

American

WHITEWATER

The Journal of the American Whitewater Affiliation



March-April 1980

Vol. XXV, No. 2



While it lacks the spirit of birch bark, even the crustiest of open boaters must admit that ABS plastic has some definite, practical advantages as these racers prove at an Arnold Whitewater Association race on the St. Francis in Missouri. (Bob Lantz photo)

COVER: Swathed in full cold water gear, Tim Elledge buries his bow in the icy foam of Maine's Rapid River. (Jamey Elledge photo)

WHITEWATER

PUBLISHED BY THE AMERICAN WHITEWATER AFFILIATION

MARCH-APRIL 1980

Vol. XXV, No. 2

The American Whitewater Affiliation

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How to Write to AMERICAN WHITEWATER:

- Send articles, photos, cartoons, poems and drawings to AWA Editor
- Send all membership forms and payments to Membership Chairman
- Send advertising matter and payments to Advertising Chairman
- Send questions of AWA Policy to Board President
- Obtain membership forms and all other information from AWA Secretary
- Obtain AWA products from Membership Chairman.
- Obtain AWA Safety Codes from Dave Smallwood, Box 1261, Jefferson City, MO 65102

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AWA INFORMATION

How to Submit Articles: Deadlines for all material, including advertising, are the 25th of Dec., Feb., Apr., June, Aug., and Oct., for Nos. 1, 2, 3, 4, 5 and 6 respectively.

Publication is planned at 6 times yearly. Single copies \$1.50 each. Surplus back copies are available at reduced prices. Write to the Membership Chairman.

American Whitewater is mailed to all members of the American Whitewater Affiliation, an affiliation of boating clubs and individuals interested in whitewater paddle sport. Membership is open to interested individuals at \$10.00 per year and to clubs at \$12.00 per year. Businesses may affiliate at the rate of \$20.00 each year. Clubs and business affiliate names will be listed periodically in the Journal.

The Staff and Directors listed above are unpaid Whitewater enthusiasts who volunteer their time and efforts to bring affiliate/member subscribers this journal. Your contribution of articles, letters, race results and schedules, photos and drawings are essential for their continued efforts and the timely publication of the American Whitewater Journal.

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Editor's Soapbox

A Note of Thanks

A few weekends ago, I attended my first race of the 1980 season. It was fairly typical: rain fell consistently, it was bitter cold, the water level in no way corresponded to the promised release, my best run was a disaster, and I can hardly wait to get back out and do it all over again.

Something else was typical, and refreshing. On Sunday afternoon when the race was over, the course struck, and most had driven off, I looked around – the entire area was immaculate. In fact, there was less litter than when the set-up crew had arrived. There were several reasons for this. First, very little trash ever hit the ground, despite the masses of spectators and competitors. Secondly, I noted an instinctive reaction in most people all weekend long to pick up stray papers and cans, and finally, an organized crew on Sunday gathered up what was left.

But what impressed me most was just how standard this practice is among continuous paddlers. In any section of the country, be it a race, club cruise, bootleg trip, or training session, paddlers almost universally leave campsites and riverbanks picked up.

For most of us, these disciplines have been so long instilled that we take them for granted. But cleaning up is a discipline nonetheless, not an instinct inspired by the open sky. Unfortunately, exploring the outdoors does not necessarily purify a slob, as mountains of trailside beer cans

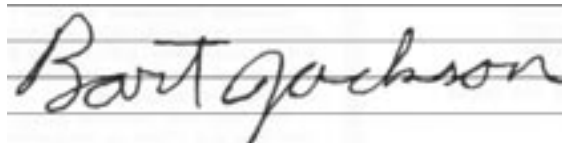
attest. And since experiencing nature will probably remain more popular than caring for it, the boating community will have to continue holding up its end and more.

Without sounding like Woodsy Owl and Polyanna combined, I feel sure boaters will continue to take care of the land and rivers they use.

Many paddlers who's experiences go back more than a decade and a half tend to lace their tales with regret at the changing character of today's canoeists. Even without the roseate hue of memory, it is fairly obvious that over the years, as skills advance and the season lengthens, more people approach boating as athletic sportsmen than general outdoorsmen.

But love of the art and appreciation of natural beauty have never been exclusive, despite the sport's growth. And boaters still exhibit that same consideration which was standard in years past. Virtually all those I boat with anywhere still treat locals with respect, ask permission before crossing land, and pick up at least their own trash.

For all these considerations I personally, and on behalf of AWA would like to thank the boating community as a whole. We are far from perfect, heaven knows, but we have kept our act clean enough to win ourselves a valuable reputation; something that will be more and more necessary as we enter the conservation fight. Again, AWA's thanks to all, and let's keep it up.




Letters from Readers:

Dear Editor:

Many thanks for publishing your appeal to AWA members to protest Adirondack Park Agency (APA) approval of the Grin-span variance application for the reduction of a Hudson River sub-division set-back from the required 150' minimum to 72'. (AWJ, Oct.-Dec. 1979). Your readers will be pleased to learn that the APA, in a unanimous (Feb., 1980) decision, rejected the developer's application. It is not likely to re-surface in the foreseeable future.

On the basis of the case facts, no other alternative seemed possible. But, I am certain that the public response generated by you, and other similar appeals, had a very significant influence, and more importantly, demonstrated to the purveyors of any such applications, that a strong public awareness exists, and reacts with vehemence, whenever the integrity of a protected river is threatened.

Again, thank you for your support.

John L. Berry,
Riparius, NY

Very happy and relieved that this variance was defeated; and glad AWA could have a hand in it. Thanks for the news,

— Ed.

Dear Bart:

Congratulations on the fine work you've been doing on the Journal. It's good to see AWA getting its act together, especially since we at the Kayak and Canoe Club of New York include it as an integral part of membership in the club.

Thanks particularly for A.B. Duel's 1952 poem "Faltbooting Mit Simulium" (AWJ XXIV/3-4, p. 10) on the upper Hudson and its wondrous little black flies! It may be of interest to your readers that the subject trip leader and "obscure New York piano maker", Ted Steinway, has

been a member of KCCNY for almost the last twenty years and, although retired from business, remains active in club administration. In addition, he has recently served as the ACA Atlantic Division's Conservation Chairman, as well as being a very active conservationist in his own right. Carrying on the tradition, his son Sascha is an A-ranked boater and very active on the racing circuit.

Any further articles you can come up with from the time when this country's paddlers could be counted on two hands would be greatly appreciated.

Ed Hanrahan
Chairman, KCCNY

Editor:

You and your staff are doing a real fine job — keep up the good work. In response to the last issue on conserving rivers etc., I thought it was great. Someone should publish a list of the rivers being eye-balled by the Army Corps and utility companies, complete with addresses where we could write our objections. Then each of us should sit down and write two or three letters per week, going right down the list.

John R. Grahm
Muskingum Valley Outfitters
Adams Mills, Ohio

Your idea is both excellent and energetic. Unfortunately to print all 11,000 potential dam sites (that's right, 11,000) currently considered by just the Army Corps, would leave little room for anything else. However, American Whitewater will continue to list several rivers under attack and appropriate protest addresses in the "Fluvial News Conservation Notes" and in various individual articles. We agree that if every boater could dash off two letters a week to halt new dams in just his

Letters *(continued)*

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state, the effect would be monumental. To get a list of your state's rivers currently being eyeballed for dams write:

American Rivers Conservation Council
317 Pennsylvania Ave., S.E.
Washington, D.C. 20003
(202) 547-6900

— Ed.

Dear Mr. Jackson:

Do we really need to ogle Chilean cuties in the journal? Is it really necessary to refer to Barb McKee as "perky" and "bouncy"? You don't call Pete Skinner "rugged" or "rock-hard". I read *American Whitewater* for boating coverage, not for female un-coverage.

On the other hand, I like the conservation and safety emphasis. (I never read trip reports as such, unless it is a stream within a day's round trip drive of my house.) The danger of MEK cannot be overemphasized and I'm glad to see it written up again.

The mag is getting to be almost as good as it was when Iris Sindelar put out four issues a year. Going to six seemed to spread the content too thin. Keep at it!

James Chute
South Portland, ME

Thanks for your comments. We plead guilty to splicing AWAS river coverage with an occasional non-boating shot, purely for variety and interest. As for Barb McKee, we have for years watched her exhibit the life and energy of any two other women. Thus the description of her sprang strictly from admiration, not drooling sexist lust. To say that this magazine in any way approaches the quality of Iris' past editorship is a magnificent compliment. We thank you. — Ed.

Dear Sir,

As part of my Bachelor of Human Movement Studies (BHMS) degree at University of Queensland, I recently conducted a Biomechanical investigation of the effects of varying paddle lengths on performance of top surf racing ski pad-

dlers. The findings of this study have direct implications for competitive flatwater and whitewater kayak racing.

While involved in the study it became obvious to me that very little (if any) scientifically-based research into the design and construction of paddles, kayaks or canoes, or into paddling technique is available in Australia.

I hope to study various aspects of paddle and kayak design and construction, as well as paddling technique under Dr. B.D. Wilson, lecturer in Biomechanics at University of Qd. Also under Dr. B.M. Quigley (Exercise Physiology) I will be investigating the effectiveness of various kayak training methods.

I would be extremely grateful for any information (scientifically-based or otherwise) which may guide me in these research areas, and would be pleased to return the favour by send you copies of my findings if you are interested.

Thank you for your cooperation.

Yours faithfully,

Rob Dickson, 57 Wylie St.
Graceville, 4075 Brisbane, Australia

Several articles on paddle design and kayak technique, along with the addresses of several American manufacturers are already on their way to you. In addition we have presented your letter and address to our readers so that their comments may aid you in your study.

Readers wishing to add their experiences and comments to this study may send letters directly to Rob Dickson or to the Journal Editor who will transfer them. Dickson's findings, upon completion, will be published in the Journal.

FREE . . .

AWA SAFETY CODE

Send self-addressed, stamped envelope to:

**AWA Safety Code
P.O. Box 1261
Jefferson City, MO 65101**

How do you squeeze a 231 pound man into a 31 pound kayak?

