulting in the photographs accompanying this article.

Succeeding the Lower Lyonsdale Falls, the Moose widens into a large pool which for all appearances signals the approach of another dam. But the dam is natural and presents a nearly perfect waterfall for running in covered boats. At water levels of less than 3 feet at the **McKeever** gage, this is probably the safest rapid on the Bottom Moose, but also the most exciting!

Scouting reveals that one quarter of the river's width (ca. 75 feet) falls with very little volume over a vertical 20 foot ledge, into a 20 foot deep pool. PERFECT. There is no recirculation and no under cutting on river right, though river center is less attractive. This falls is known for the large pool below the falls. . . Ager's Basin. Our name for this falls is '12 footer.' Having previously scouted this falls, the author reassured everyone in our first approach, prior to *our* scouting . . . that "the next drop is a little 12 foot falls." A considerable underestimate as it turned out, and thus the name of the falls. "12-Footer" is like the first falls on the Big Sandy in West Virginia. We repeatedly carried our boats back to the top for reruns. The entry into the water is so vertical that complete pop-ups are common.

The landing pool for "12 footer" is followed by a 15 foot slide which terminates with an awful looking hole at the head of the Basin. The extremely frothy hole however is nice one, with a gentle demeanor and without much holding

power. This incidently, can be a good take out spot since a dirt road leads down to the top of Ager's Basin/"12-foot" Falls.

After some meandering flat water interspersed with a couple of small rapids, once again the river drops from sight. Closer inspection reveals the on-shore remains of still another dam, long since washed away. This rapid is not a classic. River left starts good, but continues into an almost unbelievable strainer combination of tree and under cut rocks. On the right side the water is very shallow, moreover, the sloping rock bottom looks indistinguishable from a sure-form file. "Sureform" rapids has been run but at a considerable risk to boat and SKIN.

The character of the Moose briefly shifts after "Sureform" from big drop to big water, in "Powerline" rapids. This rapid, marked by the obvious high tension lines, contains two unavoidable stopper holes. Though less than a quarter of a mile long, this is the longest continuous rapid on the Bottom Moose. Those holes in "Powerline" are powerful enough to cause inadvertant enders; and the second hole actually endered an already upside down Joe Maskasky.

If energy and/or light is fading, the logical finish to the Bottom Moose trip is out under the power lines to the road. The boating is essentially completed except under extraordinary circumstances. However, the remaining three quarters of a mile to the finish of the Bottom Moose is BEAUTIFUL, and certainly worth seeing the remaining 3 rapids, even if they prove, as is likely, unrunnable.

Continuous with the end of Powerline rapids is the entrance to a falls sequence which Edie has named "Crystal." Actually I said it looked like *melted* crystal Except for an extremely scrappy sneak on far river right, this multi-step (8-9) falls is unrunnable at



.....AND GETS SPIT BACK.

SHIEBLER



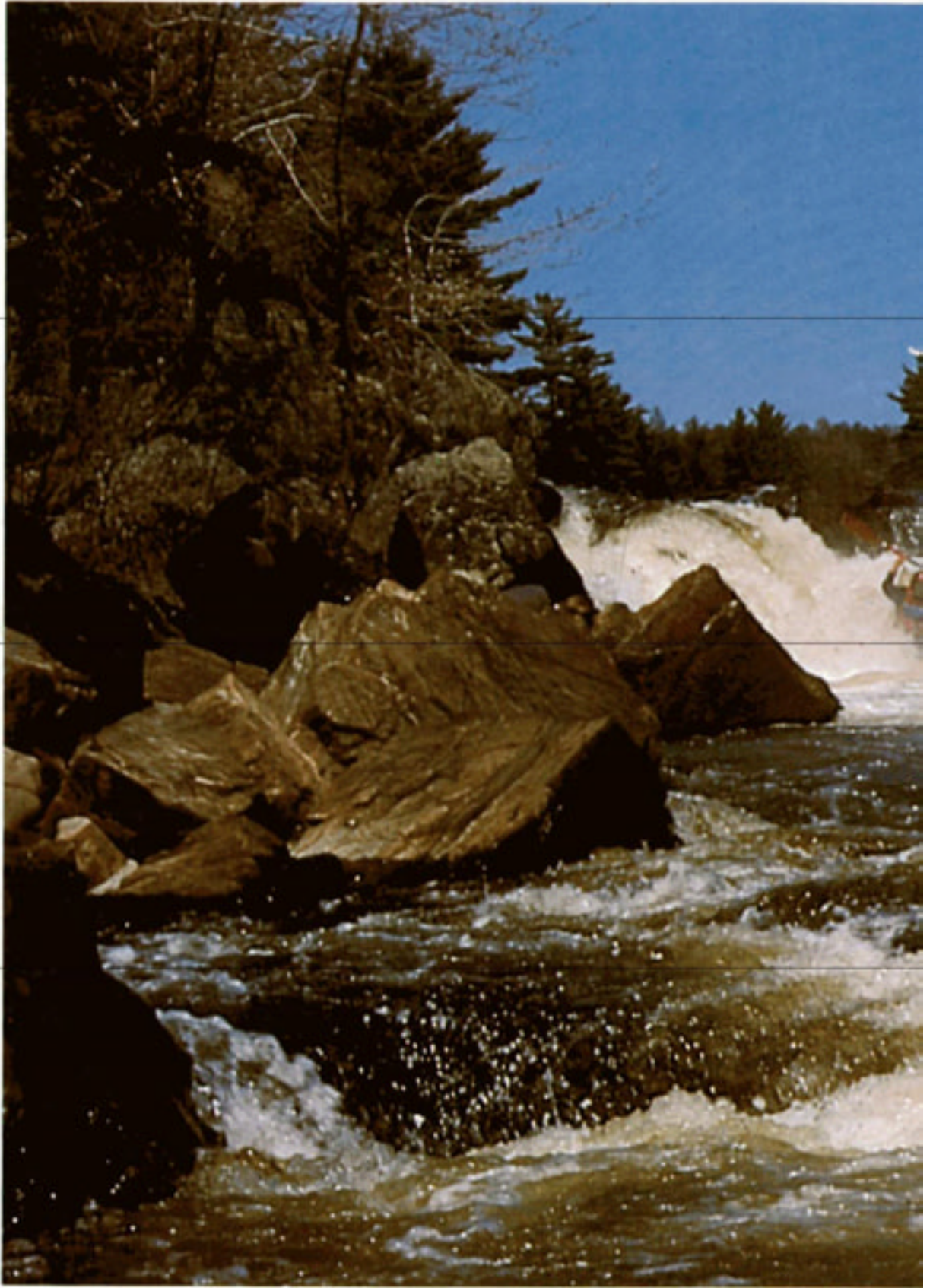
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CRAZY CARL DEMONSTRATES STEEP REENTRY AT 12 FOOT FALLS. ...

