Annual Perception Conservation Award

Across the United States and Canada, there are people who answer a great need in our natural environment, a cry for help from our rivers threatened by man and his damaging onslaught. These persons are those we would like to consider for the 1982 Perception Conservation Award.

You are invited to contribute your nomination for this honor, now in its second year. Last year's recipient was David Brown, one individual who pulled all his energy into rallying people behind an effort to save Tennessee's Ocoee River for recreational use. This year, we'd like to find another individual who exemplifies our ideals of what we all should be doing to save America's free flowing rivers. A person who has made obvious impact in changing a threatened river for the better, who has fought the bureaucracy with cunning and integrity, whose spirit of guts and determination has inspired others to discard their apathy and join the cause.

Your nominee need fill no requirements of age or geographic locale. They must have worked on a river conservation effort within the year between September '81 and August '82. Entry forms are available from Perception dealers or our offices. You must submit a typed, one to two page synopsis of your candidate's work, who they are and what they did to merit consideration for this award. If you are a member of a paddling club or conservation group, we urge you to make one nomination, with all members signing their endorsement to the synopsis. The ultimate decision on the winner will be made by the Perception staff, based on both the number of votes and the nature of the person's river conservation work. Announcement of the recipient for 1982 will be made on September 3.

We realize the work is more important than the award. But we believe such efforts to save our rivers deserve a pat on the back.

perception

P.O. Box 686 Dept. CA82 Liberty, South Carolina 29657
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To Submit Articles, photos, cartoons: Deadlines are the 1st of Jan., Mar., May, July, Sept., Oct. for issues 1, 2, 3, 4, 5 and 6 respectively. This includes Advertising. All photos will be returned. All manuscripts are subject to editing unless otherwise indicated.

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1982 American Whitewater Affiliation. All rights reserved.

COVER: With every other honor behind them, the World Champion "Garvi" brothers stroke their stuff and take their first U.S. Nationals Gold. For complete race results see page 30. (Debbie Demaree photo)
Chuck Rollins' death in Idaho last summer has raised some troublesome issues for me about the responsibility of a whitewater boating party for its individual members. I don't accept the view that Chuck was a lovable blundering guy who got himself into a fix. I do think Chuck was the victim of the ethos of the "expert boating trip".

To explain what I mean, I will retell the story of Chuck's death. Although my account is influenced by knowing Chuck and having boated with him in the East and on several western trips, I will mainly rely on the statements in Charlie Walbridge's accident report for the ACA.

As Peter Skinner said eloquently in his eulogy, Chuck "was vibrant, very alive, and enthusiastic, and yet uniquely vulnerable and in need of help. Chuck was always late for everything, forgetting something, getting lost on the road and taking improbable routes down difficult rapids".

In July, 1981, Chuck joined an "expert" boating trip in Idaho. He was "not in exceptional physical condition." As the trip progressed, it became increasingly clear that Chuck's boating performance did not match the difficulty of the runs. "He had been having difficulty with his roll...he had swum on every river..." He had lost a boat on the Middle Fork of the Salmon.

The Upper South Fork of the Clearwater, with an extraordinary gradient of 200+ feet per mile, is one of the toughest runs in the entire state, and makes the Middle Fork of the Salmon look like a novice run. It was so obvious that it would be life-threatening for Chuck to attempt this run that (apparently) without even asking him directly about his intentions, "no one", Walbridge stated, "in the party expected him to attempt the river that day." When Chuck surprised everyone by getting into his kayak, again no one was able to tell him that he was making a serious, possibly fatal, error. ("Many in the group felt, after the incident, that someone should have said something to Chuck.")

Predictably, Chuck was in trouble almost immediately. He couldn't roll, and despite vigorous rescue attempts by capable and dedicated fellow paddlers, he was killed.

As I suggested earlier, the central safety issue in this story is attitude. Chuck's rescue had to begin and end on the ground—by convincing him not to set out on the Clearwater at all. Why didn't this happen?

I am not sure of the answer, but I do know that I would have found it tremendously difficult in that situation to tell Chuck forcefully that he should drive shuttle rather than run the river. Chuck was an exuberant, generous man. He was extremely social—he wanted to be with people, to be where the action was, and above all else that meant in his kayak.

But I also think there is a socialization process in whitewater boating that makes it extra difficult to perform the otherwise straightforward action of telling a person you really care about that he's boating poorly and may be about to kill himself. Part of the accepted ethos of kayaking is that "those participating on expert trips are expected to know their own minds". The problem with this rule is that it doesn't deal with the situation of the group member who is not exercising anything close to reasonable judgement — the individual who, like Chuck, is simply out of control.

Moreover, I suspect that this ethos made Chuck's boating partners feel that it was an act of respect and friendship to remain silent.

I believe in individualism and personal autonomy and I have found wilderness kayaking to be a superb way to enjoy and test those values. But I also think that there is no such thing as a fully individual decision in such a highly charged group activity as whitewater boating. Chuck's desire to get along with people and to pull his own weight were two of his most outstanding traits, which made him vulnerable as a boater. He deserved more support than he got in reconciling these tendencies with staying alive.

—Art Block
"YOU BE THE JUDGE"

Dear Editor,

When I first read your You Be the Judge in your August 1982 issue, I did not know it was fiction. My thoughts occurred in this order as I read:

This sounds like he's going to drown—what's the point? He's going to paddle Class II alone? I guess it's possible for Class II water to rip off a jacket. Possibly, if he were unconscious.

Would I have taken this case if I were a lawyer? Maybe, a buck's a buck. If I were the Judge: not guilty! Type III (lifevests) are Coast Guard approved, AWA and ACA required for any function, and has only one drawback I'm aware of: they require a buddy. If the wearer is unconscious in the water, his jacket might as well be on the riverbank as on him. If you have no buddy to help reasonably quickly, a Type III will probably not hold your head out of water.

There may be a fault with all Type III models by not offering a leg strap option. I had never heard of leg straps before. Sounds like a good idea. (I have been racing open boats for years, perhaps it's a closed boat option.) But no straps is a minor fault compared to paddling alone in whitewater.

Very Truly Yours,
Donald Steele
Woburn, MA

Unfortunately, the accident is not fiction. The event actually happened as reported. We merely disguised some of the more personal details to avoid adding any external pressure on a case that might soon become litigated. — Ed.

A BULGE FOR SAFETY

Dear Editor,

I would like to pass on a word of caution regarding the Harishok life decks. While practicing for a slalom I tipped and lost my paddle on a rock. Trying to exit my kayak, I found that the two grab loops on the sides of my life deck had washed under the lip of the cockpit rim. I couldn't get my fingers under the rim to get them out. I ended up grabbing a rock to get my head above the water. A simple solution to the problem was to put a small wiffle ball on each loop. Sewing a fat grab loop on the front would also help.

Sincerely,
Jim Tibensky

COSTA RICA CORRECTED

Dear Editor,

In the March-April issue, an article in the Fluvial News mentioned that the Rio Reventazon was "discovered" in 1978. If you refer to the Autumn 1969 issue of AWA (XV #2), you will find an article by me on running rivers in Costa Rica, describing what was almost certainly not the first trip on the Rio Reventazon. I also Scouted the Pacuare.

I'm glad more people are now running Costa Rica's beautiful rivers and visiting that beautiful, friendly country. The boating there is certainly terrific.

Sincerely,
Jerry Meral
former AWA Director
Sacramento, CA

Oops! We stand corrected. The only thing new about the Reventazon's recent reruns is that they have helped water the way for commercial tripping. — Ed.
AWA NOTES

River Mom Reflects

Six months has passed since assuming the responsibility of the presidency of AWA. Meeting many of you out there has been one of the highlights of my summer—besides getting a first taste of many new rivers. In that time also, several changes have taken place within the AWA structure. First, Claire Geselman has volunteered to hold the pursestrings for us as our new treasurer. Bart will introduce her next issue. Secondly, the membership list has finally found a friendly computer to reside in, and we should be much more efficient at keeping track of all of you out there. We also hope to relieve Pete Skinner of handling the product sales in the very near future. And finally, for the first time in a long time, AMERICAN WHITEWATER has been arriving on time!

However, several things are still needed. First a very talented, very reliable person is still needed to handle our advertising accounts. This aspect of Journal production is most important to you, as the ad revenue does help to underwrite part of the cost of AMERICAN WHITEWATER. Should such a very talented, very reliable person be reading this, please drop me a note and volunteer for this very important position. Secondly, the first sparks of a national membership drive are just starting to smoulder. You should be hearing much more about AWA in the very near future, but we need your help. If each of you readers would recruit only one new member, our roster would double. And, I believe every paddler on every river should be aware of, and abide by, the AWA guidelines.

I am looking forward to the next six months, even though paddling activities will be somewhat curtailed. Bart, I’m sure will continue to do the superb job of keeping us informed about what’s going on in the boating community around the country, while the rest of the Board will continue to strive for increased membership, timely production, and communication with as many of you as possible. To close, I’d like to share a poem I found somewhere a long time ago that indicates my feelings about this organization I so much believe in:

Are you an active member, the kind that would be missed—
Or are you quite content that your name is on the list?

Do you take an active part to help the work along—
Or are you quite well satisfied, to only just belong?

Do you ever take a stand for things you think are right—
Or leave the work for just a few, and talk instead of fight?

Think it over member, you know what’s right and wrong—
Are you an active member, or do you “just belong”?

WANTED: COMPUTERER

As the American Whitewater Affiliation drives onward and upward, it inevitably must go the way of all modernity and move into the Oz of computers. Currently, AWA is looking for knowledgeable individual with access to or ownership of a computer. The machine we seek must be able to print out Cheshire labels in two or four column style. It must also have a storage capacity of 10,000 names and addresses and the ability to sort them by zip, activity status code, Affiliate code, and two other codes. AWA can cover expenses but cannot reimburse the individual’s time. The individual must also be someone responsible enough to handle records and produce them on time. Respond to AWA, 7 Holland Lane, Cranbury, NJ 08512.
AWA'S NEW YEAR'S GIFT: EARTHWATCH

About the time your Jan.-Feb. 1983 issue of AMERICAN WHITETRAVER lands on the doorstep, your club will be receiving the latest issue of Earthwatch Magazine compliments of AWA. Earthwatch is a nonprofit organization that recruits interested amateurs like you to join prominent scholars on fascinating scientific expeditions all over the globe. The Magazine published seasonally lists and describes dozens of expeditions from Barbados to Borneo, seeking new discoveries about everything from sea turtles to ancient Saxons. Many of these require your special talents and muscle as a paddler. This is your chance to take your self and boat to those far flung corners.

In addition, Earthwatch has developed a special lecture series for AWA Club Affiliates offering over 100 noted scientists across the country available to speak at club meetings.

All this is part of a plan for the American Whitewater Affiliation and Earthwatch work together and offer both memberships a broader number of experiences and expeditions. In future AWA issues, the Fluvial News' Expedition Exchange will be listing several Earthwatch trips of special interest to paddlers. So keep a look-out. In the meantime, go to your club president or mailbox and study the latest issue of Earthwatch. It will tell you where you can go—and how to get there.

CHUCK ROLLINS MEMORIAL FUND

Since Chuck Rollins tragically drown-ed on Idaho's Clearwater River this June, many who knew him, now united in sadness, have wanted a way to immortalize the great friend now lost. In response, AWA announces the establishment of the Chuck Rollins Memorial Fund. Steve Kahn and others will act as trustees for an endowment fund to help the many who loved Chuck, remember him.

Enhancement of the sport of river running will be the Fund's general theme, with specific possible donations including sending a paddler to whitewater school, buying safety equipment for an organization, or aiding educational programs. Donations may be under AWA's non-profit umbrella and are deductible. (Those having already sent checks to Steve Kahn should be aware of this advantage.) Those wishing to contribute please send checks to Chuck Rollins Memorial Fund, AWA, Box 1483, Hagerstown, MD 21740.

THE WATER'S EDGE

Whitewater adventures should begin at the water's edge. If you're tired of stores with poor selections and high prices then it's time to switch to Wildwater Designs.

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Start your adventure at the water's edge. Write for our 1982 Catalogue today. It's free.
EAST RACE: INDIANA'S WHITEWATER

The old man-made tributary of the St. Joseph River which once powered all the factories of downtown South Bend, should soon be powering midwestern kayaks down America's first artificial whitewater race course. This past June 25, the official groundbreaking ceremony took place for the $3.5 million dollar project which will transform the 1900-foot historic East Race channel into East Race, the whitewater, urban park.

