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Cover photo by John Ferguson
Correction: Last issue photo by Thom Lagan
WHITEWATER RODEOS
Show your skills and talents in surfing, holeriding, and free-style competition at the following river "rodeo." You'll meet other paddlers, watch talented boaters and have a chance at winning valuable prizes donated by major manufacturers of whitewater gear. There will also be dances, barbecues, films and parties.


JULY 1-14: Salmon River Days. Contact Brooks Montgomery, Salmon River Mountain Sports, P.O. Box 2535, Salmon, ID 83467. (208) 756-3285.

JULY 7-8: Nugget Whitewater Rodeo, on the Rogue River at the Gold Nugget Park near Gold Hill, Oregon, Hotdog contest, downriver race and other fun events. Contact: Chuck Schlumberger (503) 582-3101 or 482-5236.


AUGUST 4-5: Trinity River Whitewater Rodeo, on Hwy 299 near Big Flat, California. Slalom and downriver on Saturday, barbecue and dance on Saturday night and hotdog contest on Sunday. Contact: Cindy Goodwin, (916) 623-6588 or Don Banducci, (707) 822-2908.

JULY 3-6: Whitewater Open Canoe National Championships on the Nantahala River in Wesser, North Carolina. Sponsored by the Nantahala Outdoor Center, Dixie Division of the American Canoe Association and the Record Bar, Inc. Contact: Nantahala Outdoor Center, U.S. 19W, Box 41, Bryson City, NC 28713.

JULY 1: Current River Race, Doniphan, Missouri. Sponsored by the Doniphan Lions Club.

JULY 7-8: Eleven Point River Race, in southern Missouri. Sponsored by the OCKA. Contact: Joe Breahears, Rt., 1, Ravenden Spring, Arkansas.


SEPTEMBER 7-9: West Coast Sea Kayaking Symposium, at Fort Worden/Port Townsend, Washington. This will be a comprehensive series of demonstrations, lectures and exhibits. Topics to be covered include: safety, rescue techniques, kayak injury, minimum impact camping, and learning about tides, currents and waves. Demonstrations will be on and off the water. Contact: Joel W. Rogers, Seattle, (206) 682-5371.

SEPT. 22: Gauley Whitewater River Festival at the Mountain River Tours Campground on U.S. Hwy 60 near Hico, WV. Sponsored by the Citizens for Gauley River to benefit efforts to preserve whitewater recreation on the Gauley River. Contact: CFGR, P.O. Box 722, Oak Hill, WV 25901.
Write the AWA Editor at Box 273, Powell Butte, OR 97753. If you don’t wish your letter to be published, then say directly so.

Dear Dave,

During the past 18 years I’ve served as Western Field Representative for the Wilderness Society, Conservation Chairman for the Colorado Whitewater Association, was one of the initial founders of the American Rivers Conservation Council, developed the River Defense Fund of the American Wilderness Alliance, and I am presently the Executive Director of the Western River Guides Association.

The recent article, Grand Canyon Special, by Claude Lutz in the April, although interesting had a number of points that misrepresented the permit system, the intent of the National Park Service and the goals of the commercial outfitters.

While private trips run from 14 days in the summer season to 21 days in the winter season (October 16-April 15), rowing trip from many commercial outfitters also take two or three weeks. It was inferred that all commercial trips take six days and are run on 42 foot rigs with motor power. This is not necessarily the case.

The Park Service allows 220 private launches each year, 180 in the summer season and 40 in the winter. In 1982, 141 private parties went in the summer and 30 in the winter. This resulted in 49 or 22% of the permits unused. While 15 persons are allowed on private trips, the average trips had 11 people going.

In order to fill the permits, the Park Service initiated a call in for cancellations in 1983 in addition to the permit list.

This year the results were that half the private launches were off the list and the other half called in for cancellations. Forty permits went unfilled and were probably a result of the high water and bad press.

It is not the desire of the commercial outfitters to force the private boaters off to a commercial trip. Many of the Grand Canyon outfitters run support trips for kayakers. In 1982 and 1983, the trips started at $500 for two weeks, and they go up from there.

The Park Service, Forest Service, or Congress does not allow for the sale of permits. If an outfitter sells his or her business, the new owner will be given consideration for the transfer of the permit. There are cases when it has been turned down. As far as the private permit holder not being able to meet the launch date and cancelling the trip, this is simply not true. All of the river
management agencies have a flexible policy on this matter. If the trip is scheduled and the leader is not able to go, and there is a qualified back up leader, more than likely the agency will honor the permit.

The concept of everyone getting a permit and then deciding if they go private or commercial is not supported by the American Rivers Conservation Council or the Sierra Club. Both organizations realize this system will not work and that important river conservation issues need support from both the private and commercial sector.

The overriding impression of the Grand Canyon article is that one needs to be in good shape and well-organized for the outstanding river adventure. Most private boaters fit the format, most of the public does not.

The challenge of a wilderness experience is not eliminated by a commercial river trip. For the most part, the Colorado River through the Grand is class II-III water with big waves. Good boaters will have no problem. But individuals who are not familiar with wilderness travel, extended camping, isolation and other wilderness concerns, will be overwhelmed even when they ride on a motor rig. These people will not be organized and skilled on what may be a once in a life time experience, but they will be the cutting edge on organizing to save the Grand Canyon from the threats of new dams or the problems of peaking power.

Historically, wilderness advocates have been characterized as wealthy, physical elitists. This has unnecessarily slowed wilderness and river protection during the past years. But river travel is an excellent means for special populations, elderly, first timers, press, and Congressional delegates to see firsthand the beauty, excitement and spiritual values of a free-flowing river.

The permit system will remain a sticky problem even if it were all private. The main problem is free-flowing rivers are the first of the natural resources to the country to run out of. There is little question that recreational use of moving water clearly exceeds supply. If fishermen, conservationists, rafters, tubers, kayakers, and the general public are not well organized immediately, we are going to continue to lose rivers to low-head hydro developments, energy projects, urban growth and agriculture. Private and commercial boaters can not let the question of who uses the river slow down its protection. If we do, the sport will not be whitewater boating but wind surfing.

Mr. Lutz laid the blame for the permit system on the commercial operator and the managing agency. I'm sure there are some outfitters who don't care for private boaters and private who want the rivers solely for themselves. But overall, the tremendous use on rivers is a result of people discovering an unique resource and sport. Permitted use has caught everyone short, and the solutions need to be worked out objectively, not by burying the other.

Thanks,
Jenny Mallett
 PRESS RELEASE

Blackhand Gorge Preservation Association, a grassroots organization dedicated to the preservation and protection of the Licking River and Blackhand Gorge Recreation areas was recently formed in Licking County. The purpose of the association is to determine long and short term effects of incompetent waste water handling by the Newark Wastewater Treatment Plant. It is believed that toxic chemical discharges from nearby industries combined with ineffective treatment pose a serious threat to human life in the Licking River watershed area.

Ernest Grimm, founder and President of the group has been concerned with water quality in the Licking River for many years. His concern increased dramatically with a series of fish kills beginning August 20, 1983. Investigations showed that phenols, cyanide, ammonium nitrates, and raw sewage were discharged untreated into the Licking River by the Newark Wastewater Treatment Plant. William Pffifer, an independent Marion chemist and Joseph Sawyer, City Utilities Superintendent, confirmed that toxic chemical concentrations and raw human and animal waste levels (fecal coliform) exceeded by three times the tolerance level of fish and aquatic life, as set by the Ohio Environmental Protection Agency for discharge into the Licking River at the Newark WWTP.

Mr. Grimm has been in frequent contact with city officials and officials with the Ohio Environmental Protection Agency and the Ohio Department of Natural Resources. To date, willingness to accept responsibility for the health concerns of the community and it's fish and wildlife inhabitants, by any agency or official has been minimal.