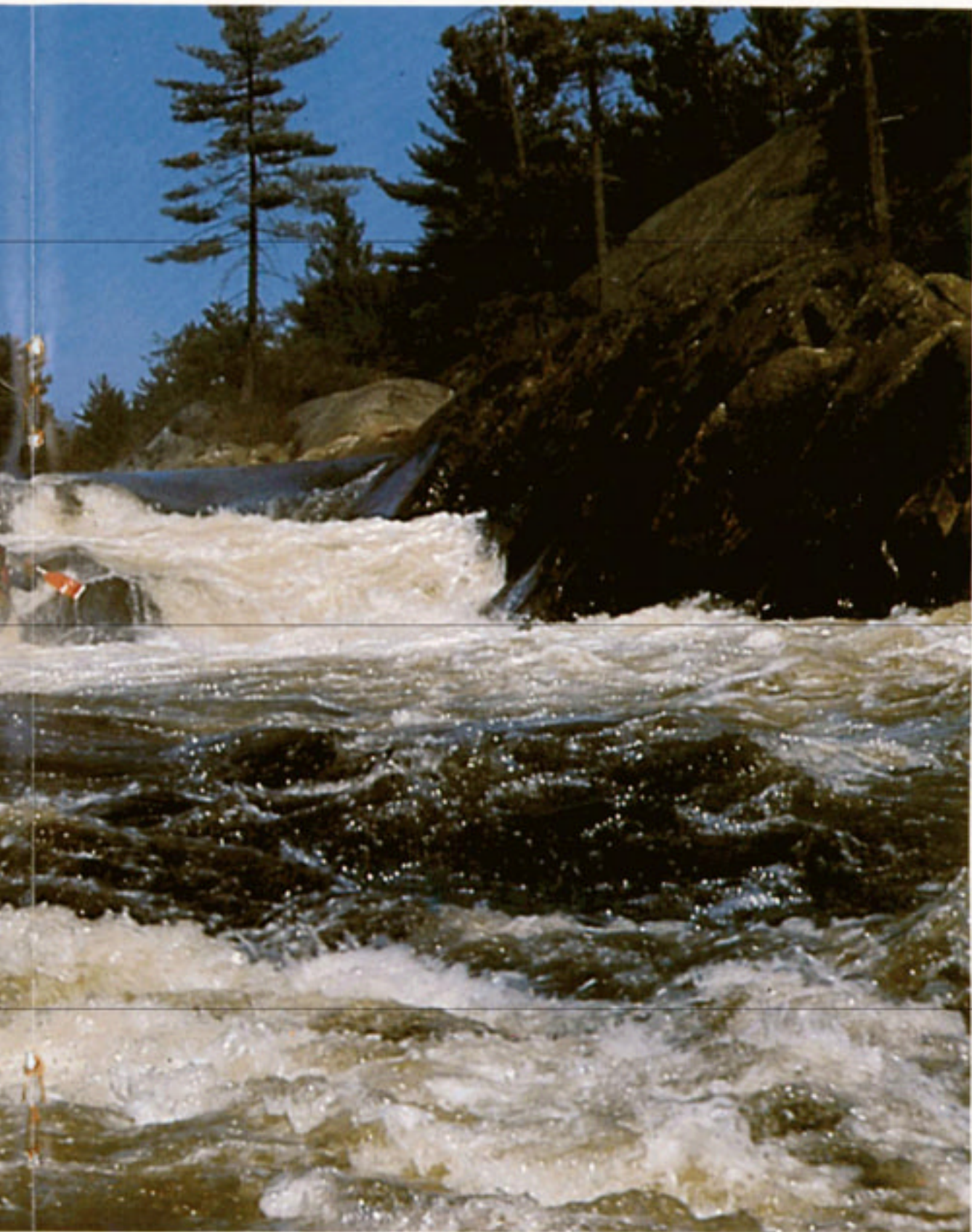


MIND YOUR MANNERS, MÜHLHANN, THE DOUBLE DAM IS NEXT

LUNGGREN



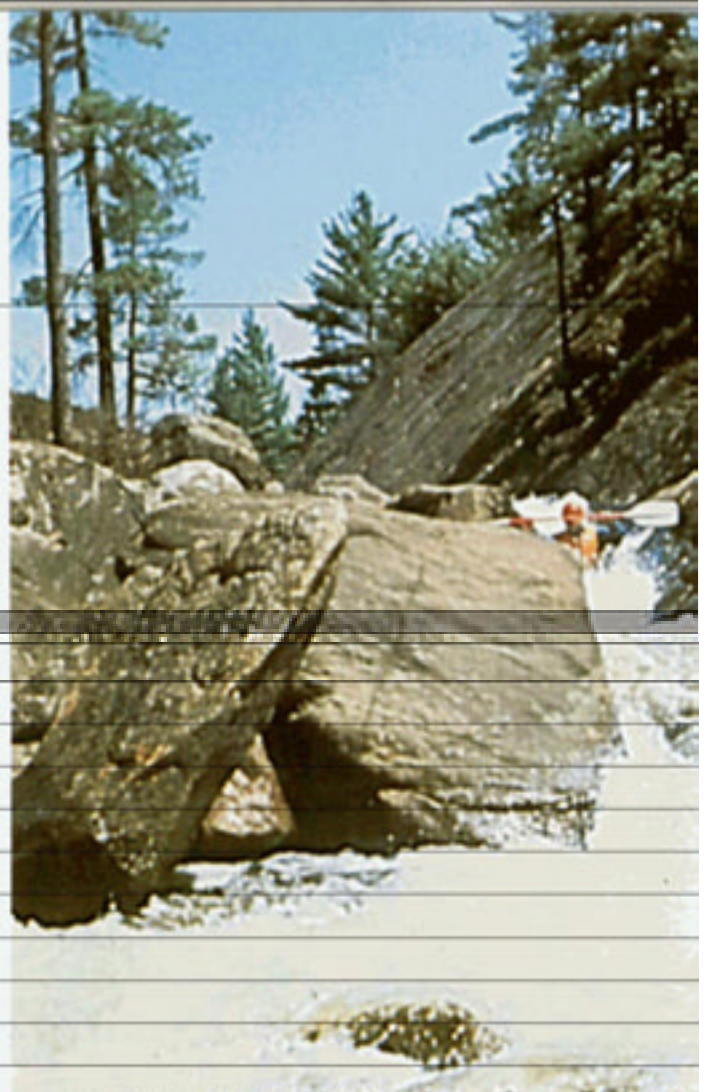
RAZOR-SHARPRUN ON KNIFE-EDGE, LOWER MOOSE RIVER, LYONSFALLS, NEW YORK.





WOW, TOM, TRY THAT AERIAL EDDY TURN.

LUNDGREN



WELL, SURE, TIGHTER THAN IT LOOKS.

LUNDGREN



C'MON TOM, ROLL UP! LYONS FALLS IS JUST ROUND THE CORNER!

SHIEBLE

DOWN THE URUBAMBA

by *Tom Jackson*

The clouds parted briefly during the flight from Lima to Cuzco. Below, the 6,272 meter high snowcap of Mt. Salcantay rose majestically from the dark green luxuriant jungle forest. Between two ranges, the treacherous Rio Urubamba was busily carving one of the world's deepest canyons.

It's a spectacular river by any measure. From its source on the Quelcayo Glacier, the river winds and swirls over its gravel bed down toward the eight km. gorge of Huambutillo, hurtling past Indians tilling their fields. At Huambutillo and Ollantaitambo it drops some 180 meters in a little over 80 kms. —not impressive in whitewater terms, but unrivaled in the magnificence of the countryside and its unique history. Known as the Sacred Valley of the Inca, it is, at 2,500 meters, flanked by mountain chains with peaks soaring 3,000 meters above the valley. At strategic points, the Incas built impressive fortresses centuries ago. Peaches, apples, avocados, and exotic forms of maize thrive in this climate where Inca nobles built their vacation palaces.

The river flows down through terraced banks with intricate irrigation systems, past small villages on towards the famous ruins of Pisac. Approaching Ollantaitambo, the river narrows, becoming violently turbulent below the town of Chilca. It's here the Incas built a massive fortress as a defense against the fierce Antis Indians of the jungle. Below Chilca and curving around Machu Picchu, the river becomes impassable to all — a raging white torrent. Ahead lie the rapids of Cocabambilla and Sugar Loaf and the boiling waters of the Urubamba as it races into the Pongo de Mainique.