Not without difficulty.

Unless, of course, the kayak has a cockpit tailored to fit a guy whose sport coats are a 46 long.

Most don't. Which may be one reason big guys take up football instead of kayaking.

So Old Town has introduced an all-around kayak called the



President. At just over 14 feet and 31 pounds, the hull will go around a river in a hurry. And with

eight extra inches of opening, the cockpit will go around the legs and hips of a linebacker.

Those extra inches say something about every kayak Old Town makes. Because it's our daft

notion that cruising around in a kayak is such plain darn fun nobody in the whole land should miss it. And that maybe we can turn kayaking into as much of a national pastime as paddling an Old Town canoe—if we try.

So we try. We build kayaks that fit the needs—and the bodies—of Americans. Never ceasing to wonder at manufacturers who do just the opposite. Who ask Americans to fit the needs and bodies of *the kayaks*.

If our designers, Klaus Lettmann and Toni Prijon (the Ty Cobb and Cy

Young of their sport), work under any one principle, it's that kayak designs must have more than one side.

The side you see on TV. In which the world class athlete plummets straight down a wall of water. To win medals with his Lettmann Hydro 80 or Prijon Dolphin.

And the side you don't see on TV. In which the guy next door rides a playful stream like a feather rides a breeze. And would rather have his Lettmann Mark IV or Prijon 420 than own the Queen Mary.

Tell your Old Town dealer which side is for you, and he'll suggest the kayak. Write for his name and a catalog, which has facts about our I-beam support system, expedition layups, and quality accessories.

Anybody who can paddle an Old Town canoe ought to try an Old Town kayak.



Old Town.
The Old Masters.
Old Town Canoe Co., Dept. W
Old Town, ME 04468
(207) 827-5513

AWA AFFILIATE NOTES

Affiliates, send your newsletters to our Editor to help AWA stay current with your club's activities and concerns.

YOUR CLUB OWES YOU . . .

Q. If you are a paddling club member, what is it you pay for, receive, but probably never see?

A. Your club's issue of *American Whitewater*.

If Your club is an AWA Affiliate, your dues pay for at least one subscription to the Journal which is sent to your clubhouse or some club official. While there is usually a single copy per club of each issue, club members should be allowed to at least scan it and pass it on. Therefore, AWA is requesting that each Affiliate publish the AWJ Table of Contents in their newsletter or post it on their bulletin board, and make some arrangements to pass around the issues it does have to its members. After all, it does no good gathering dust on a shelf.

CHATTOOGA FATALITY: AFTERTHOUGHTS

The death of Rich Bernard October 21, 1979 on Chattooga's Jawbone rapids has attracted the usual amount of bad rumors and finger-pointing press articles. The latest River Safety Task Force Newsletter offers the most thorough and accurate report, which we summarize here and add some of the comments about this tragedy and its ramifications.

The Accident occurred when Rick, a Nantahala Outdoor Center guide, was run-

ning safety boat in a K-1 for a commercial raft trip. Though Jawbone is considered the toughest of the Chattooga's Five Falls in Section IV, Rick had run it many times in his five months as a guide and was an expert. As a safety boater, he made the first demonstration run, while guides and rafters watched ashore. Rick shot the rapid, was pinned with his kayak underneath an overhanging rock after the stern of the kayak had caught on a log, submerged, and gotten held on the rock by the flow of the water. Immediate rescue attempts by hand and rope continued to fail due primarily to current strength and his unreachable position under the rock. After five hours, boat and body were hauled out by six men, when a rope was finally attached to the craft.

It was a clear, sunny 70° day and the water level was only medium: 1.55 on the Highway 76 gage.

COMMENTS:

"Given the extreme force of the pin and the consequent muscle power of six men required to free the boat, it is safe to say that Rick's situation was nearly hopeless the instant it happened. . . . Fundamentally, Section IV of the Chattooga is dangerous and the law of averages cannot be defied forever. It seems here that no rules were broken, no mistakes committed, no wrong judgements made, no fault or blame earned. Rick was in the wrong place at the wrong time. In a less extreme accident, the heroic rescue attempts made by his fellow guides could have succeeded.

NEWS

This is the first boating fatality on the Chattooga in three years, during which time thousands of commercial and private boaters have run the section.. ."

– **John Burton, Director N.O.C.**

"One fatality on the Chattooga, or even one or two more on the Payette or Gauley, must not keep us from enjoying our sport of whitewater, just as the thousands of driving accidents do not keep us from hopping into a car.

But let us remain cognizant of our mortality . . . of paddling rivers at our level of ability . . . of taking all proper safety precautions when we choose to challenge rapids that are known to be hazardous.

– **Chuck Hines**

Thanks to the R.S.T.F. Newsletter

SOUTH BEND MAKES SLALOM COURSE

What do you do if you live in oh-so-flat northern Indiana and you're tired of traveling endless hours for your whitewater? You follow the example of the Germans at Augsburg and make your own. Right now plans are underway and funding about 50% complete to transform an old hydropower raceway in downtown South Bend into a man-made slalom course 2200 feet long and 30-40 feet wide. The course would be located at the end of an old river corridor just before it connects with the St. Joseph River. It would thus offer the added benefit of providing a link for the St. Joseph fish ladder system.

Mr. John Fisher, consulting engineer of Lawson-Fisher Associates, contracted by the city for this task, recently discussed plans with the St. Joe Valley Canoe and Kayak Club. He reported that a 200 foot scale model is currently being constructed

in Massachusetts. It will be flanked with walkways, have parking and full lighting. and take about 18 months to build. \$560,000 has been funded by the Dept. of the Interior and if the remaining \$500,000 can be found, construction will begin in 1981.

The South Bend Slalom Course will be the United States' first man-made whitewater run, and it will have the special irony: this will be the first hydropower project torn down to make way for a whitewater run.

–**Thanks to the St. Joe Valley Canoe and Kayak Club**

KAYAKS STOLEN

Alabamans should keep an eye out for two rather distinctive K-1's which were stolen recently near the Little River in DeSoto State Park. Two Chicagoans came south for an early season trip, hiked alongside the river and returned to find their boats gone. One was a white, fiberglass Prijon with several large patches. The other was a Klepper Junior, 11 feet, eight inches long, with a brick red deck and a white bottom.

If found please contact Chuck Hines, Asheville "Y" Kayak Club, 30 Woodfin St., Asheville, N.C. 28801.

Boat theft is deplorable and it has long been AWJ's policy to freely advertise any

YOUR EDITOR IS MOVING

*please address all articles
and AWJ correspondence to:*

**Bart Jackson
7 Holland Lane
Cranbury, N.J. 08512**

stolen boat. So please, if you hear of a theft, drop us a note giving a thorough description of the boat, date and place of theft, and person to contact if found. You might send the same information to local club newsletters.

RACERS RAG

If you are a whitewater decked boat racer, or aspire to be, you would probably like a roster of all registered paddlers, the national race schedule, a set of racing rules and the national rankings. Well, you can get all that plus a regular competitor's newsletter by subscribing to the mailings of the National Slalom & Wildwater Committee of the American Canoe Association (ACA/NSWC). It is an excellent newsletter that goes into full technical depth on training, technique, and equipment. To subscribe, send name, address, and \$4.50 check payable to NSWC to:

Bonnie Bliss
11 Larchdale Way
Mountain Lakes, N.J. 07046

To be nationally ranked, a competitor should send name, address, and phone number to ACA, Box 248, Lorton, Va. 22079. Registration fee is \$18.50 for juniors and \$26.50 for racers over 18 as of January 1, 1980.

CANOE SAFETY CLUB PATROLS DELAWARE RIVER

Every region has its turkey stream: that deceptive beginners' river lined with boat rentals and jammed with hundreds of beer-swilling novices floating toward their own destruction. For the mid-Atlantic states, that river is the Delaware. Here the public takes its first unskilled fling at whitewater and here is where most accidents occur.

In October 1978 a group of concerned boaters, at Red Cross suggestion, decided to do more than shake their heads at this situation. They formed the Canoe Safety Club which started the volunteer River Patrol on the upper Delaware with the aims of rescuing and educating boaters for

a safer trip, and helping replace unwanted controls. Envisioned like the National Ski Patrol, the Canoe Safety club seeks to gather a corp of experienced whitewater canoeists, trained in rescue, first aid, CPR, boating instruction, and craft salvage.

48 volunteers kicked off the first season, giving up one or more weekends from April through June 1979. By day, they were posted at major rapids and put-ins to inform novices about wearing pfd's, hypothermia dangers, various techniques; and to do some rescue work. By night, they visited area campgrounds, presenting films and lectures to potential paddlers, gave safety advice, and answered questions.

This year the need for solid, experienced paddlers is greater than ever. It behooves us to control ourselves, before government steps in. If you have at least Class II+ skills, can sacrifice just one weekend between May 1 – June 30, 1980, please contact:

Chris Nielsen (201)876-0231
11 Overlook Drive
Long Valley, N.J. 07853

Chris is currently writing up an article for AWJ telling how the River Patrol can be extended to your area's turkey stream. But if you can't wait for the next issue, you may write or call Chris directly.

JERSEY BOAT TAX DEFEATED

\$6 for every boat under 16 feet and \$14 for every boat over, including canoes, sailboats, and just about anything that floats; that's what New Jersey Bill #1027 proposed. And on March 13th that's what the state legislature defeated.

The small boat tax was originally proposed to fund the New Jersey Marine Police, part of the Division of Coastal Resources, which is part of EPA. These police are responsible for statewide boating safety, law enforcement, rescue, and boating education. While all of this service is very noble, none of it reaches paddlers. Police patrol boats are all motorized and

unable to travel rivers and their education programs are strictly for motorized craft.

So while the defeat of this boat tax bill seems logical and beneficial to paddlers throughout New Jersey, the bill will probably resurface next year. So we suggest Garden State boaters keep their eyes open and make their feelings known to local legislators.