Built in 1831, East Race was originally the power focus of South Bend, Indiana's industry. But by 1964 it had become an area of crumbling factories and the channel was filled in. Now, under the much-battled-for revitalization plan, it will be transformed into a 52-acre linear park. A system of head gates will release controlled amounts of water along the 35-foot-wide, cement-sculpted canal. Overhead lights will illumine the river and the 45 feet of landscaping and shops on either side. The work's begun so lets all keep our fingers crossed for a no-snag early finish. For more info, contact Russ Oldfather, 112 N. Second St., Elkhart, IN.

COLORADO CLEANSES KIDNEYLESS

This summer 31 rafters clambered aboard and for eight days rode the Colorado River through the Grand Canyon, arriving safely, exhilarated, and thoroughly without incident. Unimpressed? Well, how about if 11 of those rafters didn't have a functioning kidney among them and all needed daily dialysis just to keep alive? Until recently, such a trip would have been not only impossible, but impossible. Hemodialysis patients had to stay within hours reach of a hospital which could regularly hook them up to the huge machine and artificially perform the kidney's function of cleaning waste from the blood.

However, with the advent of WAK (wearable artificial kidney) and the University of Utah's Dialysis Wonderland program, renal patients have broken the old hospital leash. This Grand Canyon trip represented the most remote patients have ever been from hospital hookup. Had trouble developed with a unit, a patient could have easily waited as long as 24 hours before helicopter evacuation—still 100 miles from the nearest dialysis center.

But all in all the eight pound WAK proved an infallible lifesaver for the 11 folks on the trip. It allowed them a perfectly normal adventure except for some long hours under canopies in 100° temperatures. There were even some advantages: the excess river water filtered by the WAK provided by ample supply of clean showers each day, the renal rafters appeared totally unscathed by Canyon sunburn, and John stops on the shuttle were unknown. And the dialysis process? "The only difference between here and a hospital," remarked the attending physician, "was the smiles on their faces."

ENVIRONMENTALISTS RANK HIGH

According to a recent Democratic National Committee poll, environmentalists ranked second, nationwide, of all the groups "helping to make America a better place". Farmers, just one point above, came in first with the Reagan Administration a far-lagging third. Trickling down, the remaining groups, in order, were: Senior citizens, Congressional Democrats, Nuclear arms reduction groups, Pro-ERA, Labor unions, Congressional Republicans, Conservatives, Moral Majority, Anti-abortion groups, Civil rights groups, Pro-choice...
groups, Big business, Wall Street, Liberals, Govt. workers, Oil companies, Right wing groups, Welfare recipients.

In addition, the final analysis of the poll stated, "Support for strict environmental regulations extends across demographic, partisan, ideological, and regional lines... Voters perceive the Republican Party to be far from themselves in these major concerns."

—Thanks Oregon Wilderness Coalition

PENOBSCOT BATTLE

At last a broad-based coalition of environmental groups are gathering to prevent Great Northern Paper Company's proposed Big A Dam which would inundate a valuable section of Maine's West Branch of the Penobscot River. Unfortunately, the state has already granted Great Northern the preliminary permit to build the dam which would flood the oft run Ripogenus Gorge and one of the finest landlocked salmon fisheries in the Northeast. But against them now stands a united front of Eastern River Expeditions, Trout Unlimited, the Sportsmen Alliance of Maine, Maine's National Resource Council, and others. The group has hired local legal counsel and will legally contest the granting of permits by the Federal Energy Commission (FERC) and Maine's state agencies.

A GATHERING OF EPRO

On November 18-21, the Eastern Professional River Outfitters Association will be holding its annual meeting at The Read House, 827 Broad St., Chattanooga, TN, (615) 266-4121. Programs will include "River Rescue — Training for Outfitters and Guides", Working with Rescue Squads", and "Utilizing State Agencies and Trends in Outdoor Travel". EPPO is becoming an increasingly beneficial and strong lobbying voice in safety and conservation legislation throughout the East on local and federal levels. If interested in joining this organization or receiving their newsletter, write them at EPRO, Box 238, Ocoee, TN 37361.

UPCOMING EXPEDITIONS

MID- ATLANTIC WEEKENDS. Anyone seeking paddling companions for Class III+ during late fall through early spring, in the New Jersey through Virginia area, on rivers such as the Bullpasture, Cas- selman, Jackson, Ana, Passage and others. Contact Mike or Debbie Stinbaugh (703) 430-4082.

SOUTH AMÉRICA EXPED. Interested in exploring Amazon tributaries in far off Brazil or Peru? Contact Anne Benjamin, 366 E. Cassilly, Springfield, OH 45503, (513) 323-8878. Anne is also actively seeking folks who have already explored this area by boat and might have some tips and background info for her.

MEXICO—RACE & CRUISE. The Mexican Downriver Federation annually organizes 10-15 races during that country's paddling (and rainy) season from May to October. The most popular of these is the Annual Antigua Downriver Race held in October. The race traditionally starts with a 25-mile cruise 200 miles west of Mexico City from Puente Pescados to Apazapan in 70º water of Class IV-V, with range changing flow from 200 to 2000 cfs. The race begins the next day downstream toward the Gulf through beautiful tropical country and passes a Totonac pyramid (Mayan contemporary).

The MDF seeks north of the border competitors and welcomes queries from any paddlers wanting to explore this much under-paddled area. If interested, contact Jorge Wilson, Federacion Mexicanos De Descenso De Rios, A.C., Paseo De La Reforma 195-100 Piso, Mexico 5, D.F., Tel., 592-14-77.
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In 1861, the Niagara Tour Company was forced to liquidate assets and sold the sturdy little steamer "Maid of the Mist" to other operators on Lake Ontario. The sale was conditional on delivering the boat intact to the new owner’s dock in Queenston, Ontario, seven miles downstream. It was this seemingly simple condition that sparked one of the most miraculous hotdogging feats in white-water history. The "Maid" was docked about just below Niagara Falls near a restriction in the river called Swiftdrift. Between here and Queenston rumbles the monstrous Lower Rapids—one of the most violent stretches of water in the world.

Entering the Lower Rapids, the water picks up speed to about 27 mph. Then these swift, broad and placid river is rammed through a tight constricted gorge and dashes over a barrier of great rocks. The water depth changes almost instantly from 150 to 37 feet with wave heights at least three kayak lengths high.

It was through these rapids that Captain Joel Robinson decided to pilot the "Maid of the Mist" on June 6, 1861. Manned only by Robinson, a mechanic, and a fireman, the little steamer left its dock, forged straight out into the Swiftdrift current then hove to and peeled downstream into the crushing Lower Rapids.

Foam enveloped the entire craft, waves thundered and crashed on the decks from above. The wheel was wrenched from Robinson’s hands and his mate was hurled through the bridge door and knocked unconscious. Below, the fireman clung desperately to the stanchion and prayed.

But at last, after minutes to onlookers (and a lifetime for the crew), the "Maid of the Mist" emerged from the waves into the calm and proudly pulled in to the Queenston dock. The sole damage was the loss of her funnel. The "Maid" had arrived and met the conditions of sale and Captain Robinson swore he would never run Lower Rapids again.

But today, while honeymooners gape at the famed Falls, more and more paddlers’ eyes have been glancing downstream at the Lower Rapids thinking “If a steamboat, why not a K-1?” A few have proved it. And many more have shown that other, less violent stretches of the Niagara offer paddling fun on all levels.

Well, they say it is navigable: three fifths mile of 100 to 274 thousand cubic feet per second of Lake Erie plunging down the lower Niagara Gorge, just below the famous Falls. Here, through this furious stretch the Maid of the Mist Pool tumbles into the Whirlpool with enough racing foam to bury any craft. A few kayakers have navigated this stretch successfully. An ill-fated raft did not.

The legality of paddling this stretch is murky indeed, as is the water which receives copious quantities of toxic chemical waste and sewage from Niagara Falls’ industry and Love Canal. However, a paddler's knowledge of big water, however, is not complete until he has studied the mighty Niagara and its Lower Rapids.

The Niagara River

Before construction of the Canadian and American hydro-power facilities, the Niagara River normally carried 250 thousand CFS between Lake Erie and Lake Ontario, all day, every day. And when the west wind really blew, Lake
Horseshoe Falls Attempts

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<td>Oct. 4, 1980</td>
<td>Wooden Barrel</td>
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<td>Bobby Leach</td>
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<td>July 25, 1911</td>
<td>Steel Drum</td>
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<td>Charles Stephens</td>
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<td>July 5, 1930</td>
<td>Wooden Barrel</td>
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<td>George Stathakis</td>
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<td>July 4, 1928</td>
<td>Barrel</td>
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<td>Jean Lanssier</td>
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<td>August, 1951</td>
<td>Rubber Ball</td>
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<td>Red Hill, Jr.</td>
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<td>July 9, 1960</td>
<td>Inner Tubes</td>
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<td>Robert Woodward</td>
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Erie's waters would swell eastward, pulling in flows in excess of 274,000 CFS. (A volume exceeding most rivers in the United States.)

For 20 miles, the Niagara River rushes between Buffalo and Youngstown, New York. Rapids can be found under the Peace Bridge in Buffalo, just above and below the Falls, and just below the Whirlpool. Almost any day, you can look down from the Peace Bridge on paddlers from the Niagara Gorge Kayak Club surfing, bracing, and eddying in the fast flume between the piers. (Though the water rips through at 15 mph here, whitewater is almost non-existent.) A short portage brings the players to the Erie Canal which provides a convenient flatwater return to the put-in.

The Falls

The Rapids above the Falls are almost irresistible. Class IV and V big water drops over exfoliating bedrock, terminating in the 170-foot drop known as Niagara Falls.

The American Falls entry offers the paddler challenging hydraulics and picturesque bridges over to Goat Island. Or perhaps the more precipitous drops above the Canadian Falls are your cup of tea. The brink of each cataract offers gentle surfable reversals, just above the Big Drop.

Fortunately, however, Federal Law, U.S. Coast Guard, part 207 prohibits boating in these waters (which did not stop a woman in 1979 clad in wetsuit and swim fins who waved to horrified tourists before swimming over the edge.)

The Falls themselves are truly spectacular...mesmerizing. The thought of sweeping over the edge is the essence of every paddler's nightmares. At the base of the Canadian (Horse Shoe) Falls lies the Maid of the Mist Pool with a vicious reversal and under cut, capable of trapping boats and barrels for days. The American Falls crashes 100 feet onto talus rocks and then downward to the Maid of the Mist Pool.

The American Falls have not tempted any human daredevils, although many people have accidently fallen or washed over. Only one was ever known to survive—a little dog named Fido, seen in the Lower Pool minutes after witnesses saw him carried over the brink.

The Lower Rapids

Running from just below the Falls to a big eddy called the Whirlpool are the framed Lower Rapids, a marginal Class V. The rapids begin with the Swiftdrift, directly beneath the Whirlpool Rapids Bridge, at the end of the Maid of the Mist Pool. Here the incredible froth flume rampages 27 mph at over 100 feet per mile. Robbed of flow by the power plants, the section during summer runs at 100,000 cfs from 9 am to 9 pm and 50,000 cfs at night, as per the 1950 U.S.—Canada agreement.

Since the "Maid of the Mist" steamer many people have navigated this lower stretch. The first to follow Robinson was the Barrel—2M team of George Hazlett and Sadie Allen in 1886. Charles Percy "navigated" the run twice in 1887 in a special dinghy. Many have survived in everything from swimming trunks to elaborate steel torpedos. Robert Flack did not. Lashed to his craft, he ran the final section upside down.

Today, paddling this stretch of water Continued on Page 37

Vol. XXVII, No. 5
River waves explode behind ubiquitous Niagara craft. (Photo—Skinner)

Unidentified paddler gets eaten in crashing river wave (Photo—Rollins)
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Due to the popularity of the Journal’s Buyer’s Guide yellow pages helping paddlers find quality products and services near their home or while on a trip, AWA has decided to expand and modify Business Affiliation services. The yellow pages section will now be called THE WHOLE RIVER CATALOG and will include The Buyer’s Guide as seen in the following pages.

FOR OUR READERS, this provides a comprehensive list of firms where you can obtain information and purchase the specialties you need. To help in your quest to find the right equipment and right people, The Whole River Catalog will also include a readers’ service card and regionally divided Club Affiliates list. Also for your convenience, the Buyer’s Guide will be divided into the following categories:

- BOATS
- BLADES
- ACCESSORIES
- RETAIL SALES
- LIVERIES/OUTFITTERS
- INSTRUCTION

FOR OUR ADVERTISERS, becoming an AWA Business Affiliate gets you listed in the Whole River Catalog and gets your message to thousands of America’s trend-setting paddlers at least three times a year. The layout is conveniently sized to fit business cards or larger ads. Of course, display ads are still welcome in the Journal.