Concerned citizens are urged to become involved with the Blackhand Gorge Preservation Association. The combined voices of this community will be heard. Further information may be obtained by writing the Association at 730 Forest Hills Road, Heath, OH 43056, or by calling Ernest Grimm at 763-4000.

THE DETAILS

The Gauley River is the premier stretch of whitewater in the eastern U.S. The 24 mile stretch of the Gauley below the Summersville Dam roars with 47 Class III to VI rapids. 25,000 paddlers visit the river each year, primarily, during the Fall drawdown of the Summersville Lake. Paddlers contribute an estimated $3 million to the area's economy each year.

However, the optimum conditions necessary to retain this level of use depends on the cooperation of the Huntington District of the U.S. Army Corps of Engineers. Each year the Corps draws down the Summersville Lake to provide flood control storage for the Kanawaha River Basin. During this drawdown, flows
of 2,500 cfs have created optimum conditions for whitewater boating on the Gauley. When the Summersville Lake is full approximately 20 days of boating is possible in September and early October.

In drier years when the reservoir is not full, the Corps must cut flows back at night to have ample water for 20 days of daytime recreation. The Huntington District claims that the drawdown cannot be managed to enhance whitewater recreation, even though it will not interfere with the purposes for which the project is operated: flood control, pollution abatement, and recreation.

West Virginia Congressmen have introduced bills in Congress to make whitewater recreation a purpose of Summersville. However, unless you show your support for recreation on the Gauley the Corps may not exercise its discretion and provide appropriate flows in 1984.

Water releases at night are of benefit to no one.

MANUFACTURERS & RETAILERS SUPPORT 1984 PAN AM CUP BENEFIT RAFFLE

The team spirit prevails when an entire paddling community rises to the challenge of earning funds to buy necessary additional water for the Pan Am Cup Race Series

The situation is this:
In order to have sufficient water volume, our Race Coordinator, Don Sorensen, has negotiated a release of stored water from Wisconsin Power Company reservoirs. The Power Companies have donated a portion of the water, but need to be reimbursed for the remainder required for each race course.

(The Montreal River, Hurley, WI, and the Wausau Whitewater Chute, Wausau, WI). The important issue here is that when other possible race sites are too dry for racing, these Wisconsin sites are ideal because we can virtually order the correct volume at the precise time it is needed.

The whole idea of a Benefit Raffle emerged in January '84 when Don Sorensen requested help in devising means for raising funds. By the end of February, permits were secured and the raffle was under way. Ray McLain and Diane Krage of Green Bay have accepted co-leadership responsibility for this project, with manufacturers, retailers, clubs, organizations, commercial establishments and individual paddlers contributing significant time and money toward the $4000 goal.

When requests for support went out to major manufacturers and retailers, those that responded contributed a combined total of over $3000 in merchandise and canoe school tuitions. We have THREE valuable major prizes to award at our main drawing, June 24, at the June Wausau Race (site of the 1983 Slalom Nationals).

A WENONAH ODYSSEY CANOE
A HYDRA DUET C-2
A PERCEPTION BOAT
(Winner's Choice).

The Hydra Duet is being co-sponsored by Kallner's Whitewater Specialty (of Langlade, WI), D-Mac Canoesport (of Green Bay), and Hydra. The Perception boat is co-sponsored by Whitewater Specialty and Perception. Clement Paddles, Voyageur, and Wildwater Designs have contributed paddling gear.
which was raffled at two major Wisconsin Sports Shows. Kallner's Whitewater Specialty Canoe School and the Green Bay YMCA have donated canoe training weekends which will also be raffled.

Tickets ($2.00 each, 3/$5.00) are available from regional clubs, retailers, and rafting outfitters (Herb's at Langlade, Roaring Rapids on the Peshtigo). A call to Ray McLain (414-468-6604 (h), 433-2257 (w)) or Diane Krage (414-434-1885) can help you pinpoint your nearest ticket location. (It's important that all tickets be returned to the address printed on ticket stubs no later than June 18). Tickets will be available until the June 24 raffle at the race site.

The raffle offers an interesting incentive to supporters. Each supporting and selling organization, (club or commercial establishment) will receive 25% (less 5% Wisconsin Sales Tax) of their total sales, to be used in their own projects and programs.

Money earned in excess of that needed to buy water will be used to fund paddling clinics. The first clinic is scheduled for August 20-24, and will be led by Bill Endicott, Slalom Team Coach. The clinic will be held at the site of the 3rd Pan Am Slalom Race, Pier's Gorge on the Menominee at Niagara, WI. The clinic will be open to intermediate and advanced paddlers who will be coached on slalom technique. This will be of DIRECT benefit to paddlers attending and supporting our Races.

With this team spirit in mind, an appropriate closing comment is taken from a letter to all Midwest Division members, for Don Sorensen, Race Coordinator:

"The 1984 Pan American Cup is by far the most important race the Midwest Division has ever sponsored. It will tell the country and the rest of the world if we are qualified to host a World Championship."

"It will become one of the focus points for racing in the country. Association with world class competitors will raise the abilities of our cruisers to undreamed-of levels. Let's make this the best race this country has ever seen."

The Slalom and Wildwater Committee of the Midwest Division of the American Canoe Association is hosting the United States portion of the 1984 Pan American Slalom and Wildwater Race Championships. The race series consists of three slalom races and three wildwater races. One each slalom and wildwater race will be held in Canada, in Ontario; the United States portion of the series will be held August 15 (Wildwater Race at Hurley, WI on the Montreal River), August 18/19 (Slalom Race at Mausau, WI on the Wisconsin River), August 25/26 (Slalom and Wildwater Race at Niagara, WI on the Menominee River).

The race organizer for the August 15, 18/19 races is Don Sorensen, of Albert Lea, MN. Don is also National Chairperson of the ACA Slalom and Wildwater Committee. The race organizer for the August 25/26 races is Dr. John Lowen of Niagara, WI, president of Pier's Gorge Wildwater Limited.
This news release is focused at sharing information regarding the fundraising effort presently underway in Wisconsin and the Midwest. Supporters are invited to attend the races and to support the fundraising financially. Donations are welcomed from all paddlers and supporters.

The generosity of manufacturers and retailers in making the prizes available for the raffle is most appreciated. We hope that the paddling community will support those manufacturers and retailers who make a special effort to help the sport with these donations.

Ray McLain
345 Bretcoe Drive
Green Bay, WI 54302
(414) 468-6604 (h)
(414) 433-2257 (w)

Diane Krage
3622 Glendale
Green Bay, WI 54303

1984 CENTRAL DIVISION RACE SCHEDULE

SL— Slalom
DR— Downriver (Class I-III)
WW— Wildwater (Class III+)
OC— Open Canoes allowed
TC— Training Clinic

Feb. 5
Kansas Canoe Assn. Pool Slalom, Manhattan, KS (SL, OC)

MARCH 10 & 11
Bayou Bluff Slalom & Downriver Races, Hector, AR, Illinois Bayou (SL, DR, OC, TC)

MARCH 25 & 26
Missouri Whitewater Championships (Mid West Div. Race), Fredericktown, MO, St. Frances River (SL, DR, OC)

APRIL 7 & 8
Guadalupe Whitewater Races #1, New Braunfels, TX, (SL, DR)

MARCH 14 & 15
Big Piney Slalom & Downriver Races, Dover, AR (SL, DR, OC)

APRIL 28 & 29
Guadalupe Whitewater Races (Cent. Div. Chmps.) New Braunfels, TX (SL, DR)

MAY 19 & 20
"Skull Crusher" Slalom and Wildwater Races, Cossatot River, Wickes, AR (SL, WW, OC (?)