This was the river we'd come to run. Laszlo had been preparing for this trip for more than two years and was the only whitewater expert in the group. This would be the first attempt to run the Urubamba at high water level. My sister Ellen, Peter (Laszlo's brother and Ellen's husband), and I made up the rest of the crew. Assuming all went well, Laszlo planned a regular schedule of commercial trips on Peruvian rivers. We were family along for the ride — willing guinea pigs before he started down river with a presumably less tolerant clientele.

What follows are my observations made during the trip arranged to convey the excitement and some useful information to anyone planning a similar trip. I've relied on Laszlo for technical matters, river classifications, and the like.

For our descent, we used an Avon Professional Raft modified by David Goodman and Laszlo — a design change which, since it may well have saved our lives, I'll describe in some detail.

Laszlo first removed the rubberized canvas flooring in all three sections and, as shown in the diagram, substituted one inch marine plywood in the front and middle sections. Climbing web, attached with quick-release knots to D-rings on the inner side of the raft, supported the plywood. The back section was left open to facilitate reentry if the raft flipped.

In calm conditions, the plywood floor rides well above the water level, decreasing friction against the water. But the real advantage is in rapids where water splashing over the tubes runs out through holes in the floor and around

the web-supported plywood. Instead of swamping, the craft maintains maximum maneuverability at all times.

The wisdom of this design change was not all that apparent, to me at least, until our third day down river. Early that morning we scouted downstream and, from a convenient overhang, got a clear view of class 4 rapids — very turbulent water, rescue difficult, generally not suitable for open craft.

Unseasonably low, the river raced through a 200 meter stretch of boulders. One raft-sized rock stuck up at the far end of this stretch, and if possible, we hoped to sweep around it. Ellen and Pete climbed the embankment with camera gear. Laszlo and I pushed off.

With Ellen and Pete paddling, we might have gotten through. As it was, the raft, laden down with gear for four, responded sluggishly. Even then, we skirted most of the boulders and bounced harmlessly off others until, almost clear, the large rock we spotted from shore loomed up. We piled into it.