Unless specifically ordered, entry will be limited to one category.

Charges for Business Affiliation and insertions in the Whole River Catalog will be prepaid for each year. The catalog will appear at least three times yearly. This plan will apply to both new and renewing Business Affiliates effective November 1, 1982.

BUSINESS AFFILIATION for one year includes:

1. WRC insertions of Business Card ........................................... $60
2. WRC Insertions of Name, address & phone.......................... $35
3. Same as 2 above with additional product/service information
   (6 words/line, 2 line limit) ............................................ $8/line
4. WRC insertions of 2 column, 1 inch display ad .................... $90
5. AWA artwork workup for you ........................................... $10
6. Multiple category entries — add chosen insertion cost for each additional listing.

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#1 — Business Card Insertion

AJAX CANOE CO.

MAKERS OF AMERICA’S BEST CANOES

12 MAIN ST.  
ENDERSVILLE, CA 11131  
(671) 555-1212

#2 — Basic Listing

Ajax Canoe Co.
12 Main St.
Endersville, CA 11131
(671) 555-1212

#3 — Additional Product Info:

Ajax Canoe Co.
12 Main St.
Endersville, CA 11131
(671) 555-1212

Top quality fiberglass C-1s & C-2s

racing and cruising models
BOAT MFGRS.

1. The Blue Hole Canoe Co.  
   Sunbright, TN 37872. (615) 628-2116  
   Tough, Royalex/ABS open boats with  
   engineered outfitting

2. Hydra  
   P.O. Box 669, Athens, TN 37303  
   Hydra rotomolded kayaks and whitewater  
   accessories

3. Great Falls Canoe & Kayak Repair  
   9328 Old Courthouse Rd., Vienna, VA 22180  
   (703) 261-3800  
   Repairs to Royalex, Sawyerlex Polyethylene,  
   Aluminum boats & canoes

4. Grumman Boats  
   7 South St., Marathon, NY 13803  
   Grumman canoes, aluminum

5. John R. Sweet  
   118 S. Buckhout St., State College, PA 16801  
   (614) 238-8052  
   Boat building materials and supplies; custom  
   built boats

6. Mad River Canoe Inc.  
   P.O. Box 6102, Mad River Green,  
   Waitsfield, VT 05673  
   Quality canoes of Royalex, fiberglass & Kevlar-49

7. Mitchell Paddles  
   Canaan, NH 03741, (603) 523-7004  
   Paddles, Pyranha Kayaks and paddling  
   accessories

8. Natural Designs  
   4849 W. Marginal Way SW, Seattle, WA 98106  
   (206) 935-3968  
   Outrage and Polaris Kayaks, Dan Ruuska,  
   designer/builder

   58 Middle St., Old Towne, ME 04468  
   (207) 827-5513  
   Manufacturers of the world’s finest canoes  
   and kayaks

    P.O. Box 686, Liberty, SC 29657 (803) 859-7518  
    Innovative designs & products for the world’s  
    whitewater enthusiasts

11. Whitewater Fabrications, Inc.  
    Rob Quarelle, Rt. #1, Box 186.  
    Fincastle, VA 24090  
    Whitewater boats/custom mfg. of fiber-  
    reinforced plastics

12. Wildwater Racing Kayaks  
    312 Duff Ave., Wenonah, NJ 08090  
    Ultralight racing Kayaks; European Prijons,  
    Darts; racing paddles

BLADE & ACCESSORY MFGRS.

13. California Rivers  
    21001 Geyersville Ave.,  
    Geyersville, CA 95441  
    Dragon Fly Designs drybags &  
    Res-Q-Ropes

    351 N.W. 35th Ct. Miami, FL 33142  
    1-800-327-7628

15. Maravia Corporation  
    Box 395, San Leandro, CA 94577

16. Mitchell Paddles  
    Canaan, NH 03741, (603) 523-7004  
    Paddles, Pyranha Kayaks and oaddling  
    accessories

17. Voyager’s Ltd.  
    Box 409, Gardner, KS 66030  
    Watertight bags and accessories for canoeing  
    and kayaking

18. Wildwater Design Kits Ltd.  
    230 Penlyn Pk., Penlyn, PA 19422  
    Mfr. of wetsuit, padding jacket & throwbag

19. Wildwater Racing Kayaks  
    312 Duff Ave., Wenonah, NJ 08090  
    Ultralight racing kayaks; European Prijons,  
    Darts; racing paddles

20. Yakima/The Wheels of industry  
    820 N. St., Arcata, CA 95521

RETAIL SALES

21. Adams & Sons Spring Co.  
    c/o Jim Adams. 1565 S. Wall St.  
    Columbus, OH 43207

22. Alpine West  
    1021 P. St., Sacramento, CA 95814  
    Complete whitewater dealer

23. Appalachian Trail Outfitters  
    Main & Oakland Ave. Doylestown. PA 18901  
    Supplies of quality outdoor equipment

24. Blackadar Boating Supply  
    Box 1170, Salmon, ID 83467 (208) 756-3958  
    Catalog/retail sales of boating equipment

25. Blue Ridge Outfitters  
    Rt. 340, Charlestown, W. VA 25414  
    Whitewater supplies, rentals, trips, cafe, store,  
    put-in

26. Boats & Paddles  
    c/o Bill & Ann Sweeney  
    Box 441, Madison, NJ 07940  
    Whitewater canoes, kayaks. Accessories; sales,  
    rentals, trips, classes

27. Boulder Whitsater Supply  
    2510 N. 47th St., Boulder, CO 80301  
    Specializing in sales & instruction in  
    kayaks & canoes

28. Canoe House  
    520 S. Green Bay Ave., Gillette, WI 54124  
    Retail sales of canoes, kayaks & outdoor  
    equipment

29. Canoe inputs  
    RD 2, Box 2000, Shelbyville, VT 05482  
    Canoe rentals-sales & repair of canoes & kayaks

30. Canoes Etc.  
    630 E. Polk, Morton, IL 61550  
    Canoe and kayak sales; long line accessories

31. Force One Canoe & Kayak Co.  
    14919 Stuebner-Airline, Houston, TX 77069  
    Canoes, kayaks, raft-sales, rentals &  
    instruction

32. Grand Canyon Youth Expeditions, Inc.  
    R. #4, Box 755, Flagstaff, AZ 86001  
    River expeditions and kayak raft sales

33. McLain’s Paddling Supply  
    A.R. McLain, 345 Bretco Dr., Green bay, WI  
    54302  
    Paddling and construction supplies

34. Moore Outdoors  
    1001 N. Arkansas. Russellville, AR 72801  
    Canoe & kayak rentals & sales, whitewater  
    accessories

35. Paddlers’ Supply House  
    1597 Alexandria Dr., 4A, Lexington, KY 40504  
    Serving the discriminating wildwater paddler &  
    wilderness tripper
BUYER'S GUIDE

36. River Horizons, Inc.
   Box 395, Bainett St., Neapolis, OH 43547
   Blue Hole. Perception, Norse, Mitchell & Boat trailers

37. River Runners' Emporium
   1209 W. Main St., Durham, NC 27701
   (919) 688-2001
   Whitewater, backpacking, sales & rental, clinics & trips

38. River Touring Equipment
   341 Visitation Ave., Brisbane, CA 94005
   (415) 467-2800

   Box 8150, Aspen, CO 81611.
   (303) 925-AYAK
   Finest kayak equipment in one mail-order catalog

40. "Wet Dreams"...Canoeing, Kayaking, Riverrrafting & Rowing
   Box 2229, Van Nuys, CA 91404, (213) 997-7599

41. Whitewater Unlimited
   Box 1224, Flagstaff, AZ 86001
   Whitewater equipment, sales, rentals, discounts to AWA members

LIVERIES & OUTFITTERS

42. Adventure Trek
   Box 10942, Knoxville, TN 37919, (615) 690-6478
   Whitewater outfitters, plus canoeing; backpacking, summer camps

43. Alaska Rivers
   Box 827, Cooper lake, AK

44. Alaska Travel Adventures
   c/o Don Quan, 200 N. Franklin St.,
   Juneau, AK 99801 (907) 586-6245

45. Blue Ridge Outfitters
   Rt. 340, Charles town, W. VA 25414
   Whitewater supplies, rentals, trips, cafe, store, put-in

46. Boats & Paddles
   c/o Bill & Ann Sweeney, Box 441,
   Madison, NJ 07940
   Whitewater canoes, kayaks, accessories, sales, rentals, trips, classes.

47. Canoe Imports
   Rt. 2, Box 2000, Shelburne, VT 05482
   Canoe rentals & reoairofcanoes & kayaks

48. Cantrell Canoe Sales/Rental
   Rt. 3 Hinton By-Pass, Hinton, W. VA 25951

49. Class VI River Runners
   Box 78, Lansing, W. VA 25862
   (304) 574-0704
   Whitewater rafting on the East's best rivers

50. Class VI Whitewater
   399 S. 300 W. #8, Salt Lake City, UT 84107

51. Comanche Outfitters
   1801 W. Missouri St., Midland, TX 79201
   Sporting goods dealer

52. Experiment with Travel
   281 Franklin St., Box 281, Springfield, MA 01101
   Provides outdoor recreation, educational & therapeutic programs

53. Force One Canoe & Kayak Co.
   14919 Stuebner-Airline, Houston, TX 77069
   Canoe, kayaks, rafts, sales, rentals & instruction

54. Grand Canyon Youth Expeditions, Inc.
   Rt. 4, Box 755, Flagstaff, AZ 86001
   River expeditions & kayak/raft sales

55. Headwaters—Montana
   326 E. Babcock, Bozeman, MT 59715
   Complete watercraft outfitting & information for Northern Rockies

56. High Adventure Outdoor Center
   Rt. 1 — Box 38E, Highway 1335.
   Winnabow, NC 21479
   Winnabow, NC 21479, (919) 371-9627
   SE Hdg. for wilderness courses, trips & expeditions

57. James River Basin Canoe Livery
   Rt. 4, Box 109A, Lexington, VA 24540
   (703) 261-734
   Canoe trips on the James or Maury River

58. Key Ventures
   c/o Ms. Anita Desmond, 79 Quaker Rd.
   Willard, Ont., Canada 130 3G3

59. Moore Outdoors
   1001 N. Arkansas, Russellville, AR 72801
   Canoe & kayak rentals & sales, whitewater accessories

60. Montana River Outfitters
   1401 5th Ave. So., Great Falls, MT 59405
   River equipment — fishing & whitewater float trips

61. Mother Lode River Trips
   P.O. Box 30, Columbia, CA 95310,
   (209) 532-7900
   California Paddle Raft Trips

62. Mountain Stream & Trails Outfitters
   Box 77, Ohiopyle, PA 15470 (412) 329-8810
   Whitewater rafting, cross country skiing and backpacking

63. Nantahala Outdoor Center
   Highway 19W, Box 41, Bryson City, NC 28713
   Canoe & kayak instruction, adventure travel trips

64. Natural Designs
   4849 W. Marainal Way SW, Seattle, WA 98103
   (206) 935-3998
   Outrage and Polaris Kayaks, Dan Russka, designer/builder

   Box 81, Hico, WVA 25914
   (304) 658-5276
   Whitewater rafting: New. Gauley, Cheat & camping

66. Northern Whitewater Exped.
   Box 100, The Forks, ME 04985 (207) 663-2271
   Whitewater rafting: N.-Y.-.Hudson. Moose.
   Maine-Kennebec, Penobscot

67. Northwest River Supplies
   Box 9186, Moscow, ID 83843, (208) 882-2383

68. Outdoor Outfitters
   Dan Hammad, 3203 Richmond Rd., Texarkana
   TX 75503

69. Pack Rat Outdoor Center
   46 East Township, Fayetteville, AR 72701

70. P-A-R Canoe Outfitters
   9504 Truscon Dr., Houston, TX 77080
   (713) 465-4116

71. River Runners' Emporium
   1209 W. Main St., Durham, NC 27701
   (919) 688-2001
   Whitewater, backpacking, sales & rentals, clinics & trips