JUNE 16 & 17
Dierks Slalom & Downriver Races, Lower Saline River, Dierks, AR (SL, DR, OC, TC)

JULY 14 & 15
Eleven Point Jiffy Slalom & Downriver Races, Dalton, AR (SL, DR, OC, TC)

SEPTEMBER 22 & 23
Pinnacle IV Flatwater Slalom, Little Rock, AR (SL, OC)

SEPTEMBER 29 & 30
The Junior Texas Water Safari, San Marcos, TX (SL, DR)

SAVE THE GAULEY & TUOLUMNE

With a tax free contribution to AWA’s River Funds — Claire Gesalman, 6301 Hillcrest Pl., Alexandria, VA 22312.
Most of us have our own inventory of whitewater streams within a few hours drive, and in Arkansas we certainly have our share. Some have been written up in past AWA journals. It seems as though when our boating skills have progressed to the point that we’ve mastered all our "backyard water", we search neighboring states until we've conquered all of theirs too. To sustain interest in an "adrenalin" sport such as whitewater, the excitement level must be maintained.

(Max is Central Division Chairman of the National Slalom & Wildwater Committee (NSWC), the governing body for decked boat racing in the US. The NSWC, along with the Whitewater Open Canoe Committee (WWOC), are divisions of the American Association. Max is 32 years old, has paddled since 1976, raced since 1980, and is now involved with bringing the sport to the masses. In part 1 of his article, he looks at slalom racing from a different angle.)
The alternatives are either running water in the Class V-VI range or looking to another aspect of paddling. Those not wishing to live by the sword, there is an alternative that can improve your paddling skills and boat control without putting your life on the line while still maintaining the excitement level of the sport. For lack of a better term, let’s call it recreational slalom racing.

Many paddlers feel that slalom racing is for the elite, super-athlete with bulging biceps and lungs of steel. These paddlers are dead serious about it; they live and breathe paddling. It IS their life! What I am referring to are the local canoe club races; the Minor Leagues if you will. One of the areas the NSWC is moving towards is establishing more races aimed at the general paddling community by offering classes for cruising boats, Juniors, and Masters. For example, how many joggers do you know that stand in awe of the guys that run 10 kilometers in 30 minutes flat? They too can run the distance, it just takes longer. They feel a certain accomplishment in just finishing or perhaps attaining a pre-set goal.

A parallel can be drawn to slalom. We watch the world-class racers at a major race or on TV rocketing down the course with paddle blades flying like windmills and you can’t help but be impressed. The problem is many occasional or first time racers become psyched-out by the experts therefore becoming self-conscious fearing that the crowd or other paddlers will laugh at them if they miss a few gates, have to roll, or the ultimate humiliation, swim. More mortal paddlers can finish the course; perhaps not as flashy, perhaps not as fast, but none the less the satisfaction is every bit as equal.

Another encouraging sign is that the number of races in the US is increasing making long arduous drives a thing of the past. Many races will incorporate informal training clinics to teach newcomers the basic slalom skills and pass out a few hints such as how to make your forward stroke more powerful and efficient. The point is that not everyone can or wants to be a world champion, but many of the things paddlers learn in racing makes them better cruisers as well. Some of them will be happy to just make it to the finish line, some will want to make all the gates, and some will try to have as few penalty touches as possible. It is a sport where you can compete against the course, against the clock, or against other competitors. It is these paddlers that make a race successful. It takes a massive effort on the part of the race organizers to stage a smooth running event and support of the general paddling community is essential. Below are 6 pointers for paddlers trying their first race:

1. Be familiar with the rules to prevent misunderstandings between paddlers and officials. Ask questions if you are unsure.
2. Commit the course to memory. After your practice runs, sit down and go through the course in your mind or go over the course with a group of friends getting their ideas also.
3. While on the course, concern yourself not only with the gate you’re going for but where you need to be for the next 2 or 3 gates.
4. Try to figure out ways to expend less energy on the course. For instance, do you need to make full 360° spins through the reverse gates, or will 180° turns suffice?
5. Watch some of the better racers practicing. You won’t be able to do everything they do right away but learning a little each time out should result in steady progress over a period of time. Don’t be afraid to ask their opinions about the best way to do a move.
6. Adequately warm up your muscles before starting your run, especially if you're older or it's cold outside. Jumping jacks and windmills are good out-of-the-boat warm-ups and stretching is valuable too.

Here in Arkansas, the sport is growing as it is throughout the Mid-South. We promote the sport from the angle that paddlers of similar skill levels compete in the same classes. Let's face it, no beginner wants to race their 40 pound cruising boat against an expert in a 15 pound race boat. Cruisers that have tried slalom have had fun participating and found out that they weren't that far off the hot shots. The boat and paddle blade control they learn can only help them become better and safer river runners. The bottom line is having fun in your boat!! Listed below (elsewhere) is the 1984 race schedule in our part of the country. I cordially invite anyone interested in attending our races to contact the individual AWA affiliates in the state where the race is to be held or contact me. My address is 3410 Ridge Rd., N. Little Rock AR, 72116. (Next issue, Max will cover down-river racing from a beginner's standpoint.)

Photo by Jim Hill
The staff of the River Conservation Fund is pleased to announce that printed copies of its "Assessment of State River Conservation Programs" will be available early in January.

Publication marks the end of a two-year research project that made an in-depth analysis of twenty-eight official state river programs and numerous other single river designations. The research also assessed the impact of hydropower development on state programs, the use and utility of user fees and registrations on protected waterways, and the use of related state authorities in the management of protected streams.

Among the major findings are the following:

1) Twenty-eight official state programs and individual river designations in other states given some level of protection to 265 streams totalling 11,104 miles in length;  
2) Nearly all of these designations have been successful in discouraging the construction of destructive water projects;  
3) Programs that are able to use management tools existing within other state authorities for river conservation purposes enjoy more success than programs which rely wholly on scenic river designations;  
4) Purchase of conservation easements have generally been poorly rated by agencies which have used them, but donated easements have worked satisfactorily;  
5) Land acquisition has been a seldom-used tool, and condemnation is almost never used; states which have used land acquisition at least sporadically are Minnesota, Wisconsin, New Jersey, Oregon, and Florida;  
6) State agencies have complained consistently about the lack of support for their programs by conservationists;  
7) Programs are severely under-staffed and underbudgeted; many do not even have one full-time staff position allocated to them;  
8) Many states have not used whatever federal technical assistance has been available; states have drawn on aid from the National Park Service, the U.S. Forest Service, the Army Corps of Engineers, the U.S. Water Resources Council, and U.S. Department of Housing and Urban Development;  
9) Legislation in Georgia, Arkansas, and South Carolina, in particular, is too vague to be useful and should be amended; legislation in other states is at least minimally adequate to conserve rivers;  
10) States that work hardest to involve local officials, landowners, and conservationists in decision-making have the most success; the Minnesota program's reputation has been made on the basis of success in the use of one-to-one contact with landowners and local officials by program representatives; and  
11) In general, the five best programs are those in Minnesota, New York, Maine, Michigan, and Ohio, although the Maine program is new and untested.
RCF identified a number of trends in state river conservation management during the course of the study. In particular, RCF noticed the use of statewide inventories to identify high quality resources and to set priorities for their conservation.

The use of management plans which integrate statewide water management authorities for conservation of specified rivers is a trend that should be very helpful to river conservation.

Perhaps most promising of all, RCF notes an increasing public awareness of rivers as valuable economic and cultural resources. This awareness is helping conservation programs to make significant strides during the past two years. For example, twenty-one states were working to add rivers or make improvements in programs during 1983 alone.

The assessment will be updated annually. Single copy price of the report is $11.50 postpaid (check payable to "RCF"). Copies may be obtained from: River Conservation Fund, 323 Pennsylvania Ave., SE, Washington, DC 20003.