Immediately, our stern swung around and slammed against a smaller boulder to the left. Our side exposed to the river, the full force of the current flattened the raft against the rocks.

To avoid a flip, we jumped to the downstream side. The raft heeled over on its side. Half submerged in the middle of the river, we hung on for almost half a minute. Then Laszlo, with a powerful kick, dislodged the front end. Instantly our bow swung downstream, and we dived for the paddles. Then . . . nothing. We sat in the middle of the river. Laszlo's kick had popped our open stern over the smaller rock where it looped doughnut-fashion around the rock and held us fast.

Alternately pushing down on the paddles, we wobbled free, gliding around several small boulders to reach an eddy and pick up Pete and Ellen.

Water flowed past the large boulder no less than five meters per second. Upended and almost entirely submerged, our raft presented to the current an area of some three square meters. For that half a minute, over fifteen cubic meters of water gushed through the raft every second — enough pressure to shred the original canvas flooring or any other fabric. As it turned out, we got through.

Each day the action increased. The boulders were bigger than before and the water faster. The volume of the river swelling both from tributaries and daily rains — running some 280 cubic meters per second with 1.5 meter waves, and souse holes big enough to flip a raft that entered sideways.

We pulled out at Chilca, Km. 72 on the Cuzco-Machu Picchu — Chaullay railway line, where the river churns through the treacherous gorge of Torontei. It has killed most who have tried to run it. For 64 kms., the river drops some 22 meters per km. as it tears down the canyon.

We reentered the river just below Chaullay where the Rio Maraúy joins the Vilcanota. Over a hundred curious Indians gave us a resounding send-off.

Though it bears the same name, this was not the same river we had left 80 kms. back and 1,500 meters higher up. River volume was up to 850 c.m.s. — uninterrupted rapids for ten kilometers — and holes.

We camped our seventh night on the river, two kms. upstream from Quillabamba. It rained hard all night. The Vilcanota changes its name here. When we pushed off next morning, it was into the Rio Urubamba, now 1,700 c.m.s., and fast.

The churning water clawed at the banks, gouging into and undercutting the cliffs. Seemingly in slow motion, great chunks of earth and rock, and whole trees collapsed into the river.

From below rose the grinding rumble of countless boulders which were rolling along in the grip of this powerful river. All around us hissed an infinity of air bubbles, bursting as they popped to the surface.

In low water, on an earlier trip through these rapids just below Echarte, Laszlo and a girlfriend flipped when their raft hit the pillow of a giant boulder. The washing machine action of the seething water had literally washed the pants off the girl.

In high water, it was a different proposition: now that water covered this massive boulder. Immediately downstream, it formed a huge menacing hole. Another hole appeared on the left. The route between the two led into a three meter sliding drop with a breaking wave towering just beyond. We pulled over.

Laszlo explained the all too apparent hazards in whitewater terms. If hit head-on, the breaking wave seemed punchable, and the fifty or so other breaking waves downstream looked "O.K." The problem was to hit the three meter drop precisely at the center of the narrow V-shaped wake between the holes and exactly parallel to the flow. One problem with this plan was a 1.5 meter breaking wave, just upstream from the wake, that might deflect our approach and send us sideways into the big drop.

We hit the 1.5 meter wave at an angle, and it came crashing over the side. Holding steady, we got onto the wake. Then everything disappeared. In one smooth, continuous sweep, we dropped into the hole and started climbing up the far side. The bow rose in the air for a second, then pounded on through the big breaking wave and out into the breakers beyond.

Having run the big drop in good form, we relaxed — a bit too soon. A hole caught the raft and down we went.

Tons of water crashed on all sides. Lacking forward momentum to push us through, there we sat — surfing backwards upstream until random turbulence flicked us out. Later on, we got to enjoy this experience and steered for the holes.

Before taking on the Miraflores Rapids, we set out along the shore. A helicopter would come in handy for scouting jungle rivers. Lacking this convenience, we put in half an hour of sweaty work slashing at the matted vegetation — an effort that got us no more than ten meters downstream. Since the rapids might have gone on for hundreds of meters, we backtracked.

As the river curved right before turning into the rapids, the four of us piled aboard the raft with the idea of getting a better view downstream from the far shore.

So much for the plan. The river proved more powerful than our efforts at the paddles. Suddenly, we found ourselves hurled into the unscouted rapids with two meter waves everywhere. To reach either bank, we'd have to point the bow one way or the other, and so run the risk of being flipped by a breaking wave. Hitting each wave head-on while working our way toward the side, a "six-footer" spun us sideways and into the trough of a monstrous three meter breaking wave. The steep face curled over us, and . . . we flipped.

I came out from under the raft on the downstream side, still clutching my paddle. Moving to one side, I saw Ellen holding onto the raft, also with paddle. (I mention the paddles because of Laszlo's repeated insistence that any equipment lost had to be replaced at astronomical local prices). Pete, it seems, had jumped into the hole as the raft turned over. He was left upstream behind us.

Laszlo was the first to get aboard, using the floorless rear section and jackknifing himself up. He pulled Ellen

in, then me, and we finally picked up Pete who had lost his paddle in the hole.

Righting the raft, we took stock. One paddle gone and the food bag with cooking equipment and an emergency kit. Not bad. Later, Ellen spotted the paddle. The food bag may well have reached the Atlantic Ocean.

Ahead lay the Pongo de Mainique, the last major rapids on the Urubamba which promised to be the best of all. Unfortunately, Ellen and Pete now suffered from the same stomach problems that hit us all at different times. That night they decided they weren't up to the rest of the journey. The next day we relaxed together in the small town of Miraflores, upstream from the menacing rapids, and talked over the adventures we'd been through and what we'd learned.

Since Ellen and Pete were heading back to Lima and then home, Laszlo and I stripped away everything that wasn't absolutely necessary. We were traveling light for the Pongo.