72. SACO Bound
   Rt. 302, Box 113, Ctr. Conway, NH 03813
   Whitewater school, raft trips, shop, canoe trips

73. Sandpiper Whitewater Guides
   Box 11752, Zephyr Cove, Nevada 89448
   (702) 588-4074
<table>
<thead>
<tr>
<th>No.</th>
<th>Company Name</th>
<th>Address</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>74</td>
<td>Santiam Outfitters</td>
<td>c/o Hande Hus., 1595 Cottage St. N E Salem, OR 97303</td>
<td>Whitewater kayaks, rafts, sales, rentals, lessons &amp; accessories</td>
</tr>
<tr>
<td>75</td>
<td>Sobek Expeditions</td>
<td>Box 761, Angels’ Camp, CA 95222, (209) 736-4524</td>
<td>Canoe rentals, outfitting shuttles. Daily-weekly. 4 rivers</td>
</tr>
<tr>
<td>76</td>
<td>Steamboat Canoe Outfitters</td>
<td>P.O. Box 28, Branford, FL 32008 (904) 935-1471</td>
<td>Rents rafts, inflatable kayaks, accessories. Sells related literature</td>
</tr>
<tr>
<td>77</td>
<td>Susquehanna Canoe Shoppe</td>
<td>RD #5, Box 200, Red Lion, PA 17356 (717) 244-6907</td>
<td>One of the largest inventories anywhere</td>
</tr>
<tr>
<td>78</td>
<td>Swiftwater Rental Service</td>
<td>6569 4th N.E., Seattle, WA 98115</td>
<td>Rents rafts, inflatable kayaks, accessories.</td>
</tr>
<tr>
<td>79</td>
<td>U.S.A. Whitewater Tours</td>
<td>771 Bonnie Brae St., Warren, OH 44484</td>
<td>Sells related literature</td>
</tr>
<tr>
<td>80</td>
<td>W3 Adventure, Inc.</td>
<td>P.O. Box 553, Westmount, Que., Canada</td>
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<tr>
<td>81</td>
<td>Wayfarer of the Ozarks, Inc.</td>
<td>Star Rt. 1, Ozark, AR 72949 (501) 667-4998</td>
<td>Complete outfitting/Mulberry River, rentals, shuttles</td>
</tr>
<tr>
<td>82</td>
<td>Western Mountaineering</td>
<td>550 S. First St., San Jose, CA 95113</td>
<td></td>
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<tr>
<td>83</td>
<td>West Hills Outfitters, Ltd.</td>
<td>8120 SW 66th Pl., Tigard, OR 97223</td>
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<tr>
<td>84</td>
<td>West Virginia River Adventures</td>
<td>Box 95, Hico, WVA 25854, (304) 658-5277</td>
<td>Paddle powered rafting on W. Va.’s New River</td>
</tr>
<tr>
<td>85</td>
<td>Whitewater Sports</td>
<td>307 NE 71st St., Seattle, WA 98115</td>
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<tr>
<td>86</td>
<td>Whole Earth Rafting</td>
<td>P.O. Box 4, Terry, WVA 25934</td>
<td>Two to six day trips: New-Gauley rivers</td>
</tr>
<tr>
<td>87</td>
<td>Wilderness Tours</td>
<td>Box 89, Beachburg, Ont., Canada KOJ 160</td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>Wilderness Expeditions Unlimited, Inc.</td>
<td>P.O. Box 55, 1 Riverfront St., Thurmond, WVA 25936, (304) 469-2551</td>
<td>The rapid transit system for the New River</td>
</tr>
<tr>
<td>89</td>
<td>Wildwater River Tours</td>
<td>419 So. 4th, Tumwater, WA 99502, (206) 357-2514</td>
<td>Whitewater rafting, canoeing &amp; rentals, instruction</td>
</tr>
<tr>
<td>90</td>
<td>World of Whitewater</td>
<td>Box 708, Big Bar, CA 96010 (916) 623-6588</td>
<td>Exciting whitewater raft trips on upper California rivers</td>
</tr>
</tbody>
</table>

**GEN’L CAMPING SUPPLIES**

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<thead>
<tr>
<th>No.</th>
<th>Company Name</th>
<th>Address</th>
<th>Services</th>
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</thead>
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<tr>
<td>91</td>
<td>L.L. Bean, Inc.</td>
<td>Casco St., Freeport, ME 04033 (207) 865-4761</td>
<td>Outdoor sporting goods</td>
</tr>
<tr>
<td>92</td>
<td>Commanche Outfitters</td>
<td>1801 W. Missouri St., Midland, TX 79201</td>
<td>Sporting goods dealer</td>
</tr>
<tr>
<td>93</td>
<td>Dahia Motor Co.</td>
<td>c/o Jack Akers, 4800 E. Colfax Ave., Denver, CO 80220</td>
<td>New deal used cars</td>
</tr>
</tbody>
</table>

**BUYER’S GUIDE**

**PUBLICATIONS & INSTRUCTION**

<table>
<thead>
<tr>
<th>No.</th>
<th>Publication Name</th>
<th>Address</th>
<th>Services</th>
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<tr>
<td>100</td>
<td>Adventure Travel Mag.</td>
<td>c/o Pam Miller, 1 Park Ave., NY, NY 10016</td>
<td>Glossy coverage of worldwide adventure activities; outfitters listed</td>
</tr>
<tr>
<td>101</td>
<td>Canoe Magazine</td>
<td>Box 597, Camden, ME 04873</td>
<td>The magazine of self-propelled water travel</td>
</tr>
<tr>
<td>102</td>
<td>Class VII River Maps</td>
<td>c/o W. Nealy, 210 Purefoy Rd., Chapel Hill, NC 27514</td>
<td>Hand drawn river maps-Eastern &amp; Western rivers</td>
</tr>
<tr>
<td>103</td>
<td>Force One Canoe &amp; Kayak Co.</td>
<td>14919 Stuebner - Airline, Houston, TX 77069</td>
<td>Canoes, kayaks, raft sales, rentals, instruction</td>
</tr>
<tr>
<td>104</td>
<td>Leisure Enterprises</td>
<td>8 Pleasant St., Millers Falls, MA 01349 (413) 659-3926</td>
<td>Revised 1981 instructional guide—“Recreational Whitewater Canoeing”</td>
</tr>
<tr>
<td>105</td>
<td>Roy L. Mahnesmith</td>
<td>215 S. Chestnut, Kewanee, IL 61443</td>
<td>ACA — open canoe &amp; kayak instructor</td>
</tr>
<tr>
<td>106</td>
<td>Nantahala Outdoor Center</td>
<td>Highway 19W, Box 41, Bryson City, NC 28713</td>
<td>Canoe &amp; kayak instruction, adventure travel trips</td>
</tr>
<tr>
<td>107</td>
<td>River Runners Magazine</td>
<td>Rt. 1, Box 273, Powell Butte, OR 97753</td>
<td>The magazine for kayaking, rafting, and canoeing enthusiasts</td>
</tr>
<tr>
<td>108</td>
<td>SACO Bound</td>
<td>Rt. 302, Box 113, Ctr. Conway, NH 03813</td>
<td>Whitewater school, raft trips, shop, canoe trips</td>
</tr>
<tr>
<td>109</td>
<td>Sierra Kayak School</td>
<td>P.O. Box 682, Lotus, CA 95651 (916) 626-3461</td>
<td>Instruction of whitewater kayak and rafting</td>
</tr>
<tr>
<td>110</td>
<td>Tennessee Valley Authority</td>
<td>Forest Library, Norris, TN 37828, U.S. Govt. Corp.</td>
<td></td>
</tr>
</tbody>
</table>
CRAZY CARL DEMONSTRATES STEEP REENTRY AT 12 FOOT FALLS....

AND GETS SPIT BACK.

MIND YOUR MANNERS, MLAHAN, THE DOUBLE DAM IS NEXT

LUNDGREN
RAZOR SHARPEN ON KNIFE-EDGE, LOWER MOOSE RIVER, LYONS FALLS, NEW YORK.
THE CALL OF THE MOOSE
When Paddlers Find a Pristine Spot Can Hydromaniacs be Far Behind?

Some 40 miles due north of Utica, New York, the Moose River churns its way south and west out of the Western Adirondack Mountains and the Fulton Lake chain near Old Forge, New York. Three separate runs are possible on this stream, each flows in the same ledge/drop—pool pattern, but the difference in difficulty runs from mild to gut-busting.

The upper stretch of the Middle Branch starting from Old Forge is a popular open boat run and a standard race site. Running from here down to McKeever (where the North and South Branches join) is a nice novice stretch. At McKeever's Route 28 bridge the river picks up and the Lower Moose begins. From here down to Fowlersville is an eastern closed boaters' favorite. Unlike most northeastern rivers which empty out by summer, boaters can flock to the Moose every season except winter. At three feet on the McKeever gage, the Lower Moose offers an exciting run which quickly diminishes with dropping levels.

But from the Fowlersville bridge down to the confluence with the Black River at Lyons Falls comes the 3.6 mile long Bottom Moose—a stretch only recently conquered by adventurersome paddlers. This is a drop-pool run with substantial flatwater sections separating rapids. The rapids themselves are spectacular. Formed by clefts in the jagged igneous rock, the steep drops form sheer waterfalls or smooth slides—one dropping over 40 feet.

15 runnable drops are packed into this short piece of river. Scouting is demanded every step of the way since snags, underfalls, and recirculators lurk in many of the rapids. The fun begins just 400 yards below the Fowlersville bridge put-in with a two stage falls dropping at a 45° angle. Following hard upon comes the Knifeedge rapids where the yard-wide channel drops quickly 12 feet. Then the dual drops of Upper Lyonsdale Falls; the multistage, very tricky Lower Lyonsdale which descends 40 feet below a dam impoundment; the almost sheer "12-Foot" Falls; and several others thick and fast and equally difficult. By the time you've made the 300-foot descent of this short run, you feel you've fallen a mile.

Unfortunately, all this liquid power makes the Bottom Moose of interest not only to paddlers, but to low head hydromaniacs. Right now the power beavers have received FERC permit #4346 to begin final plans to dry up the river from "12 foot" falls to the Black River.

As stated, the Bottom Moose is a recent addition to the repertoire of runnable eastern hair. As late as 1977 Jim Mulhan, Carl Lungren, Joe Maskasky, and Tom Clemow made the initial exploratory run of this incredible piece of water. Two weekends later, the crew returned and finished the entire run, taking over 300 pictures. Carl Lungren's report of that trip, Moose-Back Riding appeared in AWA's Spring, 1978 issue (Vol. XXIII, No. 2). Just to give you an example of what the top end was back in '77, we suggest you turn to the center of the Whole River Catalog and view this first running of the Moose in its full color glory. (With this centerfold begins a new effort of AWA to publish color in The Journal. Look for more beginning in 1983.)

One Final Note on the Bottom Moose. It can be dangerous. Paddling the first time on this stretch with experienced Moose-riders is obligatory as several of the drops are potential deathtraps. And every trip thereafter must be treated with the same caution as an exploratory.

Color Reprints
Reprints of Carl Lungren's original article plus the color photos are available for $1.50 from AWA Products, Pete Skinner, Box 272, Snyder Rd., West Sand Lake, NY 12196.
**AWA Readership Survey — 1982**

To keep serving you of the paddling community in the best possible ways, it is important that we get to know you and what you want out of a national organization like AWA. To help us keep helping you, we ask that you fill out the following survey, stick it in the envelope provided in this issue, and mail it back to us at your earliest convenience. Also, don’t forget to add your $1 DISCOUNT COUPON on page 39 as our thanks for your taking the time.