Upcoming Expeditions

If you or your club are seeking members for an expedition, send specifics to AWA. Please include registrar's address, mandatory skill level, location, and approximate trip dates. If possible, list the number of available places and estimated cost.

LAPPLAND 1980

I am seeking several qualified paddlers to join me in a three-week, 500 km canoe trip in Swedish Lappland, starting mid-June, 1980. This open-canoe trip will begin at the Norwegian border on a remote mountain lake and will descend from the tundra through traditional Lapp country, forest and farmland, and eventually reach the sea. Everything from the mountains to the coast will be viewed in 24-hour daylight.

Trip expenses will be shared: food, flights from Kiruna to starting point, local transport, and other expenses should not exceed \$250. Air fare to Northern Sweden, canoe rental (if required), and personal gear are your own cost. If interested, contact:

Franklin Bloomer (01) 373-4256
20, Wallgrave Rd.
London SW5, England

CANADA'S COPPERMINE

About as far north as you can go in Canada's Northwest Territories, flows the Coppermine River. Here, starting late July, 1980, we are planning a four-week, open boat, wilderness canoe expedition. At approx. 66 degrees latitude, the Coppermine will be a tundra, 24-hour daylight trip. Flowing along central Mackenzie's northern tree line, the river empties into Coronation Gulf, of the Arctic Ocean below Victoria Island. The scenery, though stark, will be beautiful and wildlife abundant.

We have a few slots left. If interested in a real expedition, contact:

Curt Gellerman
505 E. Lincoln Ave.
Roselle Park, N.J. 07204
hm (201) 245-6492

Conservation Notes

CAHABA RIVER GERRYMANDERED FROM WILD AND SCENIC

For the past two years, 115 miles of central Alabama's winding Cahaba River has been under study for Wild and Scenic protection by the U.S. Forest Service. It had the aura of a sure thing. The Department of Interior claimed it qualified. The Heritage Conservation and Recreation Service (HCRS) currently making a proposed national wild and scenic river list, included this stream. Rupert Cutler, Assistant Secretary of Agriculture Dept. (of which the Forest Service is a part) was paddled down the Cahaba last Spring by several conservationists and at the end of the trip claimed the river qualified. The Sierra Club, ARCC and the Alabama Conservancy had raised public opinion in favor of protection.

Then this past January, after a rapid personnell shuffle, the Forest Service said

NO to the Cahaba. The Wild and Scenic River definition was politically wrenched to exclude this stream. How does a squeeze play like this happen? According to river conservationists, just like this:

Birmingham Chamber of Commerce fearing enforcement of water quality laws is against protecting the Cahaba. They pressure Congressmen Bevill (Ala.) and Whitten (Miss.) who control appropriations for national water resources and Agriculture Dept. respectively; and they in turn dictate terms to the Forest Service. It has the simplicity of the old shell game.

There is probably little that can reverse this decision, but it would help if a substantial number of complaints were registered against political privilege. Write: Dr. Rupert Cutler, Asst. Secretary for Conservation, Research & Education, Dept. of Agriculture, 14th St. & Jefferson Dr. SW, Washington, D.C. 20250.

ARMY CORPS -2% LAND & WATER -60

If you are only going to write one conservation letter a year – make it this one. In Spring, Congressional fancy turns to thoughts of budget, where conservation causes are taking the beating of their lives. The House Budget Committee, after wise and masterful examination, has decided to cut the Army Corps of Engineers' budget by a whopping two and a half percent. (It's hard to trim pork when it's still in the barrel.)

But the Land and Water Conservation Fund (this is the Department of Interior's agency that supplies all the money for state and federal parks to preserve wildlife, forests, and water) monies were slashed 60%. Likewise, the Department of Agriculture's Soil Conservation Fund was cut 35%.

In short, hydropower projects, which are the meat and potatoes of the patronage system, have remained blissfully intact, while conservation funding has been effectively dismantled. These Budget Com-

mittee proposals face a big floor fight starting late April and running through the rest of this year. In this year of the cutbacks, it is unlikely that we will be able to raise conservation funding back to a reasonable level. So we must apply the next best strategy: destroy the funding of her enemies.

The American Rivers Conservation Council (ARCC) is asking every boater and concerned outdoorsman to write your Congressman and ask for one billion dollar cut in hydropower funding. In an age that dubs river conservation, school lunch programs, and aid to education as "costly luxuries", the trimming of several unwanted, unnecessary dams is scarcely excessive. So write your representative now – it's the most important river-saving letter of 1980.

COLUMBIA DAM UPDATE

Your letters worked; but the fight is far from over.

TVA's proposed Columbia dam on Tennessee's Duck River has still denied the #404 permit from the Army Corps – a dredge spoil dumping variance needed to make this boondoggle a reality. (See AWJ XXIV/5-6, p. 8). Normally, TVA's acquiring permits from the Corps is a mere matter of paper shuffling. But efforts of ARCC, Tennessee Scenic Rivers, plus a massive letter writing campaign convinced Colonel Tener of the Corps to run the full legal process on granting this permit.

AWA applauds Colonel Tener for taking this forthright, honest stance, and for thus far withholding the O.K. from this destructive project. We also thank AWA readers, who, along with others sent the Corps over 600 letters following the November, '79 hearing, to help make this dam a national issue.

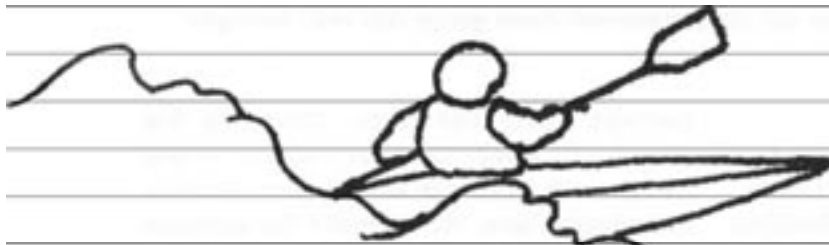
But TVA is far from licked. They have put rotating dam crews on a 24 hour-a-day construction schedule, just to get the Columbia dam structure built and ready for
(continued on page 32)

The Lower Black Canyon of the Gunnison

WHITEWATER

by *RANDY WELCH*

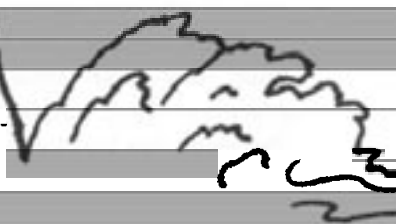
**1200 feet below Colorado's
desert floor flows an exciting
river offering a unique perspective
on the canyon it carved.**



This is a great way to start the day. The sky is beginning to turn blue and a handful of stars are dimly shining. As I look out on the ground outside of my small station wagon, I see three frost covered down sleeping bags, each containing a boater. Around the trio there is only gray badlands decorated with patches of frost. If not for the presence of we four humans, the scene would be lifeless.

Each of us groans and slowly climbs out into the late October chill. First up is Pat Call. He is in his late '20's like the rest of us, and his dark head of hair is matched by an equally dark beard. I think Pat has a look that would have done him well if he had chosen to be a minister. His gaze seems to probe deeply as if gleaning information on each man's soul.

The second man rises. He is Dennis Horgan. His appearance is aided by a full blond beard — a remnant of a Grand Canyon trip we had all taken three months earlier. He is my idea of just what Robinson Crusoe would be like: excitable, a bit eccen-





Tom Bryant, above, paddles his way out of the second inner gorge and into sunlight. (Pat Call photo)

tric, but very resourceful.

The third man off the ground is our very own version of "Cool Hand Luke", Tom Bryant. Having just started boating this past spring Tom shows exceptional skill and a daring on the waves, no doubt, due to his combination of a cool, calculating mind with a lack of experience. He thinks himself too handsome to cover his face with a beard.

A quick breakfast of snatched odds and ends and a few words designed to demonstrate each party member's enthusiasm, sends our group to the take-out, an old bridge near Austin, Colorado, just two miles away. From here we shuttle 20 miles across an old gravel road that traverses the badlands of western Colorado near Montrose. Finally we stand on the south rim of the Gunnison's Lower Black Canyon, 1200 feet above the river.

With a groan, we begin carrying Tom's boat the mile-and-a-half down into the canyon, then another mile-and-a-half to the river. We trekked the other three boats

partway down last night, following the course of Chukar Canyon; named for the Indian rock partridge which were recently introduced here. As we make the arduous and downright painful clamber over rocks and around boulders, each ponders on what he's gotten into. Pat and I are sold on the belief that any effort this hard must surely be rewarded equally below. Dennis wonders if his time might not be better spent on some less exhaustive endeavor.

Tom too wonders aloud. The rugged landscape inside the canyon suggests a river of like nature. At no time during the descent can we see the water below. I assure Tom that I have checked the topos, and am certain the water will be Class II; and as we all know, topos never lie.

Our run begins just two miles downstream of the west end of Black Canyon National Monument. Here the river still flows through a beautiful canyon but less narrow and steep than that in the monument. The upper portions of the black canyon walls are soft, Triassic red sedimentary

“ . . . high up on the crags perched the awesome figure of a Bald Eagle. It would wait until we were close and then unfold its massive wings and slide silently downstream to await our next approach.”

rock which has caused the canyon to be wider there than in the lower, more narrow, depths where hard Precambrian schist and gneiss prevail.

At last we make it to the river. The side canyon descent in itself would have been a satisfying day's adventure, but now we are committed to a 25 mile river trip; for none of us would want to carry a boat back up to the car. Owing to a release from the U.S.B.R. dam just upstream of the Black Canyon National Monument, the Gunnison is flowing 1200 cfs—a moderate level.

The scene before us, as we stand on a small beach looking up, is as alien as a view on the surface of some distant planet. Except for the perpendicular slit formed by Chukar Canyon, the river is enclosed by sheer dark walls. Vertical and craggy they tower over us. There is no doubt about our being in wild country.