These pages are set aside in each issue to report on the research and education activities of the River Conservation Fund. The Fund is a separately financed arm of the American Rivers Conservation Council. Contributions are tax-deductible. Contact ARCC, 323 Pennsylvania Ave., SE, Washington, D.C. 20003.
BIG, BIG, BIG, WATER

By Mike Quigley

You "hair" riders who think you've seen the really BIG water (Snake at 60,000 cfs, Salmon at 40 cfs, Upper Clackamas at 20,000 cfs . . . ), well, how about the Columbia at 388,439,040 cfs! Impossible? No. The prehistoric Columbia River ran at this mind-boggling flow not once, but 45 different times in 175-year intervals between 10,000 and 20,000 BC.

Geologists have named these floods, perhaps the largest in the world has ever experienced, the Spokane Floods, Bertz Floods or Missoula Floods, depending upon who's doing the talking.

The events which led to these gargantuan inundations originated during the last ice age when a 3000-foot-thick ice lobe, advancing off the Canadian Ice Sheet, repeatedly dammed the Clark Fork River near the Montana/Idaho border.

The water of the Clark Fork would back up and form a large lake half the size of present-day Lake Superior. This lake has been named Lake Missoula. When you drive south from Missoula, Montana, through the Bitterroot Valley toward the Salmon/Selway country, look closely at the surrounding foothills. You can still see the straight and level remnant terraces left by the ancient shorelines of this once great body of water.

The ice dam would hold approximately 175 years, then break up in one cataclysmic event. At that moment, a wall of water 3000 feet high would blast forth down the canyon of the Clark Fork River, across Lake Pend Orielle, through the Spokane Valley and across the plains of eastern Washington, carrying with it billions of tons of abrasive ice, rock and soil. As the deris-laden floodwaters churned their way toward the Columbia River, eastern Washington's flatlands were scoured to bedrock, forming the countless channels and colles so notable to the area.

Wallula Gap near Pasco and the Narrows of the Columbia Gorge at The Dalles presented an impediment to the onrushing floodwaters, and large temporary lakes would pool at these sites: Lake Lewis at Wallula and Lake Condon at The Dalles. Lake Condon was 1000 feet deep over the eastern entrance to the Columbia River Gorge.

As the floodwaters surged through the Gorge, the speed and abrasiveness of its debris load carved the Gorge into many of the major landforms seen today: Wind and Shellrock mountains were isolated from the softer surrounding rock. Beacon Rock was uncovered; St. Peter's Dome and other pinnacles were
whittled away from the cliffsides. Rooster Rock was plucked from the side of Crown Point and slid into the Columbia River, leaving a deep scar that is still visible on the face of Crown Point.

When the onrushing floodwater reached the Willemette Valley, it met one more major obstacle: Portland's West Hills. Another temporary lake formed, named Lake Allison, which reached as far south as Eugene and covered the Tualatin Plains up to the foothills of the Coast Range. Water lay to a depth of 400 feet over Portland. In fact, as you drive through the hills around Sherwood, notice the large granitic boulders stranded on some of the hillsides. These boulders came from Canada, carried along on icebergs swept by the floodwaters.

Then, just 48 hours after it all began, the greatest flood of all time was over. The floodwaters receded as rapidly as they had advanced, leaving behind a changed topography — land scoured to bedrock here, piled high with gravel there.

Lake Missoula had been drained and the lobs of ice across the Clark Fork River was beginning to rebuild itself ever so slowly. Another ice dam was forming. Another Lake Missoula was filling. And in 175 years, another catastrophic flood would sweep across Washington, down the Columbia River to the sea. And this scenario would replay itself over and over until the ice age drew to a close some 10,000 years ago.

Could it happen again? Perhaps. If so, there may be some futuristic "hair" riders who will dare to challenge this once again in a lifetime chance to ride the BIGGEST water on earth.'

Mike Quigley

---

Let AWA Renew You

As a Member of the American Whitewater Affiliation, dedicated to the sport and adventure of whitewater paddling and to saving wild, free-flowing rivers, I will receive six, bimonthly issues of the American Whitewater Journal. My options are checked off below and check or money order enclosed.

☐ 1 year Individual Membership — $10 ($13.50 Foreign)
☐ Affiliation for our club — $13 ($16.50 Foreign) — includes 1 yrs. club listing in AWA Journal
☐ Specified back issues — $1.50 each (4 for $5)
☐ $4 donation to American Rivers Conservation Council

Name ______________________________
Address ______________________________

Club Name ______________________________

Detach & mail to American Whitewater, Box 1483, Hagerstown, MD 21740.
Deep within the remote recesses of the Ouachita Mountains of Arkansas, the Cossatot River winds covertly thru a densely forested canyon. The river remains detached from the mainstream of civilization, much like the subsistence farmers in the community of Umpire ten miles to the east. Because of its remoteness, the Cossatot has remained in relative obscurity, having been run by relatively few boaters. The "Tot" gathers its waters from the rainfall runoff of the 2,000-2,500 ft. antediluvian slopes of the Ouachita's, once as lofty as the Alps. In summer and fall the river transforms into a trickle creating deep, green pools where bass and catfish suspend lethargically. But by later winter and spring the river, swollen by the monsoon-like rains, plunges violently southward cutting ever deeper into the east-west trending sandstone ridges of the Cross Range, which attempt in vain to block its path. The river depends on consistent rainfall for its lifeblood and tends to fluctuate drastically. One never knows for sure if they will encounter a rock-laced slalom course or a screaming deluge until at the river.
As is true for most of the world's rivers today, the freedom of the Tot is repressed by a dam of dubious value erected near the midpoint of its 87 mile course. But upstream the river rushes tempestously thru the rugged heartland. The premier boating section is a 12 mile segment between the lower F.S. road #31 and Hwy. 4. This section is the Shut-Ins, stark and rugged, inhabited by deer, otter, beaver, wild turkey, and eagles. It is considered by many to possess the best whitewater between the Appalachians and the Rockies. The country is near wilderness except for the extensive clear cutting, compliments of Weyerhauser, just beyond the bordering ridges. A maze of logging roads is a testament to forest mismanagement which has disrupted the wildlife, violated the pristine beauty of the land, and threatens to pervert the crystal clear waters with eroded soil.

I first encountered the Cossatot on an exploratory trip in the early 70's. Canoeing was the only popular means of river travel in Arkansas then, kayaks and rafts virtually unheard of at the time. When Joe Spradley, a Little Rock outfitter, purchased two kayaks an immediate romance developed for a small contingent of former canoeists. The quick, agile craft were ideally suited for the tight, rocky streams of the Ouachitas and the Ozarks. Six friends and I who rock climbed and backpacked together purchased kayaks and plunged into the sport with a fervor. We had no mentor to teach us even basic fundamentals. So, by trial and error and the assistance of Jay Evans' kayaking book we attempted self-instruction of the finer points of kayaking. Having no pools to practice in, we struggled to learn the Eskimo roll in the gelid waters of nearby lakes and pools in abandoned rock quarries.
Open canoes find an exceptional challenge in the Esses.

during the winter—without success. But when the spring rains evoked whitewater, we were not to let minor details keep us from the joys of river running. Everyone became proficient at wet exits and swimming in rapids as we paddled all the popular canoe streams. Spurred on by an insatiable appetite for whitewater, adventuresome spirits, and reckless abandon, we began to explore rivers formerly believed to be unrunnable.

We heard tales of a wild river called the Cossatot near the Oklahoma border and vague rumors that it had been kayaked by some foolhearty soul. I'm sure at least one adventurer had been down the wild section, but for the most part the Shut-Ins was veiled in obscurity and considered unrunnable.