1. I am ______ male ______ female (please check only one)
2. Age: ______ under 20 ______ 21-35 ______ 36-45 ______ over 45
3. Income: ______ under $15,000 a year ______ $16-25 ______ $26-32
   ______ $33-40 ______ over $40,000
4. I ______ own my hown home ______ rent ______ other
5. I live in ___________ (name state). The setting is ______ city
   ______ suburb ______ small town ______ rural
6. Education: ______ attended high school ______ graduated high school
   ______ attended college ______ graduated college ______ taken graduate
   studies ______ graduate degree
7. I am ______ married ______ single ______ other
8. There are ______ people in my household. They paddle with me ______ never
   ______ occasionally ______ most always
9. I support ______ (#) members of my household and family
10. Approximately how many days per year did you take part in the following activities:

<table>
<thead>
<tr>
<th>Activity</th>
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<th>11-20</th>
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<td>slalom racing</td>
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<td>downriver racing</td>
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<td>helped with race organization</td>
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<td>instructing other paddlers</td>
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<td>river conservation efforts</td>
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<td>building boats</td>
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<td><strong>Other Activities:</strong></td>
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<td>skiing (x-country)</td>
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<td>biking</td>
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<td>sailing</td>
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<td>scuba diving</td>
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<tr>
<td>tent camping</td>
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<tr>
<td>RV camping</td>
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</tbody>
</table>
11. I usually paddle ______ flatwater (Q-I) ______ Whitewater (II-IV)
   ______ “Hair” (V-VI)
12. I usually paddle in a _______ Kayak _______ Open Canoe _______ C-1 _______ C-2 _______ Raft _______ Other

13. How many of each type of boat do you presently own?
   _______ Kayak    _______ Ocean Kayak _______ C-1
   _______ Touring Kayak _______ Folding Kayak _______ C-2
   _______ Downriver Kayak _______ Open Canoe _______ Raft

14. I own or plan to purchase the following equipment:

<table>
<thead>
<tr>
<th>Will Own</th>
<th>Buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>kayak paddle</td>
<td>wool shirt</td>
</tr>
<tr>
<td>kayak paddle (other constr.)</td>
<td>wool socks</td>
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<tr>
<td>canoe paddle (wood)</td>
<td>wool trousers</td>
</tr>
<tr>
<td>canoe paddle (other)</td>
<td>wool sweater</td>
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<tr>
<td>takeapart paddle</td>
<td>sneakers</td>
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<td>PFD</td>
<td>synthetic warm wear</td>
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<td>helmet</td>
<td>backpack</td>
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<td>flotation</td>
<td>bicycle</td>
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<tr>
<td>throwbag</td>
<td>camera (still)</td>
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<tr>
<td>wetsuit</td>
<td>camera (movie)</td>
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<tr>
<td>paddling jacket</td>
<td>compass</td>
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<tr>
<td>spray skirt</td>
<td>freeze dried food</td>
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<tr>
<td>roof racks</td>
<td>ice chest</td>
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<tr>
<td>knife</td>
<td>maps</td>
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<tr>
<td>down jacket</td>
<td>skiis (x-country)</td>
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<tr>
<td>down vest</td>
<td>skiis (downhill)</td>
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<tr>
<td>hiking boots</td>
<td>sleeping bag</td>
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<tr>
<td>rainwear</td>
<td>tent</td>
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<tr>
<td>wool jacket</td>
<td>thermos bottle</td>
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</tbody>
</table>

CLOTHING

15. I choose most of my equipment through _______ advertisements _______ articles I've read _______ friends recommendations _______ catalogues _______ impulse _______ other ways

16. Approximate amount spent on paddling gear in the past year: _______ under $100 _______ $100-250 _______ $251-500 _______ over $500

17. Approximate value of equipment now owned: _______ under $100 _______ $100-300 _______ $301-1000 _______ $1001-2000 _______ over $2000

18. Approximately how many miles did you drive this past year in pursuit of the perfect river? _______ under 500 _______ 500-2000 _______ 2001-5000 _______ over 5000

19. Do you belong to _______ ACA _______ USCA _______ NORS Other nat'l organization (please list) _______ # of years _______ 

20. I belong to a local paddling club _______ no _______ yes Name: _______ 

21. Have you ever served as a club officer _______ no _______ yes position _______ 

22. I have been paddling _______ years
23. I rate myself as a _______ novice _______ intermediate _______ expert _______ inactive paddler.
24. Number of times you have run a river with a commercial outfitter: _______ ever _______ past 5 years
25. I have organized trips for paddlers _______ never _______ more than 5 times _______ frequently _______ for longer than 5 days _______ out of the country _______ more than 1000 miles away
26. I subscribe to _______ paddling and outdoor type magazines. Please list them: ____________________________
27. I receive this copy of the AWA Journal _______ as an AWA member _______ bought it from a magazine rack _______ borrowed it from a friend _______ got it through my club's affiliation
28. Do you save copies of the Journal for future reference? _______yes _______ no
29. How many people besides yourself normally read your copy of the AWA Journal (be sure to include household and club members)? ____________________________
30. Please number in order of preference these departments in the AWA Journal:
   _______ Editorial Soapbox
   _______ Letters from Readers
   _______ Cartoons
   _______ The Fluvial News
   _______ Book Reviews
   _______ Feature Articles
   _______ The Inside Touch, Race Results, Race Calendar
   _______ The Boat Shop
   _______ Buyer's Guide and Club Affiliate List
31. I would like to see more, less, the same coverage of the following topics:

<table>
<thead>
<tr>
<th>MORE</th>
<th>LESS</th>
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<th>MORE</th>
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<td>Editorial &amp; opinions</td>
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<td>River running reports</td>
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<td>Humor &amp; poetry</td>
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<td>Equipment reviews &amp; New products</td>
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<td>Safety &amp; rescue articles</td>
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<td>Racing news</td>
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<td></td>
<td>Local &amp; club news</td>
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<td>Rafting</td>
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<td>Personal profiles</td>
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<td>Expedition news</td>
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<td>Historical articles</td>
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</tbody>
</table>

Other topics you would like to see more of ____________________________
32. What do you find most helpful in the AWA Journal? ____________________________
33. Any other comments? ____________________________

Find the pre-addressed envelope in this issue and return to AWA, c/o Marge Cline, 1343 N. Portage, Palatine, IL 60067.
Now, Tom, try that aerial eddy turn.

Well Joe, tighter than it looked.

C'mon Tom, roll up! Lyons Falls is just round the corner!
It's Christmas Time!
Give that Paddler you care about a Breath of Spring!

An AWA membership, patch, article index makes wonderful stocking stuffers. Rush your order before December 5, 1982 to Fred Young so he can mail it to you in time for the Christmas Season.

SEPARATE THIS PORTION & RETURN WITH YOUR CHECK TO:
Fred Young, Box 246, Roscoe, IL 61073
OFFICIAL AWA PRODUCTS

AWA Annual Membership
(Outside U.S.A., Add $3.50 more) # Total $ Journal sample & back issues $1.50
Individual/family $10.00 ___________________ Sets of 4 $5.00
Club Affiliation $13.00 ___________________ Article Index 1971-1981 $1.00
AWA Patches $2.00 ___________________ Wetsuit Mitt Pattern $1.50
AWA Decals (water-proof) 350 ___________________ Whitewater Movie Directory $8.00
T-shirts (S,M,L,XL) $5.00 ___________________ Safety Codes— 250 each ______
(CIRCLE SIZE)

(US $ exchange only) CHECK ENCLOSED FOR __________________________ Date ______/_____/_____
Name ____________________________________________________________
Address __________________________________________________________
City & State __________________________ Zip _________________________

READER RESPONSE FORM

AWA Business Affiliates from our Buyers' Guide are your best bet for equipment and river services. If you would like more information about their products and what they can do for you, separate this form and mail it to:
AWA, Box 272, Snyder Rd., West Sand Lake, NY 12196

I am interested in more information about:
(Circle #s applicable to firms listed in the Journal)

1 11 21 31 41 51 61 71 81 91 101
2 12 22 32 42 52 62 72 82 92 102
3 13 23 33 43 53 63 73 83 93 103
4 14 24 34 44 54 64 74 84 94 104
5 15 25 35 45 55 65 75 85 95 105
6 16 26 36 46 56 66 76 86 96 106
7 17 27 37 47 57 67 77 87 97 107
8 18 28 38 48 58 68 78 88 98 108
9 19 29 39 49 59 69 79 89 99 109
10 20 30 40 50 60 70 80 90 100 110

Limit: 10 information requests per member. No responses accepted after December 10, 1982.

Name __________________________________________ Date ______/_____/_____
Address __________________________________________

City & State __________________________ Zip _________________________
AWA AFFILIATES
LISTED ACCORDING TO REGION

NORTHWEST
(AK, OR, WA)
Alaska River Co.
P.O. Box 827
Cooper Landing, AK 99572

Boeing Employees Whitewater & Touring Club
c/o Pat Hendricks
15804 47th Ave. So.
Seattle, WA 98188

Natural Designs
c/o Dan Ruuska
2223 N. 60th
Seattle, WA 98103

Oregon Kayaking & Canoe Club
P.O. Box 692
Portland, OR 97207

Outdoor Recreation Centre
c/o Dixon Centre
Oregon State University
Corvallis, Oregon 97331

Valdez Alpine Club
c/o Andrew Embick, M.D
P.O. Box 1872
Valdez, AK 99686

Washington Kayak Club
P.O. Box 24264
Seattle, WA 98124

Whitewater Rafting Expeditions
c/o Paul Smith & Fred Reser
Box 711
Condon, OR 97823

Williamette Kayak and Canoe Club
P.O. Box 1062
Corvallis, OR 97331

CALIFORNIA
Chasm Outing Club
Box 5622
Orange, CA 92667

Idlewild Yacht Club
Bob Dymon
800 Markt Street
San Francisco, CA 94102

L.E.R.C. Voyagers
c/o 12814 Arminta St.
North Hollywood, CA 91605

Outdoors Unlimited
Millberry Union Recreation Department
500 Parnassus
San Francisco, CA 94143

Paddler's News Bulletin
Sierra Club
Box 584
San Bruno, CA 94066

Sierra Club, Loma Prieta Chapter
c/o David Kim
3309 Oxford Lane
San Jose, CA 95117

Voyageur Canoe & Kayak
c/o Leon Hannah
12814 Arminta St.
N. Hollywood, CA 91605

Western Mountaineering
550 S. First St.
San Jose, CA

WESTERN STATES
(AZ, CO, ID, MT, WY)
Adventures West
1401% 5th Ave. So.
Great Falls, MT 59405

Colorado Kayak Club
University of Colorado
C/o Patti McNeely
Boulder, CO 80309

Idaho Alpine Club
Whitewater Coordinator
Box 2885
Idaho Falls, ID 83201

Idaho State University
Outdoor Program
c/o Ron Watters
P.O. Box 8118, ISU
Pocatello, ID 83209

Idaho Whitewater Association
c/o Rob Lesser
1812 N. 21st
Boise, ID 83702

Net! Org. for River Sports
314 No. 20th St.
Colorado Springs, CO 80904

Northern Arizona Paddlers Club
c/o James Rolf
P.O. Box 1224
Flagstaff, AZ 86002

Outdoor Dynamics, Ltd.
c/o Linda Greenwald
Box 27354
Temple, AZ 85282

Telluride Navy
Box 888
Telluride, CO 81435

U.M. Outdoor Program
University of Montana
Missoula, MT 59812

NORTH CENTRAL
(IN, IL, MI, MN, OH, WI)
Antioch Kayak Club
c/o Karl Mahle
PE Dept. Antioch College
Yellow Springs, OH 45387

Belleville Whitewater Club
c/o Linda Seaman Tansil, Pres.
3 Oakland
Belleville, IL 62223

Boat Busters Anonymous
2961 Hemingway Ave.
St. Paul, MN 55119

Cascaders Canoe & Kayak Club
2418 Fremont Ave. So.
Minneapolis, MN 55405

Central Illinois Whitewater Club
2502 Willow St.
Pekin, IL 61554

Chicago Whitewater Association
Marge Cline
1343 N. Portage
Palatine, IL 60067

Cincinnati Inland Surf Team
7360 Aracoma Forest Dr.
Cincinnati, OH 45237

Clinton River Canoe Club
Box T
Mantua, OH 44255

Farmington Hills P&R Canoe & Kayak Club
c/o Nancy Hinchfield
31555 Eleven Mile Rd.
Farmington Hills, MI 48018

G.L.O.P.
c/o James Tibensky
1510 Lombard Ave.
Berwin, IL 60402

Hossler Canoe Club
c/o W.G. Lawless
4027 Winding Way
Indianapolis, IN 46220

Illinois State University
Campus Recreation-Outdoor Program
220 N. Main St.
Keel-Hauler Canoe Club
P.O. Box 30094
Middleburg Heights, OH 44130

Kekoainga Voyagers
Heinz Wahl
1818 Kensington Blvd
Fort Wayne, IN 46805

Maumee Whitewater Club
c/o Richard M. Johnston
9962 Diebold Road
Fort Wayne, IN 46825

Prairie State Canoists
c/o Louis A. Boehm
6320 N. Hermitage Ave.
Chicago, IL 60660

Purdue Canoe Club
c/o Rec. Gym
Purdue University
West Lafayette, IN 47906
AWA AFFILIATES

Raw Strength & Courage
Kayakers
Jerry Gluck
2185 Mershon Dr.
Ann Arbor, MI 48103

Sierra Club, John Muir Chapter
Larry Zibel
6561 Hillridge Dr.
Greendale, WI 53129

St. Joe Valley Canoe & Kayak
C/O Y.M.C.A.
200 E. Jackson
Elk, IN 46514

Toledo River Gang
c/o Jim Hock
851 Berry
Toledo, OH 43605

U-W Hoofers
c/o Mike Sklavos
6306 Raymond Rd.
Madison, WI 53711

W-PAFB-Outdoor Adventure Club
c/o R.D. Joblove
2845 Liberty-Ellerton Rd.
Dayton, OH 45418