The course of the river is a continuously unfolding picture of untamed beauty. The 300 foot deep inner gorge is decorated by an assemblage of gargoyle-like rocks. Putting in, we see coveys of scurrying Chukars causing small slides along the precipitous slopes. A large buck bounds from the water's edge. Where the walls do not drop directly into the river, grass and small trees gain a foothold. Then, around the next bend, high up on the crags perched the awesome figure of a Bald Eagle. We were to see the great bird several times over the next few miles. It would wait until we were close and then unfold its massive wings and slide silently downstream to await our next approach.

Short, steep Class II rapids fill the first four miles, making a playful beginning to the trip. The drops look vicious from above, but invariably drop away to delightful waves, just right for surfing. Now the canyon opens up, the towering black schist disappears on our right, and as the river slows to Class I riffles, we float

through the arid beauty of Pinion Juniper.

Another two miles of river passes by and the schist begins to rise from the depths on our right. Again we find ourselves in a dark Precambrian gorge, but this one is different. For the next four miles the Gunnison pours over Class III-IV rapids. We notice in the first drop that the river has changed character. Tom is stuck in a medium size hole and tries repeatedly to pull himself out. He can't and winds up swimming. It is a bad place for a swim, but both Tom and his boat are retrieved in the pool below.

In the next major drop I find myself in trouble. Leaning hard on a downstream boulder, my stern momentarily pins against it. Struggling, but helpless, I watch my bow swing slowly downstream, hugging the huge boulder and clearing the left canyon wall by a mere eight inches.

(continued on page 32)

Dope Sheet:

Lower Black Canyon of the Gunnison River
 Location: SW Colorado, about 55 miles south of Grand Junction.
 Difficulty: Mostly Class II with some long stretches of Class III-IV.
 The Run: 25 miles from put-in near Montrose to Austin takeout. You can lop off several miles by taking out at Smith Canyon
 Preparations: Contact local Bureau of Land Management (BLM) for detailed directions and maps.
 Ask for U.S.G.S. topo quads Black Ridge, Redrock Canyon, and Lazear, Colorado.
 No permits required.
 Flow Information: Call Curecanti Field Div. of Bureau of Reclamation in Montrose: (303) 249-4551. 800 cfs is minimum. 1200 is medium.

NAVIGATION of the POTOMAC

or
How to stand up in your boat and survive

by *GEORGE WASHINGTON*

In August 1754, Virginia planter George Washington wrote a letter to Thomas Lee describing his canoe trip down a section of the Potomac. The drop he vividly describes as "The Spout", a couple of hundred yards below the confluence of the Shenandoah and the Potomac, is well known to local paddlers as White Horse Rapids (approximately Class III). Caleb Hathaway and Hal Leich of Canoe Cruisers ran it recently in Kayaks and report that "as always, it was a beauty."

As we follow in the wake of his canoe through many chutes and rapids, we can only echo the toast he proposed to Mr. Hunt, an English traveler of the post-revolutionary period:

"Success to the navigation of the Potomac."

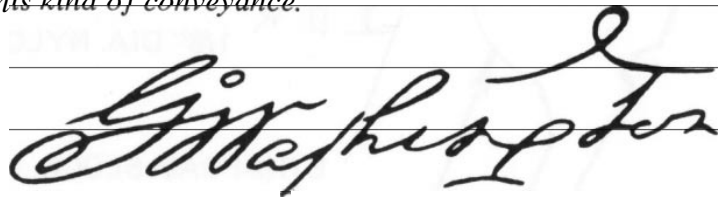
— *Special thanks to Hal Leich*



Illustration by A.J. Schauer

August, 1754

Sir: Your desire, added to my own curiosity engaged me the last time I was in Frederick to return down by Water to discover the Navigation of Potomack; the following are the observations I made thereupon in that Trip. From the mouth of Paterson's Creek to the begg. of Shannondoah Falls there is no other obstacle than the shallowness of the Water to prevent Craft from passing. The first of those Falls is also even and shallow but swift and continues so with interruptions of Rocks to what is known by the Spout sch. is a mile and half; from this their is Rocky swift and very uneven water for near 6 miles, in which distance there are 4 Falls, the first of which is tolerably clear of Rocks but shallow yet may be much amended by digging a Channel on the Maryland side abt. 2 Miles from this, and $\frac{1}{2}$ Mile below the Mouth of Shannondoah is what they call the Spout, which is the great (and indd. almost the only) difficulty of the whole it has a considerable Fall the water being confined shoots with great Rapidity and what adds much to the difficulty is the bottom being exceeding Rocky occasions a Rippling so prodigious that none but boats or large Canoes can pass. The canoe I was in wh'ch was not small had near sunk having received much water on both sides and at the hd. Their may be a passage also got round this also upon the Maryland shoar that Vessels may be hald up after removing some Rocks which a moderate expence may accomplish. One of the other two Falls is swift and ugly not much unlike the Spout but when the River is higher than ordinary a passage may be had round a small Island on the Other side which passage may be greatly improved. abt. 8 miles below this there is another Fall which is very easy and passable and abt. 2 Miles from that is a cluster of small Islands with many Rocks and swift water which renders the passage somewhat precarious. From this to the Seneca Fall the Water is as smooth and even as can be desir'd, with scarcely and perceptable Fall. The Seneca Fall is easily pass'd in two places and Canoes may continue within two Miles of the Gt. Falls but further it is not possible therefore the trouble and expence of going up Seneca Falls will not be adiquite to the expence and touble [and] will not answer the Charges as all Carriages for the benefits of a good Road are oblig'd to pass Difficult Bridge from whence it is but 8 Miles to the Landing place at the Sugarland Island and is 5 Miles to the Lowest landing that can be H'd below the afores'd Falls of Seneca. Thus Sir as far as I was capable, have I given you an acct. of the Conveniences and inconveniences that attend the Navigation of Potomack fr'm the Fall up, which I doubt but you will readily concur with me in judging it more convenient least expensive and I may further say by much the most expeditious way to the Country. There is but one objection that can obviate this Carriage and that is the Scarcity of water in the best season of the year for this kind of conveyance.

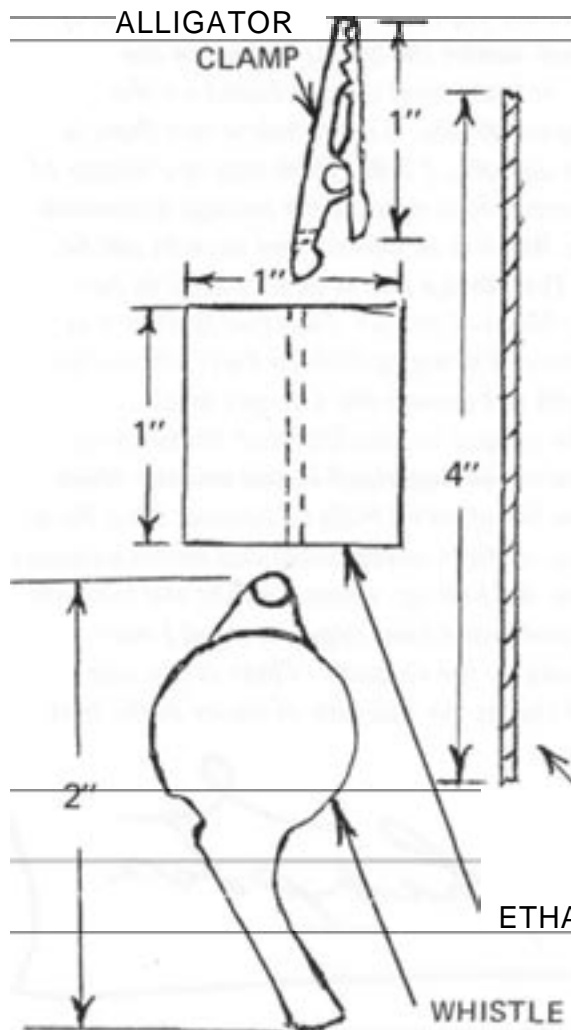


The Whistle Bob

No matter how leather-lunged you are, it doesn't take much of a rapid to drown you out when you're trying to holler to someone even a short distance away. In an emergency, this lack of communication can be disastrous.

A dime-store whistle is the logical answer. Most of the river signals presented in our last issue (AWJ-1980, #1) are enhanced by pre-arranged whistle calls. Walt Pilewski, Safety Chairman of the United States Canoe Association, has developed an excellent way to carry a whistle that will float and won't strangle you like a lanyard-noose.

One *Hint*: Let's keep the summer camp aura out of boating; use whistle signals only for emergencies. It only takes a couple of wolf calls before people begin to ignore you.



MAKING A WHISTLE BOB

1. Punch a small hole through the ethafoam block using an awl or nail.
2. Thread the string through the foam.
3. Tie one end of the string to the alligator clamp and the other end to the whistle.
4. Clip it to some out-of-the-way part of your life vest or clothing, like your life vest shoulder, and test it to make sure it won't come off while paddling.



THE CALL OF SUMMER

It's mid-season now, but within a few months all the regional standbys will be run, water levels will begin to drop, and paddlers will yearn for something outside their standard boating realm. The lure of powering your blade through a new stream in a strange land, haunts all boaters with the coming of Summer Solstice. The problems come with turning dreams into an expedition. Yet despite rising costs, paddlers still kite off into new countries every year. And with expansion of the sport, it is easier than ever, if not cheaper, to move yourself and a raft, canoe, or kayak to that far-away river.

A surprising number of paddlers have planned expeditions and still seek enthusiastic crew members. The AWA expedition file still has slots open for trips on Africa's Omo, the Coppermine in the Northwest Territories, Chile's Bio Bio, Labrador's Kenamu or the Class V+ Magpie, the Rio Inambari in Peru, 500 km through Swedish Lapp-land, and a "River Symposium" in New Zealand; all these, plus a standing offer from Laslo Bertý to guide qualified boaters down a second or first descent of virtually any river in the Amazon watershed. As an enticement and aid to your decision, we offer a few pictures of stream and shoreline, taken during last year's trips. (If enticed, write the

Journal for Inform
(All photos courtesy of Charles St. John and Laslo Bertý.)