On a sun drenched day in April a flotilla of three canoes, six kayaks, and a C-1 set forth from lower F.S. Road #31 bridge, a seldom used gravel road coming from nowhere and heading even deeper into nowhere. About all we knew about the river was that somewhere downstream was an unrunnable section of falls. From topographic maps we knew the canyon was steep with almost no floodplain and gradients ranging from 10 to over 40 ft/mile.

Purged by several days of steady rainfall, the air was clean and redolent with pine. The dense forest, illuminated by the new green of freshly opened buds interspersed among the conifers, crowded to the river's edge. I felt sure there were impenetrable hollows where no white man had ever set foot.

For the first five miles or so the river was feisty with many class I and II drops. The unique beauty of the canyon with its steep hillsides and rocky crags and the marvelous clarity of its sparkling emerald water was mesmerizing. Our original apprehension of the unknown faded further into the background with each passing mile. The river was
flowing fairly high, above 2000 cfs, its watery strands grasping our boats and pulling us effortlessly thru the deep, quite pools.

Our first real challenge was encountered at Four Steps rapid. This class III rapid is characteristic of the Shut-Ins as the river flows over ledges trending perpendicular to the flow. One mile further downstream we portaged Ed Banks low water concrete bridge, inundated by the swollen river. Then the real action began. Grey sandstone ledges, glossy black where the spray had wet the surface, became the pre-eminent feature. Smoothly carved boulders, the vestiges of raging floodwaters, lifted their heads from the river's frothy surface. An imposing ledge and boulder barricade across the entire width of the river proclaimed Zig-Zag. Typical of all the rapids in the Shut-Ins, Zig-Zag was tight, fast, and twisted. There were several short, sinuous passages thru the stone barrier, all impassable at lower water levels except one on the left bank. It was obstructed by the low hanging branches of a tree, demanding a quick 90 degree right turn into a boulder chute.

Zig-Zag gets the heart pumping, but the next major rapid, the Esses, can cause heart failure. As we rounded the next bend an ominous sensation seemed to blow across the water. Ahead the river suddenly constricted and disappeared into a boulder choked orifice. The deep, rolling thunder which typically precedes big rapids and causes visceral distress was not heard. The cape-like hillside jutting into the river's path had forced a sharp bend in the river and absorbed all sound except for a faint rumbling. But the

Rescues of pinned canoes in the Esses are common place.
Undercut rocks at the bottom of the Esses often eats canoes.

senses become well-honed in the wilds and instincts long suppressed by civilization can float to the surface. No one questioned the decision to scout. Half the party had stopped below Zig-Zag to relieve themselves, so we made sure to leave our boats in a conspicuous spot on the shore.

We squirmed and writhed to the top of a boulder slide and we're met by a wave of reverberating pandemonium assailing both sight and sound. Before us stretched a long, narrow, serpentine chasm, walled by cliffs on the left and a boulder field on the right. The water raged furiously over ledges, around rocks, piling into breaking haystacks and plunging into forbidden holes. Relentlessly it hurtled along its labyrinthian course thru the chasm, crashed into an insurmountable wall of rock, and disappeared around a bend. Undercut rock, lined the channel. I was terrified. Blood pounded in my temples and a vertiginous sensation numbed my senses.

We scrambled over car sized boulders further downstream to the heart of the rapid, searching for some route thru. A portage over the boulder field on the right bank was possible, though not practical. We watched the tumultuous water, so kinetic and alive, for a long time, joking nervously, trying to arouse a collective courage. Then a shout and a flash of color jerked our attention upstream. We watched in anticipative amazement as the other boats of our party slipped thru the aperture one by one and were swept unknowingly into the nightmarish cataracts. I'll never understand why they went past our beached boats, blindly thru the slit at the head of the rapid, but once thru the slit they were committed. I feared for them, yet, paradoxically, was eager to see the rapid assaulted. First came
Doug Young in his C-1. He was doing fine until he hit a huge breaking haystack about one third of the way down. Capsized and unable to roll he tried to wet exit from his boat but couldn't extricate his spray skirt. We watched in astonishment as Doug kept getting his head to the surface for breaths by unnaturally contorting his lanky body and dog paddleing. Yet, he remained stuck in his boat as it plummeted helplessly down the cataract and disappeared around the bend.

Next came John Barnhill in his kayak who, for some unknown reason, was without his life jacket. By sheer volition Barnhill stayed upright in the boiling rapid and passed before us, his eyes filled with terror. Then he plunged over a ledge, into a hole, and capsized. Without a roll or a life jacket he exited and desperately clung to his boat as he was flung mercilessly into rocks and thru waves as we watched helplessly, our rescue ropes stowed in our boats upstream.

Three tandem, open canoes followed in succession, their occupants shouting with excitement until one by one they filled with water and sank. Heads bobbing like corks, ricocheting off boulders and into holes, they were all swept away, disappearing around the bend guarded by the sheer cliff.

Impotent and powerless we were along above the roaring whiteness, uncertain if our companions were safe or drowned. But their fate was outside of our influence now, and self-preservation was our paramount thought. There was nothing left to do but to commit ourselves to the water. We could have portaged over the boulder field, but for some reason that possibility was effaced. Had we the skills and experience at catching fast eddies, the run would have been made easier. But being rookies we were power paddlers; finesse was not in our repertoire. We conferred and based on the calamities met by our predecessors, we carefully planned our route, avoiding the largest waves and most
Robert Booth being hurled into the narrow slot of Whiplash.

intimidating holes. We headed back to our boats; Mark, Dick, and Robert silend and dour. I looked at Joe, his face grimaced by consternation. 'Say a prayer for us, amigo," he said. I replied, smiling wryly, "I'm already praying, bro," hiding the cold twisting in my gut.

I remember little of the frantic ride down the rapid, except for flashing images of crashing water and boulders leaping up from nowhere. Our meticulously planned route was, of course, totally obliterated from view as we plummeted downstream. I remember the pounding of my heart in my hands gripping the oval paddle shaft. I remember paddling desperately as I felt my stern being pulled into the most imposing hole in the rapid. But mostly I remember the exultation which coursed thru my being as we turned the bend below the sheer wall and the yells and whoops of five victorious kayakers resounding off the ancient walls of the canyon. The rapid transformed into a deep pool as it turned from view of upstream, and there on a gravel beach, shaken, bruised, and water logged were our companions. Except for contusions, minor cuts, and mental anguish they were all well. Doug had finally managed to get out of his C-1 while the spray skirt clung tenaciously to the cockpit. Barnhill was badly shaken and would have a difficult time thru the following rapids. Afterwards, he sold his boat and gear and never got in a kayak again. The aluminum canoes had miraculously slipped thru the boulder strewn stream without becoming pinned, but looked like tin cans that had tangled with a truck. By pounding and stomping they were made somewhat seaworthy.

Our party set off again under an array of emotions ranging from pure fear to ecstatic delight. The next two miles afforded many class III rapids which kept the adrenaline coursing in our veins. We portaged another concrete low water bridge which formed an upstream pool several feet higher than the downstream flow of water pouring thru culverts embedded in the bottom of the weir. Except for Terry Keefe. Maybe he hit his head on a rock while swimming the Esses; perhaps he is just naturally insane. But we couldn't dissuade him from running the weir covered by only a foot of water, in his plastic canoe. Keefe's run was utterly slapstick. He glided smoothly across the bridge until fully two-thirds of his black boat was suspended in mid air over the lip. Then the bow crashed downward, the pivot point of the canoe striking the concrete surface, and Keefe, red
hair and beard waving in the breeze, was catapulted head over heels in a perfect arc, striking the water 25 feet downstream and disappearing beneath the froth. He surfaced some 50 feet downstream from where he disappeared yelling, "Whitewater," at the top of his lungs.