Z.C.P.F. & C.K.C.
c/o Robert W. Smith
10422 Tomkinson Dr.
Scotts, MI 49088

SOUTH CENTRAL
(AR, MO, TX)
Arnold Whitewater Association
P.O. Box 11434
St. Louis, MO 63105

Central Missouri State Univ.
Outing Club
C/O Dr. David Bowling
WCM 204
Warrensburg, MO 64070

Dallas Downriver Club, Inc.
Charles Hummer
3125 Flakland Rd.
Carrollton, TX 75007

Down Hill Yacht Club
C/O Kent G. Ashenfeller
12802 La Quinta
San Antonio, TX 78233

Meramec River Canoe Club
Earl C. Biffle
26 Lake Road
Fenton, MO 63206

Ozark Wilderness Waterways Club
P.O. Box 16032
Kansas City, MO 64112

Permian Basin Whitewater Assoc.
Ronald D. Rains
501 E. 56th St.
Odessa, TX 79762

Rio Grande Guides Assoc.
Box 57
Terlingua, TX 79852

Texas Whitewater Assoc.
P.O. Drawer 5429
Austin, TX 78763

NORTHEAST
((CT, MA, ME, NH, NY, RI, VT)
Adirondack Mt. Club
Genesee Valley Chapter
John A. Robertson, Jr.
581 Lake Rd.
Webster, NY 14580

Appalachian Mt. Club
Box 113
Bardonia, NY 10954

Appalachian Mt. Club
Box 2189
Boston, MA 02110

Appalachian Mt. Club
Cl. Chapter
C/O Robert Williams
2917 Rosendale Rd.
Schenectady, NY 12309

Appalachian Mt. Club
Box 443
Bardonia, NY 10954

Appalachian Mt. Club
Boston Chapter
5 Joy St.
Boston, MA 02108

Appalachian Mt. Club
Cl. Chapter
C/O Kent Heidenis
2 Volovski Rd.
Avon, CT 06001

Champaign Canoeing, Ltd.
C/O Le Clair
Bradvant Park
Ossining, NY 10562

Chiltern Mt. Club
C/O John V. Lesko
1 Hill Rd.
Bedford, MA 01730

Experiment with Travel
281 Franklin St.
Springfield, MA 01101

Hampshire College
Kayak Program
C/O Carol Fisher
Amherst, MA 01002

Hibernia Canoe & Kayak Assn.
Masten Rd.
Pleasant Valley, NY 12538

Hong Kong K.C.-T-ville Branch
22 Bush Hill Rd.
Simsbury, CT 06070

KCCNY
C/O Maria Scott
167 N. Taylor Ave.
Norwalk, CT 06854

Merrimack Valley Paddlers
C/O James Jackson
38 Bebe Lane
Merrimack, NH 03101

Metropolitan Canoe & Kayak Club
C/O American Red Cross in Greater N.Y.
150 Amsterdam Ave.
New York, NY 10023

Millbrook Boats
C/O John Berry
P.O. Box 14
Riparius, NY 12862

Niagara Gorge Kayak Club
Douglas Bushnell
41 17th St.
Buffalo, NY 14213

Northern New York Paddlers
Box 228
Schenectady, NY 12308

Northern Vermont Canoe Cruisers
Melinda Dodds
RD 1
Fairfield, VT 05455

Penobscott Paddle & Chowder Society
Wm. F. Stearns
Box 121
Stillwater, ME 04489

Rhode Island Canoe Assoc.
64 Eleventh St.
Providence, RI 02906

W.L.M.P.S.
c/o Bill Wang
4671 W. Ridge Road
Rochester, NY 14626

West River Whitewater Association
c/o Ken Fisher Jr.
RFD 4
West Brattleboro, VT 05301

MID-ATLANTIC
(NJ, PA, DE, MD, WV)
Allegheny Canoe Club
c/o Walt Pilewski
755 W. Spring St.
Titusville, PA 16354

Appalachian Mt. Club
Delaware Valley Chapter
461 Paxon Hollow Rd.
Media, PA 19063

Appalachian Trail Outfitters
Main & Oakland Ave.
Doylestown, PA 18901

Bottoms Up Canoe Club
c/o Doug Gibson
RD #2, Box 266
Pittsfield, PA 16340

Buck Ridge Ski Club
c/o Jay E. Bradbury
1034 Carolyn Drive
West Chester, PA 19380

Canoe Club of Greater Harrisburg
c/o Miki Moelein
310 Graham St.
Harrisburg, PA 17110

Keystone River Runners
c/o Ron H. Hutchins
1785 Water St.
Indiana, PA 15701

Vol. XXVII, No. 5
This summer during a recent trip to Idaho I became aware of the great advances made by Western paddlers in the last few years. The limits of white-water sport have certainly been extended! Unfortunately, while I was out there I felt that river classification was a grade or more lower than the International Scale as interpreted by Europeans and Eastern paddlers. Discussions with Eastern and Western boaters whom I respect has reinforced this feeling, and I am investigating further by mailing 100 of the best paddlers I know my own attempt at a regional river comparison list.

I have asked each of these 100 to make his own East-West comparison using as many well known runs as possible, and to comment on the current classification system and possible restructuring.*

My concern is simple. The classification system was devised as a communications tool, and I feel that it is in danger of breaking down through regional interpretations. In particular, advances in Idaho and Northern California have brought previously unrunnable “VI”s down to “V”s with the result that the former “V” and “IV” runs are also being devalued. My hope is to ascertain the extent of the difference, to get an accurate comparison of Eastern and Western rivers, and, if necessary, to modify the International Scale somewhat to accommodate the needs of the outstanding modern experts while not compromising the needs of the novice.

Updating Options

I feel there are several criteria for any rating modification plan:

1. To remain as close as possible to standards now in use in the U.S. and Europe.
2. To provide useful gradations at both ends of the difficulty scale.
3. To be open-ended at the top to prevent future downgrading of streams as more difficult water is run.
4. To be internally consistent throughout the U.S.
5. To be sufficiently inexact so that the user will know to make allowance for weather, water temperature, water level variations, and isolation.

My basic idea is to leave Grade I-IV, as used in the East, untouched. It gives an excellent gradation for lower level difficulty rivers and it closely follows the ICF Scale. From this point there are several options:

I. Consider Class VI to mean “unrunnable but possible”. Divide Grade V decimaly as the climbers do: e.g.: 5.0-5.9 and beyond. This would allow “low-level” grade V, such as the Gauley River’s Pillow Rock, to be a 5.0, with the more difficult Western V (North Fork of the Payette) to be 5.5, and the superhair (Devil’s Canyon of the Susitna) to be a 5.9. The decimals can be increased to 5.10, 5.11, etc. as more difficult runs are attempted.

II. Open up Class VI as a technical classification for extreme whitewater difficulty. The old “risk of life” criterion doesn’t really hold anymore, since most river deaths are occurring on relatively easy water. This class would indicate

*Charlie Walbridge will be compiling the results of this regional comparison list, which will be published in an upcoming issue of AWA. It may serve as a basis to modify the current safety code, but the author assures us, it is not an attempt to force any iron-clad system on the paddling public. Rather it is an attempt to sharpen the vocabulary in boating communications.
Experienced paddlers have long recognized that there are no river rating systems that define totally and accurately the difficulty of a particular rapid or river. There are so many factors involved that such a system is not likely to emerge.

The INTERNATIONAL SCALE OF RIVER DIFFICULTY system, defined in the Safety Code of the American Whitewater Affiliation has been, and is, the most widely accepted system. It defines, on a scale of I to VI, the difficulties of rivers from flat, moving water to that which is nearly impossible (very dangerous). There have been many attempts to devise an improvement over this system and some that have emerged (to be accepted locally) have succeeded in incorporating more of the variables. The major problems that have become apparent in each of these revisions have been that:

1. They were unavoidably more complicated.
2. Those which used a different scale (1-10, 1-16) were in conflict with an already accepted scale of 1-VI. This has resulted in considerable confusion.

Those of us who have been involved in the development of the AWA Safety Code recognize that the International Scale is less than perfect. We have attempted to improve it on several occasions but have ultimately decided that its simplicity and its wide acceptance are not to be tampered with lightly.

I personally feel that the International Scale could be improved, but I would not attempt to do so without doing it on an international basis, through the International Canoe Federation, and then only with the requested input from all member countries.

On the other hand, I must agree with the opinions from many sources that there seems to be a tendency to misread the scale, misinterpret classes, and misapply them when labeling a river. These are the result of human frailties and the ever-changing character of the river.

As we all know, a river cannot be totally classified. Even the attempts to label a single rapid are suspect. A "Class III" rapid is supposed to define a rapid which "has high, irregular waves, often capable of swamping an open canoe. Narrow passages that often require complex maneuvering. May require scouting from shore." But most of us know that this rapid is subject to change with increased or decreased volume of water making it more or less difficult. Most of us know that water temperature, air temperature, weather, remoteness of the rapid, personal preparedness, boat and equipment preparedness, overall strength of the paddling group, and the presence or absence of further hazards downstream are all factors to be considered when viewing a rapid and trying to label it.

Also, each faction of the whitewater sport looks at a rapid differently. As a result, it depends upon with whom you are talking or whose article you are reading as to what class of difficulty is applied to the rapid. We don't all speak the same language and probably never will. As used in the United States (East and West), the International Scale is probably most accurately applied by intermediate ability, open canoeists and low-intermediate kayakers.

Expert kayakers tend to downplay lesser rapids since they generally have more knowledge and ability to overcome hazards. Rowing rafters generally rate rapids lower than paddling rafters. Open canoeists (intermediate level or better—with a boat that is filled with flotation) tend to rate a rapid lower than open canoeists who have lesser skill or flotation.

Swimmers, tubers, air mattress floaters apparently don't even know the classification and don't seem to care to know.

Tell me this isn't complex!

I believe the best effort we can make is
Walbridge

extreme rescue difficulty, i.e.: not only places where a misstep may get you pinned or thrown into a hole, but a situation where you could go for miles with your group not being able to help you any more than by keeping you in sight. A great deal of Western “V” is in this category.

III. Permit classification numbers to extend beyond Grade VI as difficulty requires; i.e.: grade VII or even VIII. It can be defended on the grounds that other countries simply do not have access to rivers of this difficulty (except in underdeveloped areas) and Americans need the differentiation.

INVENTION of the YEAR

THE GAULEY ROPE PULL. For all those wondering how to make easy shuttle from a river where pavement is distant and rails run right alongside, may we suggest the latest and simplest invention to hit paddling this year. The Gauley rope pull (named for its river of origin) consists of merely two lines wound round your boat at either end of the cockpit. To get where you want to go, merely put your craft broadside to the rails, take the end of each rope over your shoulder, and trudge on. It’s an idea whose time has long come and use is spreading quickly. And no, it does not damage your boat, at all.

Goodwin

to try for a standardized application of classification for a given river, river run or rapid for the average period in which it is generally run. I believe this classification is most correctly applied by intermediate canoeists or low intermediate kayakers. Guide books and maps which might further describe the characteristics would be a great help. We are approaching the point at which every river in the United States will be described in a publication. Greater dispersal and usage of this information would probably do more good than playing around with the classification system.
The 1982 Senior Open and Junior-Master National Slalom Championships were held on the first rapid of the Ocoee River below Ocoee #3 last August. This is an oft-used gem of a slalom site and the organizers from Dixie set two challenging courses for the three day event.

The Junior-Master race, featuring a slightly easier course, was contested the first day. 1981 C-1 Junior champion, Jed Prentice and 1981 runner-up, Bill McKinney continued their intense rivalry by exchanging finish places this year. Both have two more years as juniors. In addition, bronze medalist Chris Vamos, in only his second race put on a performance which hinted that Junior may be the hot class of the future. In winning K-1 Junior, Bob Fisher from Vermont looked smooth and strong. K-1W Junior, tiny Kara Rupple, handling her first big water race well, promises to improve rapidly with growth and practice. Clive Lister successfully defended his K-1 Master title, but perennial C-1 Master champ, John Sweet was edged by newly eligible Ken Stone. For the second straight year, women's singles and doubles canoe classes were offered on this course in an attempt to promote participation by women in canoe classes. Although championship classes did not form this year due to a lack of required entrants in C-2W and C-1W, Carrie Ashton performed beautifully in besting the C-1W class.