WHITEWATER



Jay Doub
7 Foot Falls
Chattooga River
South Carolina

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SAUSAGE FLOTATION For Open Boats

by *BILL ATKINSON*

Two of the great things about paddlers is that they are incredibly innovative and cheap, er, thrifty, regarding their sport's equipment. Now, true to this tradition, paddler Bill Atkinson has developed a new open boat flotation system that you can make in your basement and save a fair amount of cash on. Bill, a long time member of the Appalachian Mountain Club's Boston Chapter, has been paddling flat and mild water expeditions for the past seven years. Just a little over a year ago he became a whitewater fanatic and now spends all his weekends on the streams throughout New England.



With just two inner tubes and \$20, you can add seven cubic feet of boat-saving flotation to your craft.

If you hold any hope salvaging your boat when you dump, it soon becomes obvious you need something beyond the manufacturer's minimum found in most open canoes. Foam or various inflatables jammed under the center thwart are tough to fasten well and inconvenient for gear storage. Therefore more and more boaters are turning to the ethafoam sidewall system. It rides the boat high out of the water, and adds some slight rigidity to the craft if tightly fitted and laced in. The idea of flotation laced onto the boat's sides, seemed good to me. But the inflatable and deflatable sausage made from old truck innertubes offers more flotation and several advantages, not the least of which is price.

COMPARISON

HM

E

■

"Sausage" Sidewall

Cost: \$20 aprox. (if tubes are \$6 ea.)

Displacement: 3% cu. ft. per side

Gunwale submergence when overturned:

Aprox. 4% in. (with 100 lb. boat)

Weight: 17 lb.

Dimensions: 84 in. long x 10 in. wide ea.

Foam Plank Sidewall

\$50 aprox. in Boston area

2 cu. ft. per side

aprox. 5% in.

10 lb.

any length desired x 4 in. (using 2 planks of foam per side.

Additional Advantages – Foam:

Foam planks take up substantially less room in the center of the boat where you store gear or paddle solo. Foam adds some greater rigidity in case of pinning.

Additional Advantages – Sausage:

Sausages can be deflated for easy storage on long trips. For solo paddling, the tube defines a comfortable kneeling width, and firmly braces for lateral support.

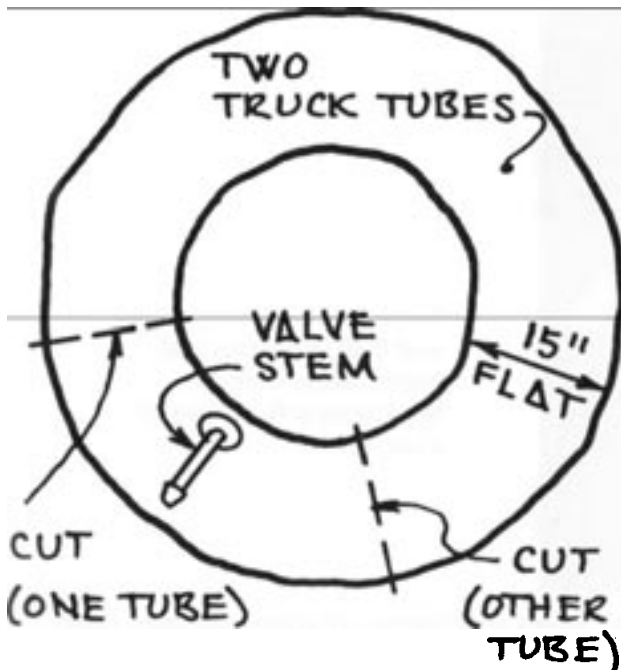


Figure 1A

MAKING THE SAUSAGE

Though the directions are exacting, the system is not difficult to make or install. You will need the following tools: heavy duty scissors, stiff wire brush (or wire wheel on electric drill), neoprene contact cement, hammer, 8 brass grommets (7/32-inch hole), 20 feet parachute cord, knife, strong lungs or bicycle pump.

Get two second-hand truck inner tubes size "9.00 x 20" or "10.00 x 20" (meaningless measurements). Try your local gas station. Tubes vary; select for maximum lightness and fatness (14%-15 inches wide when deflated). Make sure they have valves and caps with a slot in the top for removing the valves themselves. Inflate tubes, clean them in a tub of water and search for leaks. Patch as necessary.

Decide where in the boat you want the valve stems to come, remembering that each sausage will be of opposite hand; then cut the tube straight across the width, as in Fig. 1A.

Form a two and a-half-inch flap on each end, oriented to fold toward the original center of the tube. That is, flatten the tube out on the floor. From the tube end, cut a two and a-half-inch slit down

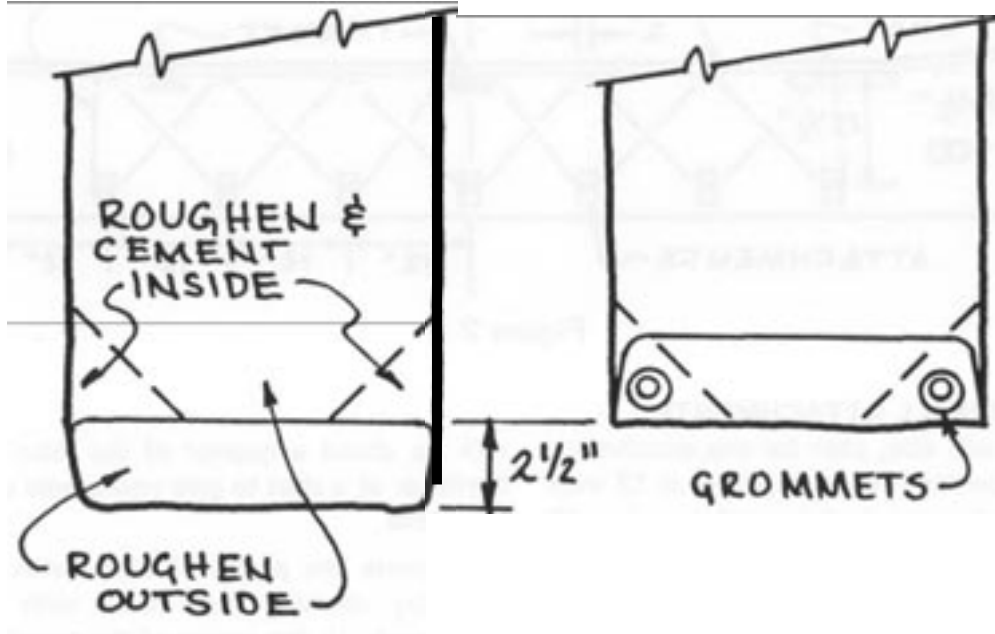


Figure 1B

Figure 1C

each side. Then turn the scissors 90° and cut straight across connecting the two slits. This will leave you a flap like the one on a manila mailing envelope. See Fig. 1B. Repeat process on other end.

Roughen all surfaces to be cemented. Sandpaper's impossible, a wire brush is O.K., but a circular wire wheel on an electric drill can do the job in minutes. (Eye protection is a must here.) Roughen the inside of the flap and the two and a-half-inch area it folds down on. Also, on the inside, roughen a triangular area at the eventual corners as shown in Fig. 1B. This will prevent air escaping and should be large enough to accommodate the grommets described later.

Using neoprene contact or a good grade rubber cement glue the inside of the corners and then the flap. Thoroughly hammer the finished joints.

Set a large brass grommet (7/32 inch hole) in each corner of the flap. Then re-inflate tube and check for leaks. Leaky flaps may be pulled apart and recemented. Once leakproof, attach 30 inches of parachute cord to each grommet and there you have it.

While you prepare the attachments in the boat, keep the sausages inflated and gently stretched out straight, so they won't curl back to their old shape.

MAKING THE HULL ATTACHMENTS

Like the ethafoam sidewall, the sausages are laced against the hull's sides in criss-cross fashion. (See photos). For aluminum boats, attachment schemes have been worked out by others. This fiberglass attachment system has been worked out for ABS, fiberglass, or plastic boats.

You will need the following tools: 22 inches polyethylene tubing — 3/8 inch out-

side diameter, non-precious scissors, masking tape, heavy gauge sandpaper, eight ounces epoxy resin plus hardener, 22 feet of two-inch fiberglass tape or a half-yard square sheet, coffee can, mixing stick, wax paper and Handi-wrap (not Saran-wrap), two inch throw-away paint brush, staple gun and half-inch staples, measuring tape, drill with quarter inch bit, 60 feet of cord.

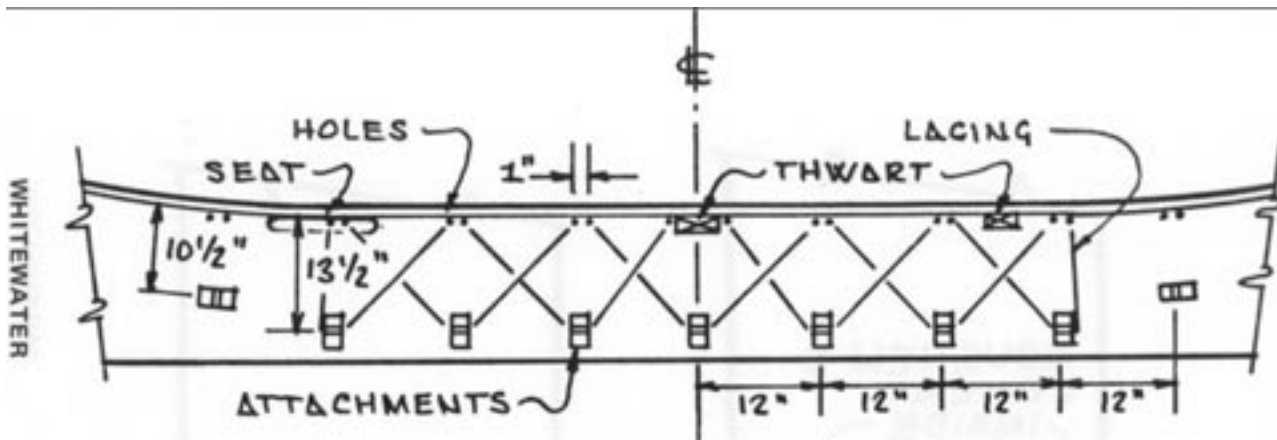


Figure 2

LOWER HULL ATTACHMENTS

On each side, plan for one attachment at the center thwart and four at 12 inch intervals toward the bow and the stern; 18 in all. From the underside of the gunwale, measure down 13 1/2 inches, to locate the center of each attachment; except at each end attachment: measure down only 10 1/2 inches and orient them 90° to the others. See Fig. 2.