A long, deep, serene pool proclaimed the awaiting fury louder than any audible warning. Even the stillness of the water was betrayed by a heightening of potential energy which permeated the air like static electricity before a thunderstorm. We stood on a convoluted ledge of sandstone, its sleek, curved surfaces sculptured over thousands of years by the softest of chisels. Before us, like nature gone berserk, stood the six ledges of the Cossatot Falls, later to be named Cossatosser, Eye Opener, BMF, Washing Machine, Whiplash, and Shoulder Bone. The roar of the water pouring thru the breaches in the ledges was deafening. The ledges were distant tiers forming pools with fast currents on seven distinct levels. At higher water levels they would merge to form one monstrous rapid. Standing in the middle of the falls they looked much longer than 0.3 mile and much steeper than the 80 ft/mile estimates. Most impressive was the thundering fourth drop of Washing machine, falling eight feet thru a narrow slot, plunging into a violent whirlpool, then veering sharply between a car-sized boulder and an abutment from the ledge.

We stood in awe, alone in our thoughts, with spray in our faces and thunder resonating our beings. The obdurate stone we stood upon seemed to vibrate before the relentless onslaught of energy. And
tickling the base of my cerebrum played the impossible fantasy—Could the Falls be run? The thought made me shudder. No, certainly not now. But maybe someday, when I had learned the intimacy of the flow and had sharpened my skills to their zenith. Perhaps. It would be the ultimate.

In the summer following my virgin run on the Tot, the water trickled thru the gaps in the ledges as black, venomous water moccasins lay sunning on the warm stone. Krys Veris, who inspired me to reach beyond my grasp, and I swam in the pools of the Falls, exploring every detail and curve in the stone. Sliding naked over the smooth bedrock, I let the water show me its natural course, clutch my ankles and pull me into its deflated holes, and hurl me along its fluid dance with the stone.

Throughout the autumn and winter the Falls invaded my dreams. Engulfed by crashing walls of water, I was swept violently thru a maelstrom, powerless as a fragment of flotsam. Then I would awaken in a cold sweat and listen to the rain falling in the woods outside my bedroom window. And I knew that in those cryptic mountains to the west the water was rising in the Cossatot. And I realized that until I floated thru the breach that marks the threshold of the Cossatot Falls, I would be haunted by the spirit of the river which had captured my soul.

**EPILOG**

Two years passed before I ran the Falls. Most everyone on the exploratory trip also became veterans of the Falls. But that is another story. Suffice it for now to say that after all the mental, physical, and spiritual preparation, and having run the Falls a thousand times in my mind, I was not in the least disappointed. The Falls, class IV-V, are now run at water levels from near 600 cfs to over 5000 cfs, difficulty not necessarily increasing in proportion to the flow. At all levels it is a wild ride. The Falls have broken boats and bodies. I've seen faces smashed into scarlet, shoulders dislocated, glass boats atomized, and bodies swept from the land of the living only to be released by the mercy of the impetuous water—most of the time. The river can be floated another four miles beyond the Falls to the Hwy. #4 bridge. Portage of the Falls is, as put by Mark Schmidt, "about as easy as carrying your boat down six flights of a fire escape." Devil's Hollow Falls, a reknown boat buster, is halfway down this section preceding two miles of flat water.

If the Cossatot can escape the threat of more dams for hydroelectric power and the destruction of its watershed from clearcutting malpractice, it will remain one of the premier whitewater adventures in the country.
MORE ON EROSION OF STANDARDS — or moron erosion of standards, as the case may be. After my last month’s diatribe, Jerry Holladay wrote me a nice letter explaining that his reason for rating the Big Laurel trip as "expert" was that last year, when the trip was listed as advanced, several paddlers showed up who were neither advanced nor ready for Big Laurel. Jerry and Mike Rainey had to run a 7 hour care-athon, and there was one serious injury.

This is a period of GCA membership expansion; a lot of folks are rapidly developing their skills, improving a lot faster than I did, and they have a right (in most cases) to view themselves as promising paddlers. Most of us old-hand trip leaders have not had a chance to see these up-and-coming paddlers on good "test" rivers like the Upper Hooch or the Nantahala, and so when we schedule something bodacious and start getting phone calls, we are hard-pressed to tell whether the registrants we doubtfully accept are going to be an asset or a burden to the trip. Don’t ever con a trip leader, or yourself, about your skill level. The more difficult the river, the less margin there is for inexperience, and the harder the looks you’ll get from people who know what they're doing.

I want to be honest with you about these river ratings. You don’t have to be advanced to be accepted for a run on Chattooga III, and you don’t have to be "expert" to run Chattooga IV. These ratings specify the skill level necessary for complete security on the section of river in question, the level of skill we hope to see in the trip leader, and as far as possible, in most of the people on the trip. I barely qualified as a senior intermediate when the Klausman Kamikaze Kayak Klub plus Texans took me down Chattooga III. Hank has a movie of me running Dick's Creek upside down and somehow finishing right side up without rolling. It was a warm day with a moderate water level, and on such a day I would be willing to have some sensible senior intermediates along on section III. But not on Chattooga IV, or the Ocoee. On those rivers we "advanced" paddlers have to do a lot of looking after one another just to get ourselves down with an acceptable safety margin. And on stuff like Big Laurel in high spring water, it’s no time to try your skills.

In this issue or the next, I’ll be publishing the comparative river ratings compiled by Charlie Walbridge, ACA safety chairman. These attempt to equate level of difficulty across well-known
streams and rapids in different regions of the country. The southeast rankings may be a little controversial; for example, the Ocoee at 2500 cfs is ranked as easier than Five Falls at 1.2. Hah! But on the whole, the rankings look sensible and deserve careful study.

Some suggested benchmarks on paddling ability, briefly stated. An untrained beginner doesn't belong on whitewater, except in the context of a proper training course. A trained beginner, whether trained by us, by GSU, Georgia Tech, High Country or NOC, is not yet experienced enough to claim mastery of anything, and should not sign up for GCA trips on "advanced" runs like Chattooga III, even if you were trained there. A junior intermediate has had several good clean runs on rivers like the Etowah and the Broad, and is working on skills on the Upper Hooch and Nantahala under the watchful eye of more experienced paddlers. A senior intermediate is quite secure on the Upper Hooch and Nantahala, and even has a three-out-of-four success rate on Lesser Wesser. A senior intermediate is ready to try Chattooga III on summer GCA trips, subject to the trip leader's approval.

An advanced paddler has real mastery of Chattooga III at water levels through 2.5, including the sense to know when to portage Bull Sluice. A good benchmark for a true advanced paddler is running the Ocoee at normal summer levels with no swims. Sneaking Witch's Hole is regarded as a mark of good sense. Swims on Chattooga IV are a blot on your advanced status: you should have rolled or portaged. Advanced paddlers don't always clean class IV's upright and in the boat. Sometimes they roll and sometimes they walk.

Finally, take time to enjoy your own development on the easier rivers. There's a lot more good class 2 runs in the southeast than class 3 and above. Don't let that hunger to run the big stuff spoil you for the rest.

—Ed. of The Eddy Line
Georgia Canoe Association
Raft Innovations For The 7984 Season

by A1 Ainsworth

River running technology is maturing!

Inflatable boats have been bouncing down the world's rivers, some successfully, some disastrously, for the past thirty years.

Now, the inflatable boat has taken control of the river running world and is virtually indestructible . . . unfortunately, there are those of us who could destroy anything that floats.

Technology is trying its darndest to protect us from our shortcomings, whether it be a lack of physical strength, an inability to read white-water, or the skills to handle a boat.

Today’s boats are able to, literally, come out of tighter scrapes. The tougher fabric frowns at that sharp basalt ledge, the bow and stern rise keeps out that cold water, the larger tube sizes provide more flotation, and the self-bailing floors reduce the load in heavy water.