Chacarares, a small town five kilometers upstream, is the last chance to get off the river before the Pongo de Mainique. Below Chacarares, the Urubamba narrows dramatically from 100 meters to less than **30** meters, gathers momentum and hurtles into the Pongo through vertical 100 meter cliffs — five kilometers of continuous whitewater with three major drops.

Just upstream from the Pongo (a Quechua Indian word meaning "gateway"), the whirlpools start. One, two meters in diameter, foamed beneath our raft. We weren't steering for them then — later yes, but not now. Spinning out of control, we saw our entire stern disappear into the swirl, our bow lifting **30°** out of the water.

Swept into the Pongo, all is confusion, our raft thrown from side to side, sometimes skimming downstream,

now upstream, every which way, tossed like a cork in a tea kettle. Dashing against the convoluted walls of the canyon, the torrent rages into great whirlpools far vaster than any we've seen before. Near-vertical walls block out the sun, and from over the top of the enclosing moss-covered cliffs, a multitude of waterfalls plummet down on either side. The roar and confusion is incredibly magnified, growing greater all the time until thrust around the last bend — the largest cascade of all — a fifty meter arc of water pounding down into the surging current directly ahead. Below the fall, an enormous whirlpool swirls, formed by the cascade as it strikes the flow — seven meters in diameter and two meters deep!

We steer for the side, straining on the paddles, getting nowhere. Times slows, and yet we are actually accelerating, closing with the whirlpool. The raft teeters on the rim, and we begin to rotate back *upstream* — our circular course sweeping us around and under the falls.

Helpless now to escape from the Brink (as we later named the whirlpool), I clutch my paddle and burrow between the equipment, against the side tube. I suck in a last **lungful** of air as our bow edges towards the falling torrent.

The raft shudders, jolted by tons of falling water thundering down upon us. Battered under the firehose impact, I feel my body grow heavy, leaden, and as if in a dream, I seem to be swimming endlessly.

Then suddenly, it was all over. We were gliding over open water without a scratch, away from the Brink. The incredible Pongo — it was worth all the tuna fish, the oatmeal, all the wet misery, everything.



any level. The sneak route has the danger of boaters not staying up-right, ending in the mixmaster of river center.

Immediately after Crystal is a pool impounded by a decrepit wooden dam which funnels 95% of the Moose through a power canal and into an obviously abandoned mill. While clambering over the dozens of six-foot diameter mill stones on shore, curiosity got the best of us. After scrambling around the fence surrounding the mill and ignoring the usual "No trespassing" signs, we peered through what was once a window. As the light passed through what apparently was the roof, we were dumbfounded to notice on the floor of the mill, under yellow rain canopies, two large OPERATING electric generators!! This discovery lessened the bitterness of water being diverted through a 'useless' mill, but not much. There was not enough water to run this falls below the dam, regardless of the 45 minutes we spent trying to find a route. The only recourse was over land! Jim and Joe carried around on river left. Tom and myself chose a more direct route . . . we slid off the 25 foot high, dry falls into the pool below. As a result, the aerodynamics of kayaks were judged unacceptable for hang-gliding.

The only remaining rapid before the Moose River's confluence with the Black River is again guarded with a dam with the water being diverted off for electrical generation. The "Last Falls" is normally dry, much **higher-than-normal** levels are required before enough water spills into the runnable right channel. On those occasions, when the Last Falls has had water, it has provided an exciting conclusion to the Bottom Moose, both from a boater's and photographic point of view.

The top of Last Falls is easily recognized by the bridge over the dam. This road is also the usual take-out. The

rapid begins with a drop over the dam which rests on the crest of a 5 foot falls. A short pool follows, and then a shallow rock garden. Finally the boater rides a 20 foot wide flume down into a shallow caldron. This aerated pool is very effectively stirred by a 75 foot long, 20 foot high, falls forming the left side of this sheer walled mixing trough. The wall of water to the left of the sloping flume does create a "slide for life" impression but this is a more beautiful, than difficult rapid.

That's the *Bottom Moose*, another half mile of flat water and the boater arrives at the confluence of the Moose and Black Rivers. The confluence is on the crest of Lyons Falls . . . another story. The Moose is a shouting, whooping, howling, river.

MOOOOOOSE!!!!!!

While teaching high school, my students once asked me on a Friday, if I was going out and getting drunk on the weekend. When I replied negatively they assumed immediately that my "highs" were with drugs. Those ninth graders were not prepared for my explanation of the "adrenalin high" that kayaking produces; but then none of them were boaters, much less "MOOSEKATEERS."

Much has been said on safety in previous articles and issues of A.W.A., as well as on the beauty and thrill of kayaking, but after this article I feel a bit of reiteration won't do any harm. Judge your own capabilities *very carefully*, . . . the tomorrows will come, and rivers will always be there, especially this one, The Bottom Moose.



**MOVING?
LET US KNOW!**

these two groups. Over one half of the commercial river user's family income is in excess of \$24,000 each year. The same proportion of river runners report only \$17,000 per year! Commercial river parties are 1/2 female and non-commercial users are now only 1/4 female. 9170 of commercial river users have never been on the Colorado before, whereas, only 3070 of the non-commercial users have never been on the Colorado. Non-commercial users are younger, less likely to live in cities, and more likely to belong to outdoor groups than their richer counterparts.

Specifically non-commercial river users are groups of friends, one of whom owns a raft or two, and who share the expenses of the trip and often have kayaks or C-1's along for the ride. The people on such a trip are more experienced in whitewater. In short most of AWA members are or will be non-commercial boaters on the Colorado.

Who used the River in the past?