Mask off with tape a six by two and a-half-inch rectangle at each attachment. The end rectangles should be vertical, the center ones horizontal (with the keel). Roughen each outlined rectangle.

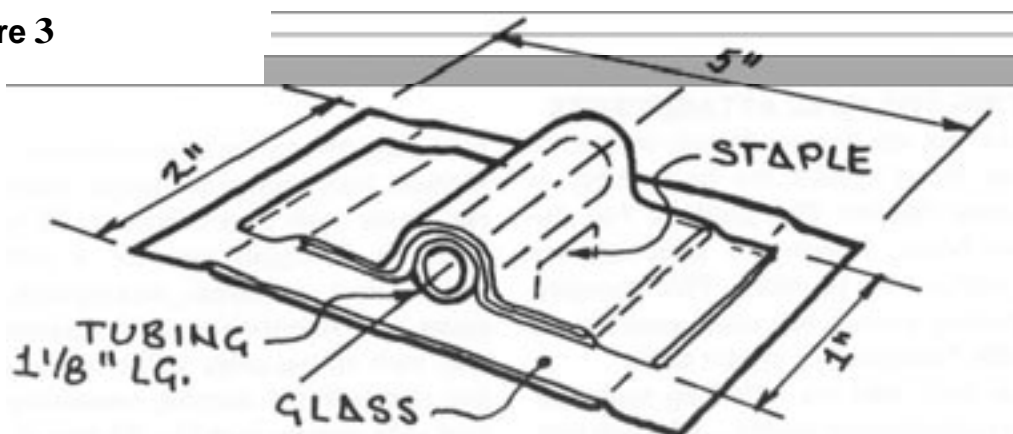
For each of the 18 lower hull attachments cut a one and one-eighth-inch length of polyethylene tubing and four strips of fiberglass: a two, three, four, and five inch strip each two inches wide. Lay these strips on a wax paper working area and

mix up about a quarter of the resin and hardener at a shot to give you ample working time.

Saturate the pieces of cloth with the resin by daubing them hard with the paintbrush. In the center of the taped off rectangle, lay in one resin-soaked two-inch patch, followed by a five-inch patch over top. Lay on the pieces of tubing crosswise and over that lay a three-inch patch folded lengthwise, followed by a four-inch patch folded lengthwise. See Fig. 3.

Work out all the air bubbles with a paintbrush and lay the Handi-wrap over this mass for a smooth finish. For extra security, take a staple gun and shoot a half-inch staple parallel and close to each side of the tubing. After cure, remove tape and wrap. If you don't have acetone, clean your hands with any strong laundry soap powder and water.

Figure 3



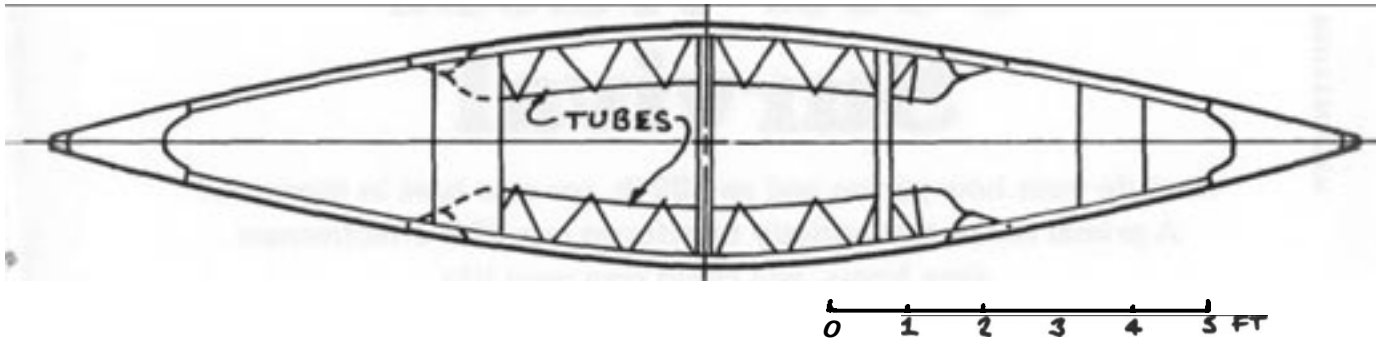


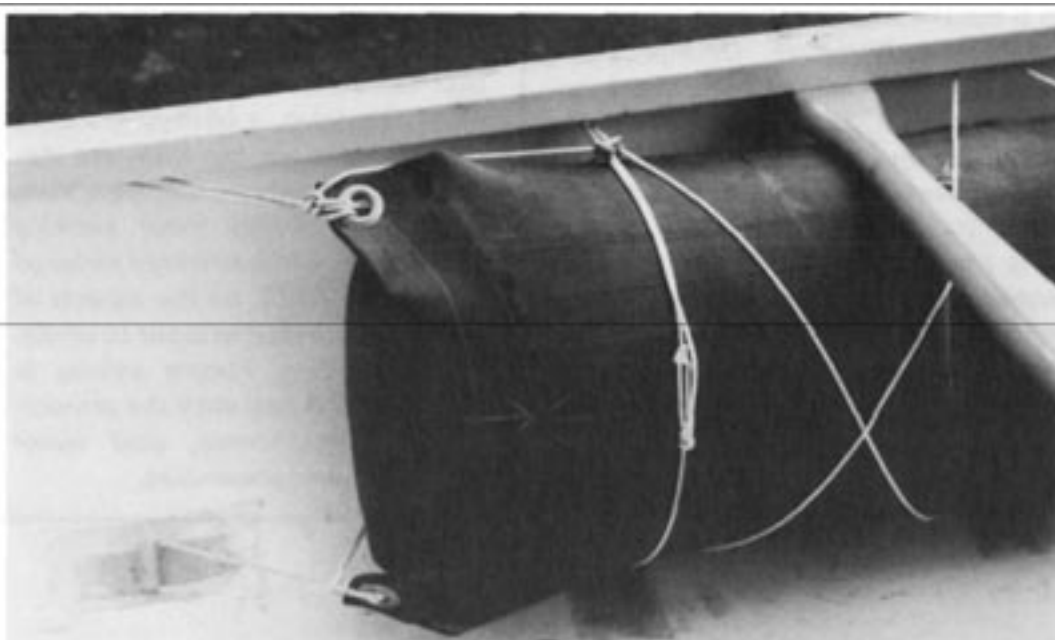
Figure 4

UPPER GUNWALE ATTACHMENTS

There are 18 upper attachments, each located directly above the lower ones and just underneath the gunwale. (See Fig. 2). To make the attachments, drill pairs of holes through the hull, one inch apart. At the center thwart, they should be far enough apart to clear the thwart. Make sure you select a drill bit just barely large enough to allow for your cord. Very little water will pass through the holes but purists may want to modify things so holes can be sealed or dispensed with.

To install the *sausages*, deflate them a little and attach grommet cords to the outermost attachments so the inside of original tube arc is toward the center. Pull taut, but not so hard you pull out the grommets.

Using about 30 feet of cord each side, lace in the tubes as shown in Fig. 4 and the photos. Inflate the *sausages* the rest of the way by mouth and make adjustments by tightening or loosening the lacing. To get maximum volume from the tubes, use a tire pump and blow them up to a 31-32 inch circumference.



Cold Water Survival

What do your bow person and an 800 lb. sea cow have in common?
A primal reflex that entirely transforms our CPR-effectiveness
time frame, and could save your life.

by MARY GINSBURG

True or False

- ___ After a person has been underwater four to six minutes, the case is hopeless. He will either die or have irreversible brain damage.
- ___ A drowning victim with cold and clammy skin, dialated pupils, no pulse, and no respiration is dead.
- ___ Once you've started CPR, you keep it up until the body turns blue or you get to a hospital.

If you answered true to any of the statements, you are in line with the common misinformation about cold water drowning. Within the past four years, it has become increasingly apparent that the oft-taught "facts" above no longer hold, and that humans can endure submer- sion much longer than believed. One of the most useful first-aid skills for the whitewater paddler is cardiopulmonary resuscitation (CPR) which combines mouth-to-mouth breathing with external heart massage. That this can save lives of near-drowning or heart attack victims is well known. But knowing when to apply them is equally important.

Dr. Martin Nemiroff, University of Michigan Medical School, and Dr. John Hayward, University of Victoria, B.C., two of the foremost hypothermia re- searchers have discovered this amazing paradox: *the coldness that kills can also prolong the life of a person who would otherwise drown.* Three particular cases turned this theory into practical fact.

▲ April 1975, an 18-year old man, sober, drove off the road into an icy pond and spent 38 minutes underwater before rescue. Dr. Nemiroff directed emergency room physicians to continue resuscitation

efforts begun by the ambulance atten- dants. He was transferred to the University Hospital, under Nemiroff's care, and after 13 hours the young man awoke. He later returned to college where he achieved A-grades. So much for the brain damage theory.

At two recent international con- ferences on Hypothermia and Cold Water Survival, one at the University of Rhode Island in January, and the other in Westchester County, New York, in March, experts in the field discussed both theoretical and prac- tical aspects of survival in the cold. Mary Ginsburg, a biology graduate student who canoes with the Ap- palachian Mountain Club, New York Chapter, attended these exciting conferences and is writing a series of articles for AWA, on the aspects of cold water survival relevant to white- water paddling. Future articles in the series will deal with the physi- ology of hypothermia, cold water treatment, and prevention.