Not every boat has the feature you want, but technology is providing a lot more options than it did, even, five years ago.

With the rapid growth in private boater use, the rafting marketplace has seen an influx in dollars, resulting in innovations and sophistication in the inflatable raft industry. The competition is fierce. And this year is no exception.

The major change in the 1984 season are the design changes in the self-bailing raft. On the market for several years, the size of the raft has been restricted to larger boats due to the loss of flotation with the mesh floors. Since the floor provides additional flotation, self-bailing technology was suitable for the 12 to 16-foot range since it drastically reduced the carrying capacity.

The self-bailers, so far, are only found in the PVC, polyester weaves manufactured by Maravia of San Rafael, California, and White Water Manufacturing of Grants Pass, Oregon. The PVC rafts are able to maintain their rigidity while the hypalon-coated nylon loses its stiffness without a full floor.

Another phase of the market undergoing a change are pontoons, also known as cata-rafts and Huck-finn tube rafts.

White Water Manufacturers has its version of the cata-raft. The tubes come in 12, 14 and 16-foot lengths and in tube diameters of 18, 20, 22 and 24-inches.

Rogue Inflatable is also introducing a cata-raft. The B. A. Hanten-designed tubes are 17’8” and 22” in diameter.

CampWays has a blunt-end 14’ foot tube which is 22” in diameter.

New on the market, SunRunner, is introducing its 15-foot catarraft designed by Bill Hines of Gladstone, Oregon.

Design changes in 1984 are not the only important features when considering purchasing a raft.

Bow and stern rise affect the maneuverability of the raft. The shorter waterline enables the raft to pivot quicker, according to Ron Mattson, a member of the Sino-American Yangtze Expedition and owner of Cascade Frames in Monroe, Oregon. B. A. Hantan likes a good stern rise to make it easier to backferry a raft while positioning for a difficult rapid.
Avon Adventurer MKV-14 ft.

Bruce Mason, a member of American Himalayan Whitewater Expedition in 1981 and Director of the Outdoor Program at the University of Oregon in Eugene, Oregon, feels a tight floor and stiff material also make a raft more maneuverable. An advocate of Maravia, Bruce also believes a good tight PVC floor won’t sag when loaded with water... reducing the amount of water a boat can take on in heavy water.

Another factor in how a raft handles is its weight. Dan Baxter of B & A Distributors in Portland, Oregon, feels the lighter the boat, the better it handles.

The width and length of rafts have been modified to fit the needs of the river-running world. Normally, the narrower the boat, the less stable, but the more able it is to get down those narrow, rocky rivers. The wider the raft, the greater the stability, particularly when going sideways thru one of those unavoidable situations and holes.

Another consideration when selecting a raft is how do you want to handle it? Do I row or paddle? Richard Ford, formerly of Maravia, suggests a slight upturn on the bow and a slight upturn on the stern, enabling the paddlers to better reach the water and execute their strokes. Paddle boats can, and usually, have an extra thwart, adding extra buoyancy while providing lateral stability.

Tube size should also be considered when thinking of paddling a boat. Tom Foster of Sierra Whitewater in Springfield, Oregon, considers 18” tubes the optimum for paddling in adventurous white-water. Any larger, the paddlers have trouble staying on the tubes.

Usually, rafts that are intended to accommodate the needs of an oar-equipped frame, have an uplifted bow and stern and are restricted to two to no thwarts. The ride is usually drier an only requires one person to navigate the river.

Other important components of a raft are multiple air chambers, recessed military or Avon-type valves, strong and solid D-rings, material type and strength.

The majority of the design changes have been influenced by the private river runner. Features found only on

Campways Shoshone.
a few rafts are now commonly marketed because of the influx of self-outfitted boaters. The cash flow has increased and the quality of the river-running gear has increased and brought the price of the equipment within the reach of the private boater's wallet. The supply and demand has made technological advances more affordable to the manufacturer as well as increasing the quality of the boats on the market.

CampWays, with the largest array of models on the market, designs boats for paddling and rowing, with a wide range of styles and sizes. Dan Baxter, a member of Upper Ganges Expedition and distributor of CampWays rafts, admits there are boating changes designed to enlarge the private boater market. He also states, "There are boats not marketed in the Pacific Northwest that are leading sellers on the east coast."

Bill Zinkand, owner of Boat Technology in Confluence, Pennsylvania, concurs with Baxter, saying, "The small, tighter rivers of the east coast are made for paddling, while, out west, the rivers are more, for lack of a better word, dangerous, and are better handled with oars."

Portland, termed "The River Running Capital of the World" by Baxter, says there are more private boaters in Western Oregon than any other area in the world. The reason, the outdoor nature of the Oregonians and access to many and varied types of rivers, some with year-round boating seasons.

And the buyers are becoming more sophisticated, bringing about the need to explore new areas. And bringing about competition for the boating dollar.

Some of the new designs and companies for the season are:

Maravia, the leader of PVC fabric rafts, is introducing the "Fat Santana", which at 16'10" by 7'5" and with 24" tubes, is within the range of the private boaters needs and pocketbook.

The boat can be delivered with a plain fabric floor grommetted around its perimeter to allow water to drain, without a floor in the center section for those who desire a suspended marine plywood floor from their frame, or with a new 4" thick inflatable self-bailing floor just developed by Maravia. Price: around $3000.

Larger self-bailers are also available. The Chubasco at 22' by 8' with 28" tubes and the Short Chubasco at 18-feet.

Celebrating its tenth year, Maravia is selling a limited version of its popular Williwa I, 14'3" by 6'8" with 20" tubes, according to Jack Nelson of Cascade Outfitters in Springfield, Oregon. "The anniversary special will be fitted with eight extra 2" D-rings, will include a grommetted cargo deck in the rear, and will sell for $1899 (1983 price of a standard Williwa I was $2500)," says Nelson. "The Special Edition will be available in sky blue and yellow only, with black rubbing strakes, chafing strips and floors, and only 15 will be built, according to the company."

Jim Cassady, owner of Pacific River Supply in Richmond, California, and designer of the self-bailing boat being built by Whiter Water Manufacturing, says, "conventional rafts will be outdated."

In their third year, the Grants Pass Manufacturer is Maravia's lone competitor in the PVC, self-bailing market.

Called the Class Five, the self-bailers are directed at the private boater market. Built in 12, 14 and 16foot lengths, the rafts have inflatable floors.
"The rafts handle like kayaks...you can eddy-hop...and much more maneuverable when dry, the only fair comparison you can make with a boat that is a non-self-bailer. In heavy water the self-bailer is a 'hands-down' winner," says Cassady.

"I ran the upper Tuolumne and the Class Five made that run seem like a Class III," relates the designer and boater.

The White Water Manufacturing boat is a polyester-weave with a PVC coating with the seams heat welded as opposed to the cold glue technique used by Maravia.

The 12-foot boat has 18" tubes with a 6" inflatable floor, the 14-foot raft has 20" tubes with an 8" inflatable floor and the 16-foot raft has 22" tubes with an 8" inflatable floor. Prices range from $2000 to $3000, according to Randy Shelman, of the Grants Pass manufacturer. "And don't forget the cata-rafts."

Alii is the other leading polyester-weave, PVC-coated raft on the market. Manufactured by White Water Mfg., the raft was researched and developed by professional guides and craftsman, according to John Yanutik, owner.

The only model they make is 14'10" by 6'10" with 20" tubes. It weighs 102 pounds and comes in orange, yellow and blue. Alii is affiliated with American Welding and Manufacturing in Medford, Oregon. Price is $1899, and $300 for a self-bailing floor.