Before the explosion of white water lovers in the late sixties, independent boaters and rafters were an unknown phenomena in the Grand Canyon. However, applications for non-commercial userdays have grown from 7,600 in 1972 to a staggering 89,000 in 1976 while user quota remained at a paltry 7600, necessitating denial of 9270 of these applications in 1976. During the same period commercial outfits on the river have averaged a 570 wastage of their 89,000 userday allotment! the Draft Environmental Statement states that:

"These data suggest that no citizen would have been denied a commercial trip if all 21 concessioners were contacted. At the same time, 81,488 user-days were denied the non-com-

mercial sector in 1976." (p. 11-43)

What will happen to demand in the future?

Based on past history, commercial demand does not appear to be growing. If it does grow, it will be because of advertising. Most commercial raft-riders have rarely, if ever, seen whitewater closeup. Their interest is generated by word of mouth (about the fabulous and luxurious experience) or by advertising. Advertising clearly would ruin the chances for any person specifically interested in whitewater to ever get to use the river and therefore cannot be tolerated. (If say 100 million Americans developed a desire to go down the river, the probability of whitewater lovers using the river would be near zero!)

Non-commercial demand grew 90% each year from 1972-1976. At this average rate the 1980 demand would exceed a million user-days! I do not believe that a 90%/yr. growth rate can be used to project non-commercial demand, however, because the applications include repeaters and parties who filed multiple permit applications under different leaders within the group. Utilizing the average increase in demand between 1972 and 1975 of 68% per year, I have constructed a chart based on past experience demand projections, and the proposed allocation quota's listed in the "preliminary plan." You can easily see that your likelihood of getting a permit on the Grand under the proposed system is very small. However, if we go to the proposed plan outlined in concept at the end of this article, our boaters' chances will be a good deal better, at least until demand becomes very high.

Unless a fairer system is implemented than the one proposed, the rich non-boaters (generally known in the parlance as "the little lady from New Jer-

sey'') will continue to enjoy the Canyon and their poorer whitewater brethren will suffer from a continual reduction in the probability they will ever get on the river. *Clearly it is only fair that the commercial users wait in line with the rest of us.*

Impacts of the fairer system.

The last columns of the table show what use would look like under the NPS proposed system and under the system I propose. As one can readily see, demand for commercial services will fall off rather precipitously. Revenues will plunge, equipment will lie unused, and companies will fold. This is perhaps unfair to such companies.

The river itself may also suffer, some say, because commercial outfits have learned techniques to more carefully preserve campsites and archeological resources along the river. Also commercial raft-riders may be exposed to more of the natural phenomena in the canyon because the commercial guides may know the river better from repeated trips there. Non-commercial rafters will predominate in river use and therefore necessitate a higher degree of supervision and participant control by the NPS.

The Proposed Plan (SKINNER)

Given these considerations, I propose the following system for allocating usage of the Colorado:

- A. Allocation of river user-days shall be determined from a list made up of both commercial and non-commercial applicants. The actual river use will then more fairly reflect the proportional demand for this resource by the two sectors except for the following:
 - a. Allocation of user-days to com-

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mercial outfits shall never be less than a base level established by the National Park Service after a study has been made by the NPS or contractor and after appropriate public input on the unique public purposes served by commercial concessioners, to be completed within two years.

- b. Allocation of user-days to the commercial concessioners will be allowed to decline (until the study recommendations are implemented) at a rate of at least 20%/year starting from the present allocation of 89,000 user-days per season. (20% is a fair depreciation rate for raft equipment)
- c. If the number of commercial customers picked from the waiting list (In A above) falls below the base level established in a and b above, then additional commercial riders will be extracted on a priority basis from the waitinglist.
- d. Assignment of commercial raft-riders to particular concessioners will be made by applicant preference until individual quotas are filled and thereafter by lottery.

Years	No. of Commercial User-days Utilized	Percentage of User-days Unsatisfied
1972	88,135	0%
1973	86,264	0%
1974	84,195	0%
1975	84,709	0%
1976	85,006	0%
1977	75,421	0%
1978	85,440 est. @ 95%	0%
1979	85,440 est. @ 95%	0%

1980	NPS	Skinner	NPS	Skinner
	123,525	71,200	0%	42
1981	123,525	53,400	0%	57
1982	123,525	35,600	0%	72
1983	123,525	17,800	0%	86
1984	123,525		0%	
1985			0%	

ROLLIN' ON THE RIVER

Iris Sindelar

Ten years ago, whitewater canoes were pretty much of a rarity among the San Francisco Bay Area river tourers, and those who could roll them were even more rare. Walt and Kay Harvest had been working on a roll in their C-2, and Walt could roll the thing pretty well. Kay had trouble, though, sticking with the canoe long enough to try again if their first attempt failed. She puzzled over this for a while and discovered that after a failed attempt, Walt was able to stick his nose out and grab some air, while she, being approximately a foot shorter than Walt, was still several inches under the surface. So he was wondering why the heck she wasn't snatching a breath so they could keep on trying, and she was wondering how in the world he was managing to stretch a lungful of air out so long.

We were newcomers to the Bay Area at that time, and our stable consisted of a heavy banana-boat C-2 and a bulbous yellow C-1 called the *Ballena Amarilla*. Wanting to follow the Harvests' example, but deciding it would be more prudent to learn to roll individually before attempting the togetherness bit, we took our Yellow Whale along to the 1967 Feather River Races. There was a fantastic big warm swimming hole near the camp, an ideal spot for underwater sport such as rolling practice.