▲ A rescue squad found a five-year old boy in the 46° F water of a shallow creek after a 15 minute search. The squad performed CPR enroute to the hospital, where Dr. Nemiroff and his team persisted with treatment although the boy's core temperature was only 93° F and there was no sign of brain activity. Two days later the boy sat up and began to play with his toys. There was no brain damage.

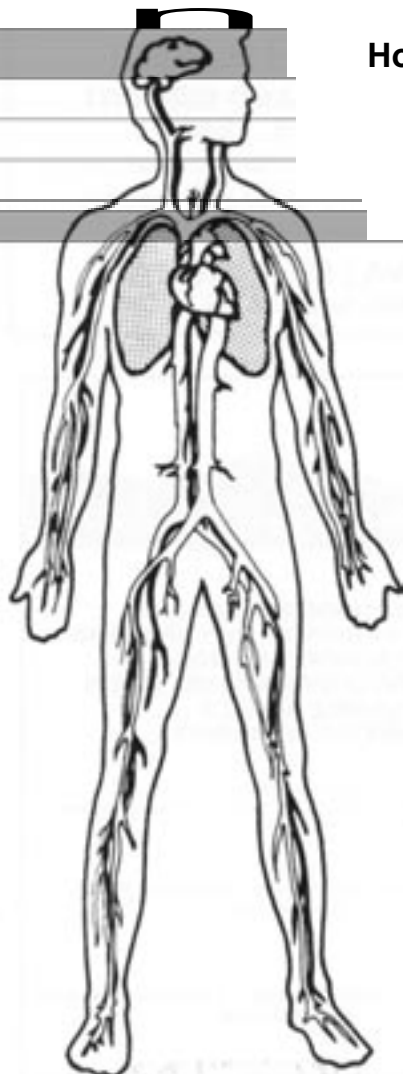
▲ March 1979, a 24-year old woman was trapped in the back of a car that had plunged into the Charles River in Boston. The car filled and she was trapped for nearly a half hour before rescue. Because of immediate resuscitation efforts by her rescuers, she was able to walk out of the hospital after two weeks care.

THE DIVING REFLEX

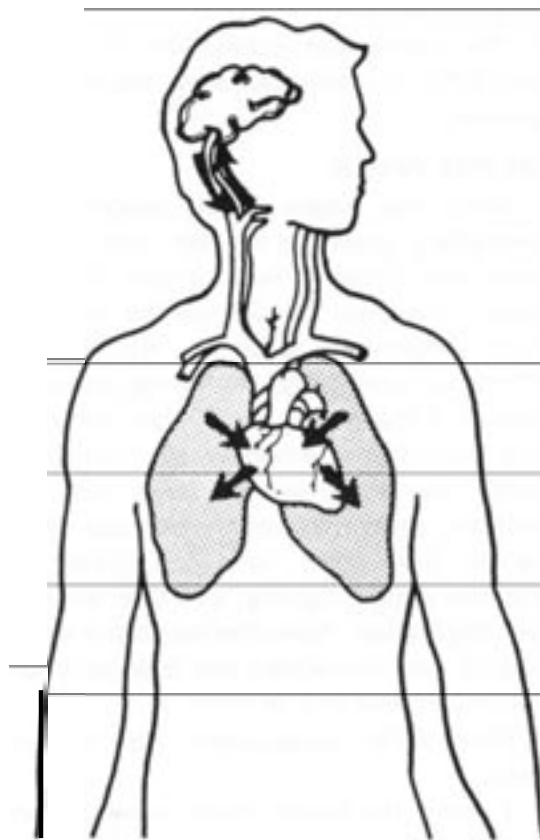
Just exactly what allows a person to defy the standard drowning countdown and survive under cold water, is still being researched. But scientists have recently discovered a bodily response called the Mammalian Diving Reflex. Similar to the reflex that permits diving mammals, such as seals and sea cows, to survive long periods underwater, it is basically a body shut down response triggered by sudden face contact with cold water (below 70° F).

Upon getting the cold signal, the heart rate slows, the peripheral blood vessels constrict, and blood circulation in most parts of the body is shut off except to the heart, lungs, and brain. This reflex ensures that oxygen remaining in the blood is

How the Mammalian Diving Reflex Works:



NORMAL CIRCULATION:
 Blood moving throughout body



MAMMALIAN DIVING REFLEX:
 Blood restricted to heart, lungs and brain.

transported to the brain itself, and results in its needing less oxygen. Thus survival time is vastly increased two ways.

Obviously, this reflex is not automatic. Your body doesn't go into a stupor every time you jump into a 65° F swimming pool, nor do the majority of victims trapped under water for more than six minutes survive. Varying factors contribute to cold water survival, and some have been identified as:

1. **Age.** The younger the victim, the more likely he is to survive. It is believed the diving reflex decreases with age.
2. **Water temperature.** The colder it is, the faster the brain cools, enhancing chances of survival.
3. **Water quality.** The cleaner, the better. Also, fresh water seems more conducive than salt water.
4. **Submersion time.** Of course, the less time under, the better the odds of ultimate recovery.
5. **The immediate institution of competent CPR is a key factor in the victim's survival.**

ON THE RIVER

What this means to the boater in an emergency situation on the river is that there are virtually no iron-clad signs of death. Rescuers should not be deterred from beginning aggressive resuscitation efforts as soon as the victim has been gotten out of the water, despite lack of favorable factors or presence of traditional signs. The victim will probably look terrible and show many of the classical death signals: blue color, cold skin, fixed and dilated pupils, rigidity, and lack of pulse and respiration. Nevertheless, if the water is cold, and immersion less than an hour, the victim may still be alive.

1. Start CPR immediately and do not stop.
2. Prevent the victim from losing more heat, but do not try to rewarm him.
3. Get him to a medical facility as soon as possible all the time continuing uninterrupted CPR.

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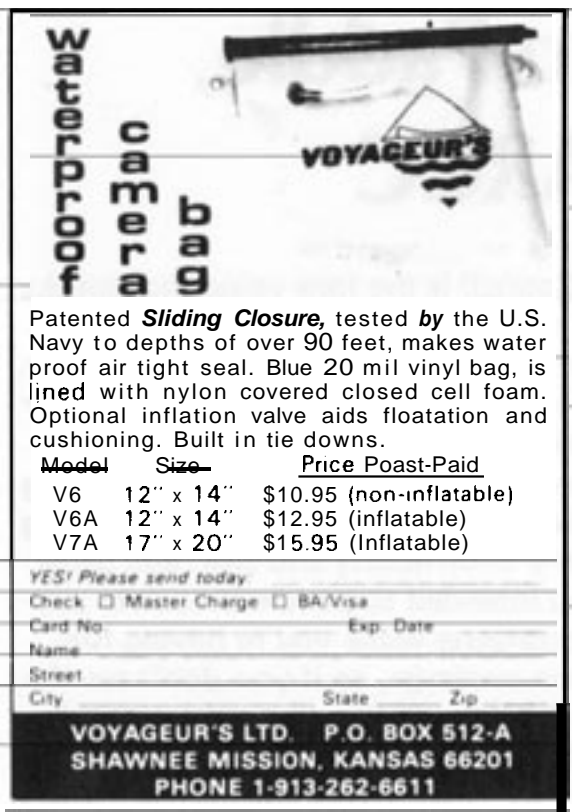
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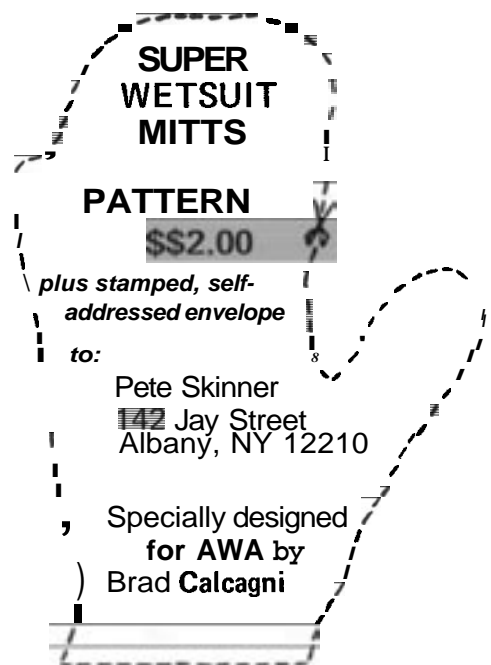
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Clearly, since almost all paddled white-water is below 70° F, it is important for paddlers to be aware of the possibility of giving the cold water drowning victim a second chance, and to be prepared to do so by the application of well-learned cardiopulmonary resuscitation techniques. Because it is impossible to learn effective CPR from a book alone, no description is given here. The American Red Cross, through its chapter safety service divisions, and the American Heart Association, sponsor CPR courses which include practice of the techniques on manikins. Any group can make arrangements with its local Red Cross Chapter for a CPR course to be given to its members. (Such a course takes approximately nine hours and costs about five dollars for materials.) In addition, various community agencies, such as local fire departments or ambulance corps, often offer such courses. Every safety-conscious paddler who does not already know how to administer CPR owes it to his fellow-paddlers to seek out such a course and take it!

REFERENCES

International Association of Dive Rescue Specialists, "Cold-Water Near-Drowning: What You Can Do." A slide film available from Concept Systems, Inc., 1449 Riverside Drive, Fort Collins, Colo. 80521.

Pennsylvania Fish Commission, "Survival in Cold Water." A pamphlet available from the Commission at Box 1673, Harrisburg, Penn. 17120.

U.S. Coast Guard, "Cold Water Drowning—A New Lease on Life." Pamphlet #CG-513, available from your local Coast Guard Office. (Or for a single copy send a stamped, self-addressed envelope to: Mary Ginsburg, 1810 Haight Avenue, Bronx, New York 10461.)

40 Trips to Paddle with ARCC

The American Rivers Conservation Council is the lone voice that speaks for our rivers. They wade Washington's political morrass and line up Congressmen for our side. They battle dam builders at hearings and lance holes in their arguments. They are the rivers' lobbyist, the knights who battle for what we believe in, and they are desperately short of funds.