In the Senior Open Championships, 1982 was a year for veterans in two classes to finally win national titles which, surprisingly, had heretofore eluded them. Chris McCormack won his first national title in men's kayak. Top American C-2 team, world and Europa cup champions, Steve and Mike Garvis, finally added a national championship to their long list of accomplishments. However, in C-1, two-time world champion Jon Lugbill, who has never won a national singles crown, was once again edged out by Dave Hearn who won his 5th national slalom singles title. A relative newcomer, hard-working Sue Norman, scored an upset victory in women's kayak over six-time national champion Linda Harrison. In decked boating during recent years, C-2M has not enjoyed the competitiveness nor level of participation experienced in open canoe racing. However, this year the mixed doubles field, topped by Karen Marte and Brett Sorensen, was larger than the men's C-2 field. Efforts to revitalize C-2M have produced more teams hoping to compete internationally in 1983.
Dave Hearn pivots into and under a gate on his way to his fifth National C-1 Championship
(Debbie Demaree photo)

**SLALOM**

<table>
<thead>
<tr>
<th>Class</th>
<th>Entrants</th>
<th>Pen.</th>
<th>Time</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-1</td>
<td>(58 entries)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>Chris McCormick</td>
<td>0</td>
<td>193.6</td>
<td>193.6</td>
</tr>
<tr>
<td>2nd</td>
<td>Doug Gordon</td>
<td>5</td>
<td>198.8</td>
<td>203.8</td>
</tr>
<tr>
<td>3rd</td>
<td>Norm Bellingham</td>
<td>0</td>
<td>207.0</td>
<td>207.0</td>
</tr>
<tr>
<td>K-1W</td>
<td>(14 entries)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>Sue Norman</td>
<td>5</td>
<td>242.5</td>
<td>247.5</td>
</tr>
<tr>
<td>2nd</td>
<td>Linda Harrison</td>
<td>10</td>
<td>254.3</td>
<td>264.3</td>
</tr>
<tr>
<td>3rd</td>
<td>Carrie Ashton</td>
<td>5</td>
<td>268.0</td>
<td>273.0</td>
</tr>
<tr>
<td>K-1 Master</td>
<td>(6 entries)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>Clive Lister</td>
<td>55</td>
<td>201.0</td>
<td>256.0</td>
</tr>
<tr>
<td>2nd</td>
<td>Dave Kurtz</td>
<td>10</td>
<td>261.9</td>
<td>271.9</td>
</tr>
<tr>
<td>3rd</td>
<td>Tom Jones</td>
<td>55</td>
<td>233.4</td>
<td>288.4</td>
</tr>
<tr>
<td>K-1 Jr.</td>
<td>(5 entries)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>Bob Fisher</td>
<td>10</td>
<td>176.5</td>
<td>186.5</td>
</tr>
<tr>
<td>2nd</td>
<td>Kelly Strickland</td>
<td>10</td>
<td>182.9</td>
<td>193.5</td>
</tr>
<tr>
<td>3rd</td>
<td>Scott McCauley</td>
<td>10</td>
<td>185.9</td>
<td>195.9</td>
</tr>
<tr>
<td>K-1W Jr.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>Kara Ruppel</td>
<td>230</td>
<td>385.4</td>
<td>515.4</td>
</tr>
<tr>
<td>C-1</td>
<td>(29 entries)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>Dave Hearn</td>
<td></td>
<td>204.6</td>
<td>206.4</td>
</tr>
<tr>
<td>2nd</td>
<td>Jon Lugbill</td>
<td></td>
<td>210.9</td>
<td>210.9</td>
</tr>
<tr>
<td>3rd</td>
<td>Mark Wiggins</td>
<td>10</td>
<td>236.6</td>
<td>264.6</td>
</tr>
<tr>
<td>C-1W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>Carrie Ashton</td>
<td>75</td>
<td>261.6</td>
<td>336.6</td>
</tr>
<tr>
<td>2nd</td>
<td>Barb McKee</td>
<td>170</td>
<td>296.2</td>
<td>464.2</td>
</tr>
<tr>
<td>C-1 Masters</td>
<td>(4 entries)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>Ken Stone</td>
<td></td>
<td>210.9</td>
<td>210.9</td>
</tr>
<tr>
<td>2nd</td>
<td>John Sweet</td>
<td></td>
<td>218.7</td>
<td>218.7</td>
</tr>
<tr>
<td>3rd</td>
<td>Ray McLain</td>
<td>30</td>
<td>266.3</td>
<td>296.3</td>
</tr>
</tbody>
</table>

**C-1 Jr.** (8 entries)

| 1st | 10 | 198.0 | 208.6 |
| 2nd | 10 | 208.9 | 218.9 |
| 3rd | 20 | 218.5 | 238.5 |

**C-2** (6 entries)

| 1st | 12 | 237.9 | 237.9 |
| 2nd | 12 | 235.2 | 245.2 |
| 3rd | 5  | 244.4 | 249.4 |

**C-2M** (8 entries)

| 1st | 11C | 288.9 | 398.9 |
| 2nd | 11C | 329.2 | 439.2 |
| 3rd | 70  | 400.6 | 470.6 |

**K-1** (17 entries)

| 1st | 24:13.55 |
| 2nd | 24:18.62 |
| 3rd | 24:54.0 |

**K-1W**

| 1st | Carol Fisher |
| 2nd | 26:13.35 |

**K-1 Masters** (3 entries)

| 1st | Bruce Fishburn |
| 2nd | 21:31.22 |
| 3rd | 22:08.11 |

**C-1** (10 entries)

| 1st | 27:40.67 |
| 2nd | 27:46.18 |
| 3rd | 28:43.39 |

**C-2**

| 1st | Mike Hipsher, Dave Jones |
| 2nd | 25:43.17 |

Long acknowledged as one of the top, this year K-1 Chris McCormick proved himself unquestionably the best in the U.S.
(Debbie Demaree photo)
Twelve years ago a separate national championships for open canoe was introduced on the Dead River in Maine. The championships were contested there four times early in that twelve year period and in July '82, returned to that site for the fifth time. During the seven years since the race was last contested on the Dead River 1975, Whitewater Open Canoe sport has seen marked advances in equipment, training and skill. This development was evidenced by the significantly faster downriver finish times, by the much greater depth and sophistication of technique demonstrated in slalom, by the greater number of both downriver and slalom classes which were contested and by the total number of boats which started.

Of the 135 downriver boats to start (compared to 88 in '75), only four failed to finish. The winners were all at least 10 minutes faster than their 1975 counterparts. In winning OC-1, Ralph Vincent was 11 minutes faster than 1975 champion, Olympian Roland Muhlen. 1981 champs Nancy Shelhorse and Lillie Gilbert successfully defended their title on OC-2W, but several other 1981 winners settled for second as new champions were named in OC-1 master, OC-1, OC-2 short and OC-2 medium.

However, I noticed the greatest advance in slalom, a discipline which has lagged behind downriver in development. In 1975, I won my first doubles title in a Blue Hole. Most of the competitors appeared to be "weekenders". A mere handful of singles paddlers had specially designed slalom boats. This year, the slalom racers consisted of serious athletes who had trained for the race and who competed in several superior slalom racing designs recognized as ideal whitewater craft because of their maneuverability and lightweight. Of the 105 boats which started (compared to 67 in '75), there were no DNF's.

To challenge today's skilled competitors, attempts were made to move the slalom site upriver to utilize the Class III Poplar Hill Falls rather than the Class I-II 1975 site in the run-out of that rapid. Unfortunately, a washed-out bridge made the existing route inaccessible. Organizers, hampered by a long carry, steep banks, and thick underbrush managed to locate the start only part way up the rapid. A typically tricky John Berry-designed course attempted to make up for the lack of big white-water, but in the final analysis, the 1982 course was easier than national slalom courses have typically been in the last four years. Hence speed and precision were emphasized with many titles awarded on the basis of a clean run.

As usual, with 13 entries, mixed doubles was the second largest and probably the most competitive event with the 1982 champions posting a clean run and the fastest score (289.9) of any boat in the slalom event. The largest class, OC-1 short, was won by John Sweet's 294.6, in the second fastest score of the race. A hard-working newcomer, Spark Shuman from Mt. Wolf, Pennsylvania missed the winning OC-1 time by a mere .6 second. John Zubizarreta and Robert Harkness successfully defended their men's doubles title posting a clean run score of 319.8. George McLane, John Berry and Anne and Keech LeClair retained their titles in OC-1 Jr., OC-1 Masters Medium, and OC-2 Masters respectively.
## RESULTS

### SLALOM

**OC - 1 short** (19 entries)
1st John Sweet
2nd Spark Shuman
3rd Harold Deal

**OC - 1 medium** (15 entries)
1st Tim Kelly
2nd Steve Scarborough
3rd Robert Friedman

**OC - 1W short** (6 entries)
1st Barbara McKee
2nd Judy Browne
3rd Holly Carr

**OC - 1 Masters medium** (8 entries)
1st John Berry Sr.
2nd Keech LeClair
3rd Bill Zeller

**OC - 1 Jr. short** (5 entries)
1st George McLane
2nd Randy Braley
3rd Kevin LeClair

**OC - 2** (12 entries)
1st John Zubizarreta, Robert Harkness
2nd Joe Stahl, Dave Jackson
3rd Steve Scarborough, Fritz Orr

**OC - 2W** (5 entries)
1st Bunny Johns, Robert Harkness
2nd Lee Prouty, Holly Carr
3rd Ann LeClair, Barbra McKee

**OC - 2M** (14 entries)
1st John Sweet, Barbra McKee
2nd Linda & Dave Davidson
3rd Lee Prouty, Andrew Smith

**OC - 2 Jr/Sr** (7 entries)
1st Kevin & Keech LeClair
2nd George & Dennis McLane
3rd Randy Braley, Mike Malone

**DOWNRIVER**

**OC - 2M** (14 entries)
1st Nancy Shelhorse, Randy Drake
2nd Lilly Gilbert, Norm Hecker
3rd Nathaniel Lucy, Narianne Bean

**OC - 2** (21 entries)
1st Schuyler Thompson, W.R. Tingley
2nd Norm Hecker, Randy Drake
3rd Bill Young, Ben Pearson

### OC - 1 (28 entries)

<table>
<thead>
<tr>
<th>Position</th>
<th>Name 1</th>
<th>Name 2</th>
<th>Score</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Robert Harrison</td>
<td>Ken Kilareski</td>
<td>39.9</td>
</tr>
<tr>
<td>2</td>
<td>41.0</td>
<td>87.2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Robert Huffman</td>
<td>Robert Harkness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55.3</td>
<td>106.2</td>
<td></td>
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### OC - 2 Jr/Sr (11 entries)

<table>
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<tr>
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<th>Name 1</th>
<th>Name 2</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Don &amp; Dan Littlefield</td>
<td>Bill Soule, Same Tome</td>
<td>2:53:09.1</td>
</tr>
<tr>
<td>2</td>
<td>Charles Haines &amp; Charles Haines Jr.</td>
<td>254:31.0</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>2:56:24.6</td>
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### OC - 2 short (13 entries)

<table>
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<th>Position</th>
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<th>Score</th>
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<tbody>
<tr>
<td>1</td>
<td>John McDonald, Jeff Wren</td>
<td>George Walsh, Ed Mendes</td>
<td>2:51:31.9</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>2:51:36.3</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>2:55:33.6</td>
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### OC - 2W (5 entries)

<table>
<thead>
<tr>
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<th>Name 2</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Nancy Shelhorse, Lilly Gilbert</td>
<td>2:57:09.4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2:33:06.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3:05:29.9</td>
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### OC - 2 Masters (8 entries)

<table>
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<th>Name 2</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Bob Shelton, Neil Phillips</td>
<td>John Rowe, Frank Stasz</td>
<td>2:49:40.8</td>
</tr>
<tr>
<td>2</td>
<td>2:50:08.8</td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>2:56:39.3</td>
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### FINAL SCORE

(Each race score represents a standardized (0-10) difference from an average of 50.)