At first, for some reason, Jim was not all that anxious to start working on a roll, so he helped me try it a few times. I didn't actually make it, but came so close that his ego stirred him to action. He didn't relinquish the boat the whole rest of the weekend. Soon he had worked out a fairly reliable roll, and decided to join the Bay Area "hair" boat-

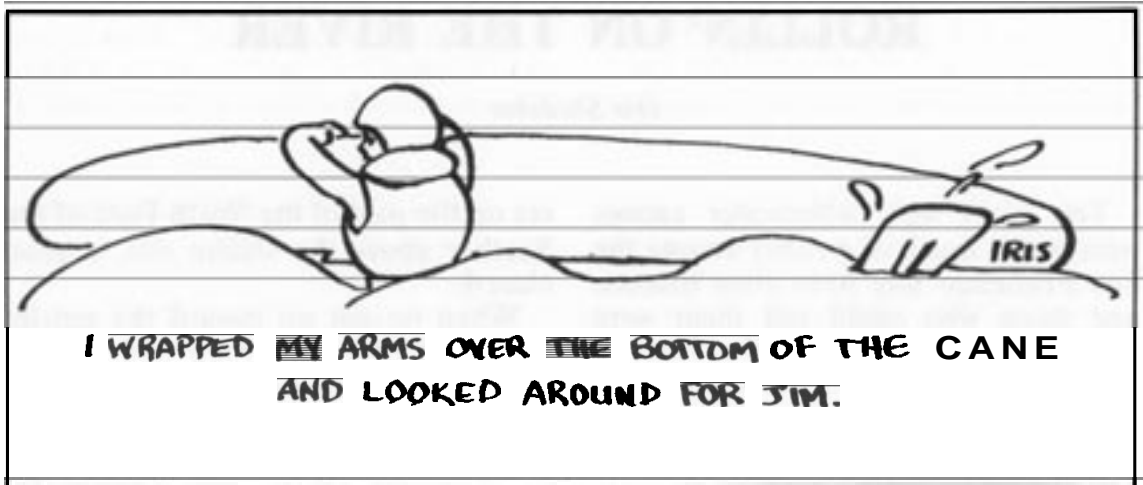
ers on the part of the North Fork of the Feather above the slalom site, a good class 4.

When we got up toward the put-in, we found that the group had already started; but they told Jim to go on up and put in, and they would wait for him. I dropped Jim off and went down to where the others were waiting. Finally he drifted around the bend — bottom-side-up. Shouts of "ohmigod" and then the totally unexpected: slap of paddle blade and grinning, dripping face again topside of the boat. It was a great way to break the ice.

When the annual Memorial Day trip came along (on the Rogue River in Oregon that year), I still hadn't mastered a roll, so Jim laid out this strategy in case we should flip in the C-2: I was to get out of the boat, he would roll it up, then I was to grab the grab loop and he would take me to shore and safety.

So there we were, backpaddling into a river-wide roller because a kayaker had dumped in front of us. Roaring water filling eyes, ears, mouth, sinuses and, I guess, brain. Sputter to the surface, look around for a straw to cling to, and wonders of wonders, a lovely cockpit rising perpendicular to the water alongside me. I grabbed the top edge of it, pulled it back down and wrapped my arms across the bottom of the boat. But where was Jim? There was a paddle blade flailing about alongside the boat, but it seemed like ages until his head appeared. He was gasping and his face seemed kind of purple.

It took three or four kayaks and roughly half a mile to get us to shore. I overheard Jim telling one of the rescuers, "I just don't understand it! I felt

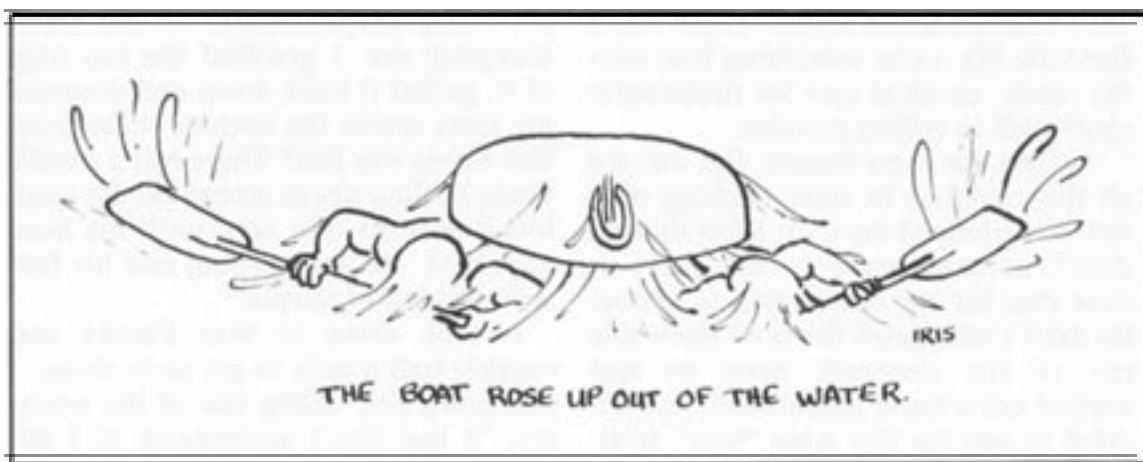


Iris got out of the boat, and started to bring it up, and the blasted thing just clapped right down again! I tried two or three more times but couldn't even budge it! Just as if a giant hand were holding it down in the water. . ."

After a couple of nasty swims I had developed a bad case of chicken-itis, just about the time Kay Harvest was busy with her third baby. One day (again at the much-lamented North Fork of the Feather) Walt noticed that Jim paddled left stern just as Jim was noticing that Walt paddled right bow. They got into a C-2 and started messing around. "Say! Let's try a roll!" Over they went, and we spectators were treat-

ed to an unforgettable sight: a paddle blade appeared ON EACH SIDE OF THE BOAT, each blade came down with a mighty THWACK! and the boat rose up out of the water. Two sprained-looking faces eventually appeared beside the boat. "Maybe we'd better talk this thing over." In the course of the next two years, these two guys developed an instantaneous roll and were able to take their C-2 anywhere a kayaker could go (and they did).