Avon, long a forerunner in the river-running world, has increased the tube size this year and, surprisingly, dropped its prices, making it one of the best buys, according to Ron Mauselle of the Inflatable Boat Center in Portland, Oregon.

Using another fabric, hypalon, the British inflatable has been abused on the world's toughest rivers and keeps coming back for more.

Using 100% hypalon calandered on Nylon, the Avon is warranted for five years from date of purchase against such defects as aging, cracking or porosity. The warranty is also transferrable.

According to Avon literature, all inflatables have less hypalon content than their inflatable. The British raft is hypalon-calandered on both sides of a nylon weave, enabling the boat to be inflated to 2%-pounds pressure, giving you a stiff and maneuverable boat to punch those holes.

The British boat manufacturer measures its material in ounces compared to others listing their boats in denier, a word meaning the weight of 9,000 meters of a single thread measured in grams. Avon uses three weights of nylon fabric: 5% ounces per yard, 8 ounces and 11 ounces. With an 840 denier thread in their 5%-ounce material and slightly more in the 8-ounce fabric, the double-weave of the 11-ounce material gives you 1,680 denier.

Al Ainsworth is the President of the NW Rafters Association. P.O. Box 19008, Portland, OR 97219.

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Orange, CA 92667

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C/O Marge Cline
3434 No. Portage
Palantine, IL

Chiltern Mt. Club
C/O John Lesko
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Bedford, MA 01730

Clinton River Canoe School
23705 Audrey
Warren, MI 48091

Club Canoas, Santiago, SA
C/O Rodrigo Vasquez Caballero
Antonio Bellet #309

Coastal Canoeists, Inc.
P.O. Box 566
Richmond, VA 23204

Columbus Council AYH
C/O Douglas C. Miller
1300 Presidential Dr. #207
Columbus, OH 43212

East Tennessee Whitewater Club
C/O Gunter E. Liepins
816 Embarcadero Rd.
Knoxville, TN 37923

Eastern Montana College
Recreational Activities
Box 570
Billings, MT 59101

Explorer Post 2001
C/O James A. Hasse
11827 So. Arbor Dr.
Houston, TX 77089

Explorer Post 999
C/O R. Steve Thomas, Jr
3509 W. Colonial Dr.
Hope valley, VA 23860

Farmington Hills P&R Canoe & Kayak
C/O David Justus
3155 Eleven Mile Rd.
Farmington Hills, MI 48018

G.L.O.P.
C/O James Tibensky
1510 Lombard Ave.
Berwyn, IL 60402

Hong Kong Snakes K.C.
22 Bushy Road
Simsbury, CT 06070

Hoosier Canoe Club
C/O Thomas W. Baker
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Indianapolis, IN 46227

Idaho Alpine Club
P.O. Box 2885
Idaho Falls, Idaho 83401

Idaho Canoe Club
C/O Box Lesser
1812 N. 21st
Boise, ID 83702

Keel-Hauler Canoe Club
C/O Box 30094
Middleburg Hgts., OH 44130

Kennebec Sewer Runners
C/O Paul Reinstein
RFD 1, Box 5240
Skowhegan, ME 04976

Keysoat Raft and Kayak Adv.
Box 1486
Valdez, AK 99686

Knik Canoe Club
C/O Peter Cogan
29 Monadnock Ave.
Lowell, MA 01851

Lower Columbia Canoe Club
Box 40210
Portland, OR 97240

Mason-Dixon Canoe Cruisers
C/O Ron Shanholtz
222 Pheasant Trail
Hagerstown, MD 21740

Meramec River Canoe Club
Earl C. Biffle
Box 1092
Patterson, LA 70392

Metropolitan Canoe & Kayak Club
C/O N.A. Payne
Box 1868
Brooklyn, NY 11202

Minnesota Canoe Assoc., Inc.
Box 14207 University Station
Minneapolis, MN 55414

Monocacy Canoe Club
C/O Box 1083
Frederick, MD 21701

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<th>Address</th>
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<tbody>
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<td>C/O Tom Buckard</td>
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<td>c/o Douglas Bushnell</td>
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<td>P.O. Box 157 Station B Buffalo, NY 14222</td>
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<td>Northern Arizona Paddlers Club</td>
<td>c/o James Rolf</td>
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<td></td>
<td>P.O. Box 1224 Flagstaff, AZ 86002</td>
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<tr>
<td>Northern New York Paddlers</td>
<td>Box 228 Schenectady, NY 12308</td>
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<tr>
<td>Northern Vermont Canoe Cruisers</td>
<td>c/o Alan Roberts</td>
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<td>Box 826, Wellington St. Colchester, VT 05446</td>
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<td>Oregon Kayaking &amp; Canoe Club</td>
<td>P.O. Box 692 Portland, Oregon 97207</td>
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<td>Outdoor Action Program</td>
<td>302 W. College Princeton University Princeton, NJ 08544</td>
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<td>Outdoor Adventure Club</td>
<td>c/o Rodman D. Jablove 2845 Liberty Ellerton Rd. Dayton, OH 45418</td>
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<td>Ozark Wilderness Waterways Club</td>
<td>Box 16032 Kansas City, MO 64112</td>
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<td>Penn State Outing Club</td>
<td>Canoe Division 8 IM Building University Park, PA 16802</td>
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<td>Penobscot Paddle &amp; Chowder Soc.</td>
<td>c/o Adrion Humphreys 20 Forest Ave. Orono, ME 04473</td>
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<td>Philadelphia Canoe Club</td>
<td>4900 Ridge Ave. Philadelphia, PA 19128</td>
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<td>Piedmont Paddlers Canoe Club</td>
<td>1515 Tarnworth Dr. Charlotte, NC 28210</td>
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<td>c/o Louis A. Boehm 6320 N. Hermitage Ave. Chicago, IL 60660</td>
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<td>Jerry Gluck 2185 Mershon Dr. Ann Arbor, MI 48103</td>
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<td>c/o John Farison 6794 Clara Lane Forestville, CA 95436</td>
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<td>Rutgers Univ. Outdoor Cl.</td>
<td>P.O. Box 231 c/o Robert Markley New Brunswick, NJ 08903</td>
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<td>c/o Appalachian Outfitters 1133 N. State St. Clarks Summit, PA 18411</td>
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<td>c/o Carl Trost 257 Pacheco St. San Francisco, CA 94116</td>
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<td>Telluride Navy</td>
<td>P.O. Box 838 Telluride, CO 81435</td>
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<td>Tennessee Scenic Rivers Assoc.</td>
<td>Box 3104 Nashville, TN 37219</td>
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<td>Texas Whitewater Assoc.</td>
<td>Box 5429 Austin, TX 78763</td>
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<td>Toledo River Gang</td>
<td>c/o Jim Hock 320 Cyril St. Toledo, OH</td>
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<td>c/o Andrew Embick MD P.O. Box 1889 Valdez, AK 99686</td>
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<td>WIMPS</td>
<td>c/o Bill Wang 66 Statt Rd. Rochester, NY 14624</td>
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<td>W-PAFB Outdoor Adventurers Club</td>
<td>c/o Rod D. Jablove 2845 Liberty-Ellerton Rd. Dayton, OH 45418</td>
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<td>Washington Kayak Club</td>
<td>P.O. Box 2426 Seattle, WA 98124</td>
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<td>Wild-Water Rafting Club</td>
<td>Box 1523 York, PA 17405-1523</td>
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<tr>
<td>Williamette kayak &amp; Canoe Club</td>
<td>P.O. Box 1062 Corvallis, OR 97331</td>
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<tr>
<td>Wilmington Trail Club</td>
<td>Box 1184 Wilmington, DE 19899 Z.C.P.F. and C.K.C.</td>
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<td>c/o Robert W. Smith 10422 Tomkinson Dr Scotts, MI 49088</td>
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