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<th>Position</th>
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<th>Name 2</th>
<th>Slalom</th>
<th>Total</th>
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<tbody>
<tr>
<td>1</td>
<td>John Zubizarreta, Robert Harkness</td>
<td>349:8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ed Weatherby, Fritz Orr</td>
<td>374:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ray Faulkner, Sonny Hunt</td>
<td>392:3</td>
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</table>

### COMBINED CLASSES

**OC - 1 com.**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name 1</th>
<th>Name 2</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Robert Harrison</td>
<td>Ken Kilareski</td>
<td>39.9</td>
</tr>
<tr>
<td>2</td>
<td>41.0</td>
<td>87.2</td>
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</tr>
<tr>
<td>3</td>
<td>Robert Huffman</td>
<td>Robert Harkness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55.3</td>
<td>106.2</td>
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**OC - 2 com.**

<table>
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<tr>
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<th>Name 2</th>
<th>Score</th>
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<tbody>
<tr>
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<td>John Zubizarreta, Robert Harkness</td>
<td>415.5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ed Weatherby, Fritz Orr</td>
<td>418.8</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ray Faulkner, Sonny Hunt</td>
<td>53.0</td>
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</table>

**OC - 2M com.**

<table>
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<tr>
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<th>Name 2</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bunny Johns, Payson Kennedy</td>
<td>45.1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>John &amp; Margie Zubizarreta</td>
<td>47.0</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Brad Hebler, Lorrie Drake</td>
<td>38.5</td>
<td></td>
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</table>

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To run or not to run is in the decision facing every Whitewater boater, each time he comes to a new put-in or a challenging rapid. It is a simple point and oft ignored that paddling white-water holds danger—dangers which are never totally negated by skill, guts, and the "right stuff": Chuck Hines, leader of the Asheville YMCA Kayak Club in North Carolina, shows from his own experience that the choice of running or not running depends on an awful lot more than the water level.

"Wha'dya think?" I asked my bearded friend, Will Pruett.

"I think we'd better find a shorter, safer stretch further on downriver," he replied.

"Okay."

We sat together in his van, listening to the steady pounding of the rain on the roof, looking out the water-streaked windows at the upper section of the Tellico River, its usually clear surface now an angry, rushing brown, pouring over large boulders and cascading down sharp chutes.

It was early spring, and we had come to the Tellico in the remote mountains of east Tennessee after spending the previous day warming up on the easier Oconaluftee River in western North Carolina. The Oconaluftee had been a scheduled club trip, with Will as the leader, and seven of us had thoroughly enjoyed kayaking its Class II and III rapids.

Such scheduled trips include a built-in element of safety. The group gathers at a pre-determined spot. The river to be run is known in advance, the water level carefully checked. Several cars are available, making the shuttle relatively simple, and occasionally a non-paddler comes along just to handle the driving.

There is a designated trip leader who is familiar with the river and with the capabilities of the participants. The leader conducts an equipment check, then appoints one or two sweep paddlers. These are competent people who bring up the rear while running the river; if anyone encounters trouble, they perform the rescue. Fortunately on a well-run club trip, such rescue is seldom needed. Everything falls into its proper place, like a musical performance that has been rehearsed. So it was on the Oconaluftee, even though we found it running higher than expected and the rapids a bit more challenging. The weather was cloudy, cool, and the water temperature was icy, as we picked our way down this narrow stream which flows through the Cherokee Indian Reservation and can be paddled only in the early spring, before the start of the fishing season.

After the run most of our group headed back home, but Will and I drove in his van to the Nantahala Outdoor Center (NOC) where we planned to spend the night before tackling the Tellico.

At NOC, we chatted with Dave, the young, energetic commodore of the Dixie division of the ACA. We waved at Bunny, the defending world champion in C-2M racing. We met Judy, a beginning paddler from Georgia, and John, an AWA member from Ohio, now a white-water kayaking enthusiast after years of marathon canoeing. We discovered that our waitress at the NOC restaurant was Kathy, from Indiana, with whom I had paddled the Conasauga and Nantahala two years previously. We ran into Ray, an old friend from Wisconsin who is one of the finest all-around paddlers in the country. We looked at license plates from Mississippi to Minnesota, from Florida to Connecticut to Colorado.

"Where y'all paddling tomorrow?"
Author Chuck Hines faces Tellico Foam someone asked.

"The Tellico," we responded. 
"The races scheduled to be held there have been moved, y'know."
"How come?"
"High water."
"What's it running?"
"Over 400 cfs."
"Well, we weren't planning to race, anyway."

We went to sleep early at the NOC motel. It was still dark the next morning when I was awakened by thunder, and huge flashes of lightning. Then came the rain. Continuing rain. A downpour. I smiled. When a storm hits the Nantahala Gorge, it really lets loose. More than once in the past I have been plastered and pelted by a Nantahala deluge. I drifted back to sleep, and was rudely wakened two hours by Will's morning clatter. The rain was still falling, and I could hear the rumbling of the creek adjacent to the NOC motel. "Whazit?" I mumbled.

"Seven o'clock," Will said. Two hours later, after a big breakfast, the van windshield wipers were slapping furiously back and forth as we headed toward Tennessee and the Tellico. The Tellico is a run-off river that can be paddled only in the spring, when it becomes fierce and fun. (Sometimes very fierce and not much fun.) When we arrived, we found that we had the river to ourselves. We learned why when we drove up the road alongside the river. The water was pulsating. Dangerous. Especially in the upper section. Lantz and Sehlinger, in their A Canoeing and Kayaking Guide to the Streams of Tennessee, rate this section as Class III and IV—at normal level, giving it 24 points on the numerical scale. They state, "This is not a trip for beginners, nor is it for those who overrate their abilities or have to depend on luck." At the surging level we found it, this was a definite understatement.

A car pulled up beside us with kayaks on top. The driver lowered his window but didn't say a word. He just stared at river in astonishment. Will said, "What's it running?"

"Over 500 and rising...maybe 600 by now...too much for me to handle today..." He drove away.

Will and I looked at each other. "Wha'dya think?" I asked him. "I think we'd better find a shorter, safer stretch farther on downriver."

"Okay."

Unlike the Oconaluftee, this was not a scheduled club trip. There were just two of us in a single vehicle. Conditions were questionable, at best. We weren't about to do anything foolish. As Will put it, "If being cautious makes me a whitewater wimp, so be it." We headed back down the river road, looking for an easier stretch to run. Finding it, we dumped our boats and paddles at riverside and drove

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the van down to the Ranger Station Bridge, our takeout spot.

As if approving of our decision, the rain stopped as we changed into our paddling apparel. Our good luck continued as another car approached; I flagged it down, and we hitched a ride upriver to our kayaks and the put-in we had selected.

I was the first one in. The water temperature wasn't cold as I expected, but the river was flowing extremely fast. It was a solid brown: unappetizing but exciting. I surfed and ferried for 10 minutes at the put-in rapid, as Will joined me. Wordlessly we turned and headed downriver, rounding a bend, keeping to the inside of a Class II+, bouncing through two-foot waves. Alone on the river, we were carried swiftly through more II and III rapids. Some quick, decisive maneuvering was demanded, but mostly it was a matter of reading each rapid in advance, catching the tongue or chute at the top, and then being propelled through long sets of two-and three-foot waves. Almost before we realized it, we had reached the takeout bridge.

"That's the fastest ride I've had in a long time!" Will laughed as he hopped out.

I remained in a while longer, surfing and ferrying at the last rapid, concluding with a couple of practice rolls. Exhaused, finally, I clambered ashore as the rain resumed.

Thirty minutes later, dressed and warm, we were driving homeward, passing through the village of Tellico Plains, where the water was running well above the foot bridge. "It's gotta be 600 cfs or more," Will decided. "Perhaps a lot more." I looked over at my boating buddy, who doesn't mind calling himself a whitewater wimp when it comes to using common sense, displaying good judgment, and exhibiting caution when conditions require it. I started thinking how glad I was I hadn't been lured into something over my head. Mulling this over, I waxed more and more thankful that I was lucky enough to paddle with a friend who had the courage not to run and the sense not to pressure me.

Every boater should be so lucky. Are you?

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is no less hazardous and may be illegal as well. Putting in on the Canadian side violates Niagara Parks Act regulations, RSO 1970, Chapter 298 and 97. The most recent regs, 1974, R.R.O. 1970 #619 prohibit a person placing "...canoe ...or watercraft of any kind...upon the talus or foreshore of the Niagara River that is under the jurisdiction of the (Niagara Parks) Commission." (Ontario Regulation 486 169, Section 4). This regulation essentially prohibits launching and landing on the Canadian side without a permit (which upon application would probably be denied). Other regulations (such as traffic rules) might be applied to paddlers as well—each punishable by a $100 fine. Also, Canadian CUSTOMS requires notification of any boat's entry into Canadian waters.

Boat launching on the American side is not specifically prohibited. New York State regulations applicable to Parks land, such as the shores of the Niagara River, are contained in Chapter 1, Subchapter A, NYCRR and in regional rules as well.

The closest (very marginally) applicable rule is Section 375.1 (f)—Disorderly Conduct which allows one to "Commit an act which may...create a hazardous or offensive condition by any act which serves no legitimate purpose." Section 27.11, Parks Land Recreation Law allows fines up to $100 for violations.

In other words, though boat launching may not be specifically prohibited, Parks Police may charge paddlers with some offense to discourage paddling this awesome stretch. More important, Park Police will physically prevent anyone they see putting in on any moving water stretch of the river. The run itself requires a bomb-proof roll and extensive big water experience.

Ten-foot cross-curlers, fifteen-foot exploding waves and vicious boils and eddies would almost surely flip any craft during the one minute, 3000 foot long zoom flume. The action is constant and savage from below the Swiftdrift all the way to the Whirlpool.

In 1981, after several years of trying, ABC-TV finally pulled the right strings and convinced the NYS Parks Dept. to let four kayakists legally run the rapids. For reknown racer Carrier Ashton it was the top end. "These were the biggest rapids I have ever seen!" remarked Carrie. The run was made and filmed on October 14, 1981. It was successful if harrowing for all paddlers and was shown on the "American Sportsmen" Series. If safe, the run was not exactly pristine. "It's filthy". Carrie stated, "We were practicing rolls in the water and I found my nose was stuffed up after the first one!"

Clearly whitewater and police are not the only dangers of this run. Toxic chemicals, from hard pesticides to solvents, pour into the river out of the ground and sewers around Love Canal and several other Hooker Chemical Co. dumps above the Falls. Below the Falls, millions of gallons of minimally treated, chemically contaminated sewage from Niagara Fall's new, but already chemically hobbled waste water treatment plant leaves a foul smelling sheen on the water. If the rapids don't wreck boat and paddler instantaneously, the chemicals waste him in the long run!

The Whirlpool

At the end of the 3000 feet Lower Rapids awaits the treacherous Whirlpool. From the rapids, water shoots smoothly down the steep ramped throat, into a 100-foot, deep circular maelstrom.
According to a 1973 report by Bob MacMullin, P.E., the Whirlpool rotates clockwise at river flows below 62,000 cfs and counter-clockwise above that, due to the momentum and direction of the entrance jet.

At 100,000 cfs the Whirlpool's surface elevation measures 277 feet m.s.l. and at 268 feet m.s.l. at 50,000 cfs. This nine foot elevation change is not matched by a similar differential in the jet charging into this circulating pool. Consequently, the entry into the Whirlpool at 50,000 cfs is blocked by a gigantic river wide cross curler and a very regular 14 foot crashing wave. The smoother entry at 100,000 however, is matched with very vicious boils and spinning whirlpools, capable of easily swallowing kayaks or swimmers.

The origin of the Whirlpool dates back to the last Ice Age when the Wisconsin ice sheet blocked the prehistoric Niagara Gorge exiting near St. David, Ontario, three miles west of Lewiston, New York, its present escape route. After the ice sheet receded, the river found a new course, and cut the gorge upriver from Lewiston instead. When the river cut into its old gorge, filled with glacial debris, it blew the present whirlpool clean and continued its cutting action in a more southeasterly direction. Today, some 4700 years later, it continues to chew its way toward Buffalo at the Canadian Falls at the rate of several feet each year.

Below the Whirlpool

The Niagara River, now dizzy from its spins, spews out of the Whirlpool and off to Niagara Glen and Devils Hole Rapids. Class IV big water rapids abound as do boils and cross curlers. Kayakers have paddled up river here to play among the rapids, though Park police prevent entry down the Park's 1000 steps leading down to the Devil's Hole.

Just below these rapids stand two modern day engineering wonders. The N.Y.S. Power Authority pumped storage generating station and Canada's Sir Adam Beck Station. Facing each other in a gigantic concrete walled gorge, these stations pour out 65,000 and 90,000 cfs respectively. Traditionally, big water boaters struggle upriver and play in the intense eddy lines, boils, and...
whirlpools thus created, while power station personnel watch these antics dumbfounded.

Over 200 feet lower than Lake Erie, the Niagara’s 250,000 plus cfs peacefully make their way past Youngstown into Lake Ontario. Gone are the hydraulic explosions and turbulent froth. In their place flow tranquil green waters, moving inexorably toward the St. Lawrence River and the Atlantic Ocean. Surely, this is one of the beauties of water: The terrifying power of a huge, crushing drop transforming into placid tranquility just a short stretch—a few seconds—downstream... if only I were as flexible.

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