Once Jim decided to spice up a rolling session with an impromptu demonstration of the convenience of having a spare paddle immediately accessible on the deck of the boat. He had in-



stalled a quick-release paddle holder on the deck of his C-1 after a swim occasioned by a broken paddle during a class4 descent. We had a cheap wooden paddle that obviously was unequal to a good strong brace, so with his good paddle in the quick-release rig, he leaned out upon the cheapie. The electrifying CRACK! got everyone's attention. There was the bottom of Jim's boat, with pieces of wooden paddle floating nearby. Much underwater commotion, followed by the triumphant snap of the roll.

In California, rolling practice during a river trip can be lots of fun because the air is generally warm even if the water is cold, and sometimes even the water is warm. However, we moved to the Northeast before I got the roll mastered, and when the water temperature is approximately 32 degrees F, and the air temperature scarcely higher, there's nothing enticing about roll practice on the river. One winter we had access to a college pool for a few weeks, so we really worked on our C-2 roll. With at least one of us feeling dauntless, we entered the earliest slalom of the year. A slight miscalculation in a swift jet, and it was roll time.

We swung into action underneath the boat. My hands felt very strange. There was no paddle in them! The boat was starting to come up, and I slapped the water furiously with my pitiful flippers as we approached the hairy edge of uprightness. Not good enough. We ended up crawling through the snow on the bank.

I had one more chance to try a river roll before knee surgery ended my career as a canoeist. We flipped during the descent into a quiet pool a few yards short of the finish line of a slalom. What a fantastic place to show off our hard-practiced roll! "Why the hell did you get out of the boat? You couldn't have PICKED a better place

to try a roll!" A rock had knocked my paddle out of my hands on the way over. The spare paddle was at Jim's end of the boat, out of my reach.

I still don't know what it's like, **rollin'** on the river. When I'm upside down in my kayak, Panic screams, "You fool, you're no fish, get your head out of the water!" But I hear that first roll under fire is as heady as a glass of champagne. That's what I'll think about next time my head is down amongst the bubbles.

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UPSTREAM

Next issue we'll have a story from Ted Steinway about Edi Pawlata, the man who brought the Eskimo Roll to Europe; an account of a run of the North Fork of the Payette in Idaho by Bob Walker; a report on the Wilderness

Public Rights Fund from Steve LaPrade; a report on a River Safety Symposium in North Carolina, plus anything else YOU decide to write. All this and our usual collection of great photos, humor and news.

BOOK REVIEW

Flowing Free by the River Conservation Fund, Reviewed by Bill Kirby

To those of us who are baffled by the complexities of environmental law, this book comes as a gift from the gods. In this slim volume the River conservation Fund, the tax exempt affiliate of the American Rivers Conservation Council, has decoded the legalistic jargon that assaults those interested in river preservation and presents an easy to understand outline of the provisions of the National Wild and Scenic Rivers Act. In addition, the book suggests courses of action for those who would like to initiate conservation movements for streams in their locality.

The information in *Flowing Free* obviously comes from a great deal of experience. The book is written from an extremely pragmatic viewpoint, pointing out the concerns of landowners and local citizens when they are presented with the proposed federal or state "take-over" of their land. The authors point out the dangers of taking an inflexible stand in matters of stream conservation. a lesson that has been learned the hard way in such areas as the Upper Youghiogheny and the Upper Potomac. In these areas the resentment of local

landowners, largely a result of misunderstandings created by poor communication, has made establishment of Scenic corridors a very difficult and unpleasant process.

The book begins with a review of the salient points of the National Wild and Scenic Rivers Act, pointing out the limitations of this valuable tool for river conservation. It then goes on to assess the effectiveness of the act so far. (The verdict? It's working, but slowly.) Many rivers however, are not suited for national protection for various reasons, and must be protected by other means. *Flowing Free* outlines these alternative measures, including state and local protection and protection by private landowners. The authors also include three case histories to illustrate the procedures and the amount of work necessary to protect a particular river. The rivers discussed are the Obed in Tennessee, recently acquired by the National Park Service, the Missouri and the Little Miami in Ohio.

Every paddler should own a copy of this book, for two reasons: First, the purchase price of \$3.25 goes to fund the efforts of the Conservation Fund in its continuing educational research on the ways of preserving the remnants of America's free-flowing rivers. This small financial commitment is the

minimum a paddler can be expected to make. Second, each paddler should become active in river conservation to some degree and this book gives the citizen the information he needs to become a force in the struggle. The vast number of development-conservation conflicts extant in the nation guarantees each paddler an issue which is both close to home and relevant to his recreational activities upon which he can exert his energy. Also, surprisingly, the book reads well and even a reader whose interest in environmental law is lukewarm will find much to snag his attention. The book is illustrated generously with excellent photographs including some of paddlers' favorite places.

If we are to have any rivers left for the next generation of paddlers we must start now to preserve what we have. The River Conservation Council has produced a valuable tool to achieve that goal. The citizens must now begin to utilize this tool to its maximum efficiency. The book is available at many outdoor equipment retail stores. (If it's not available at your local store ask them WHY NOT. Pointedly.) It can also be ordered directly from:

The River Conservation Fund
317 Pennsylvania Ave., S.E.
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Ontario Voyagers Kayak Club

J. G. Shragge
116 St. Germain Ave.
Ontario, Canada M5M 1W1

NEW ZEALAND

Canoe Camping **Ltd.**
112 Ohiro Bay Parade
Wellington 2, New Zealand

Gishome Canoe & Tramping Club

Tony Geard, Box 289
Gisborne, New Zealand

Nelson Canoe Club

Box 793
Nelson, New Zealand

PERU

South American Explorers' Club

Robt. Cook
Casilla 3714
Lima 1, Peru

SWITZERLAND

Kanu Club Zurich
Otto Kosma
8008 Zurich
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