The 40 trips nationwide listed below are their major method of raising funds and of getting people out to experience the streams they're fighting to save. These one to eight day trips vary in difficulty and size, and generally have an interesting crew. So if you intended to paddle that river anyway, why not join an ARCC trip and contribute while you're having fun.

ARCC is trying to expand its Western coverage, so if you don't see the river you love on the schedule, write ARCC and they'll work something out. Please note there are three special non-cost canoe trips in prime areas where only a small donation is requested by non-ARCC members. On most other trips, contributing members receive a 10% individual discount and sustaining members receive a 10% family discount.

EASTERN REGION

Date	River	Craft	Minimum Age	Cost
April 27	Potomac (Smoke Hole Canyon), WV	canoe	12	\$20
May 4	Shenandoah, WV	raft	10	\$23
May 10-11	Pine Barrens Trip, NJ	canoe	none	•
May 12	Cheat, WV	raft	13	\$30
May 15-23	Saint John, ME	canoe	12	\$475
May 16	Potomac, MD	kayak	14	\$35
May 25	James, VA	raft	12	\$25
May 26	Lehigh, PA	raft	10	\$24
May 27	New, WV	raft	14	\$42+
May 28-June 5	Saint John, ME	canoe	12	\$475
June 21-22	Delaware, PA/NJ	canoe	8	•
July 4	Shenandoah, WV	raft	10	\$22.50
July 10	New, WV	raft	14	\$35
July 12-13	Cheat, WV	canoe	12	\$70
July 15	Cheat, WV	"ducky"	14	\$30
July 19	Potomac, MD	kayak	14	\$35
July 27	Penobscot, ME	raft	12	\$48
July 28	Kennebec, ME	raft	12	\$48
August 31	Youghiogheny, PA	canoe	12	•
September 1	Youghiogheny, PA	raft	12	+
October 3	Gauley (lower), WV	raft	14	\$39
October 4	Gauley (upper), WV	raft	16	\$50
October 12	Lehigh, PA	raft	10	\$26

SOUTHERN REGION

Date	River	Craft	Minimum Age	Cost	WHITWATER
June 8	Amicalola, GA	canoe	12	\$30	
June 9	Chattooga (Section III), GA/SC	raft	12	\$22	
June 10	Chattooga (Section IV), GA/SC	raft	13	\$35	
June 12	Nantahala, NC	raft	7	\$12	
June 13	French Broad, NC	raft	10	\$25	
June 14	Nolichucky, NC/TN	raft	12	\$30	
June 15-16	New, NC	canoe	none	\$60	
September 4-5	Ocoee/Chattooga, TN/GA	raft	13	\$50+	

WESTERN REGION

May-August ++	Salmon (Main), ID	raft	8	\$515
May-September ++	Snake (Hell's Canyon) ID/OR	raft	8	\$515
May 19-24	Dolores, CO	raft	12	\$300
May-August ++	Colorado (Cataract Canyon), UT	raft	12	\$375
June 7	Matanuska, AK	raft	7	\$40
June 13-14	North Platte, CO WY	raft	12	\$95
July 21-26	Green (Desolation-Grey Canyon), UT	raft	8	\$450
November 1-7	Rio Grande (Big Bend), TX	canoe	16	\$550**
December 13 or 14	Skagit, WA	raft	none	\$30

* ARCC contributing members may participate free of charge; other participants will be asked for a small donation.

+ Special trip; contributing member discount does not apply. On Youghiogheny Trip, price varies with outfitter.

++ Six-day trips.

** Includes air fare; contributing member discount applies only to river portion of trip price.

Please reserve space for me on the following ARCC river trips:
 (1/2 cost deposit for week-long trips; full payment for others)

_____ people on the _____ trip on the _____ river

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Please send me detailed information about the river trip program.

I would like to join ARCC and the fight to save our rivers. Enclosed is my 1980 membership fee which includes *American Rivers* – ARCC's newsletter and a copy of *Flowing Free*.

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| <input type="checkbox"/> \$15 individual | <input type="checkbox"/> \$30 contributing | <input type="checkbox"/> \$200 lifetime |
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Mail to: American Rivers Conservation Council; 317 Pennsylvania Avenue S.E.,
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(continued from page 12)

television coverage. Lacking funds to buy the 35,000 acres which they plan to inundate, their plan is to seduce Congressional support through publicity hype. This will not be easy: the EPA has already expressed concern over violations of water quality standards and destruction of wildlife. In addition, by TVA's own figures, the Columbia dam would at best return only 60 cents on every dollar invested. This makes Tellico look like a comparative goldmine.

It is feared, TVA will try another end run through Congress, a la Tellico, and get a conservation-standard exemption bill passed for this dam. Our best hope of preventing such a disaster is each of us to write our local representative asking them to be alert and oppose all funding for the Columbia dam. The TVA claims this to be "among our last major dam projects". Let's fix it so their last project has already been built.

Thanks to American Rivers Conservation Council's Dave Conrad.

GUNNISON

(continued from page 15)

After desperate braces, I recover and make my way to the pool below. 'What's next?' I wonder. The river answers with more congestion.

Horgan's Hell. Weaving our way, we come to the biggest drop of the bunch. Nothing can be seen from our boats, but Dennis blindly leads the way. One by one we follow the bouncing helmet below us. The drop rushes to its mid-point where the entire river constricts to a 10-foot wide channel surging along the left canyon wall. This, the only passible channel then drops abruptly into a foamy hole which leads to safety. Later, in Dennis' honor we dubbed this top drop Horgan's Hell. As a warning to future Black Canyon runners:

it would have been a good idea to scout this drop from the river right, where the shoreline is covered with large blocks of rock.

At last we come to the mouth of Smith Fork Canyon, and all breathe easier. There is no more dark hard rock to anger the river. (Smith Fork is a good place to end a trip as there is a road which follows the side canyon down to the right river bank.) From here to the Austin bridge the river and scenery are more sedate. The Class I rapids carry us by receding canyon walls, a few signs of civilization, and directly into the blinding glare of the setting sun. It is a classic way to end a classic western day.

While packing our gear, the four of us agree that the Lower Black Canyon of the Gunnison provides the greatest feeling of isolation of any river run in Colorado. That isolation combined with natural beauty created a fine wilderness experience. To obtain such an experience is perhaps the best reason to kayak.



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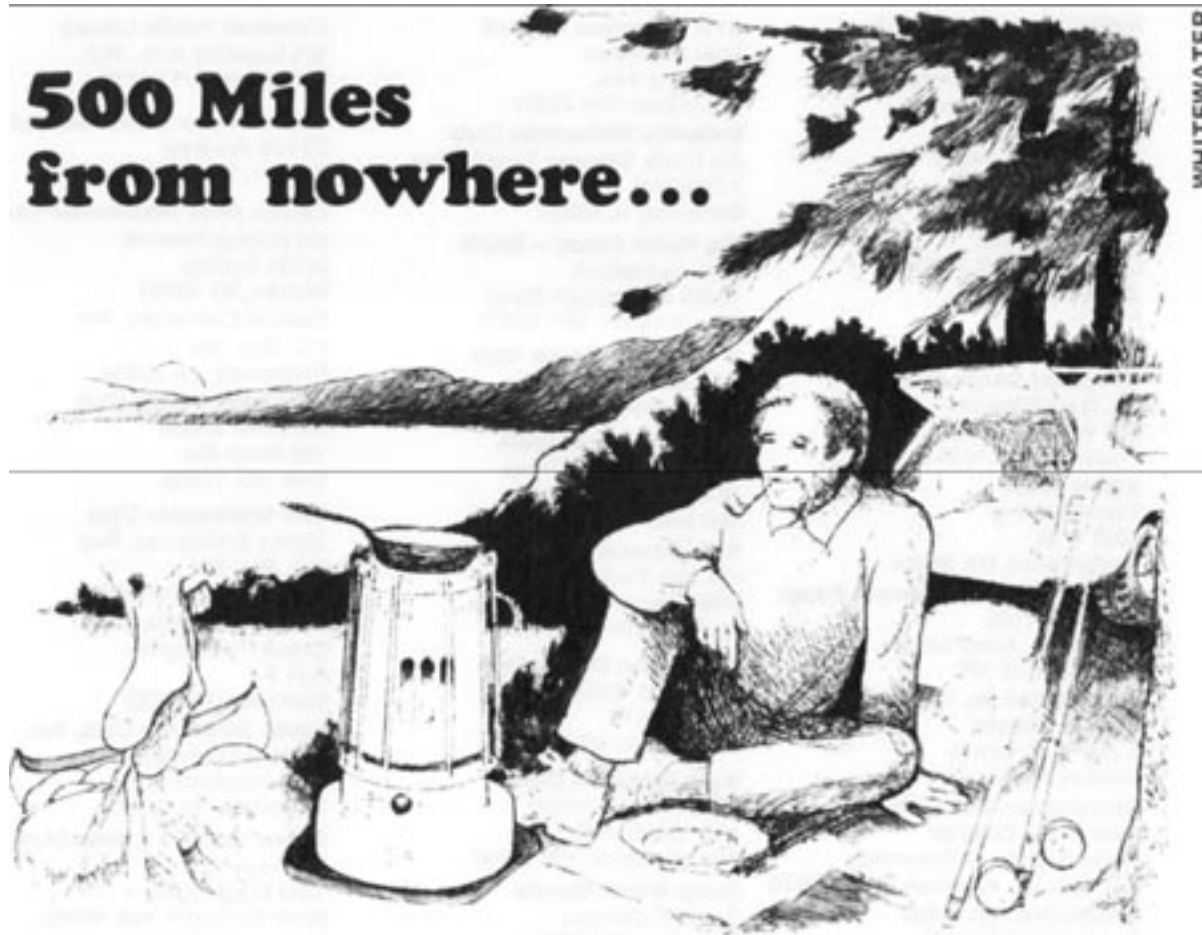
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