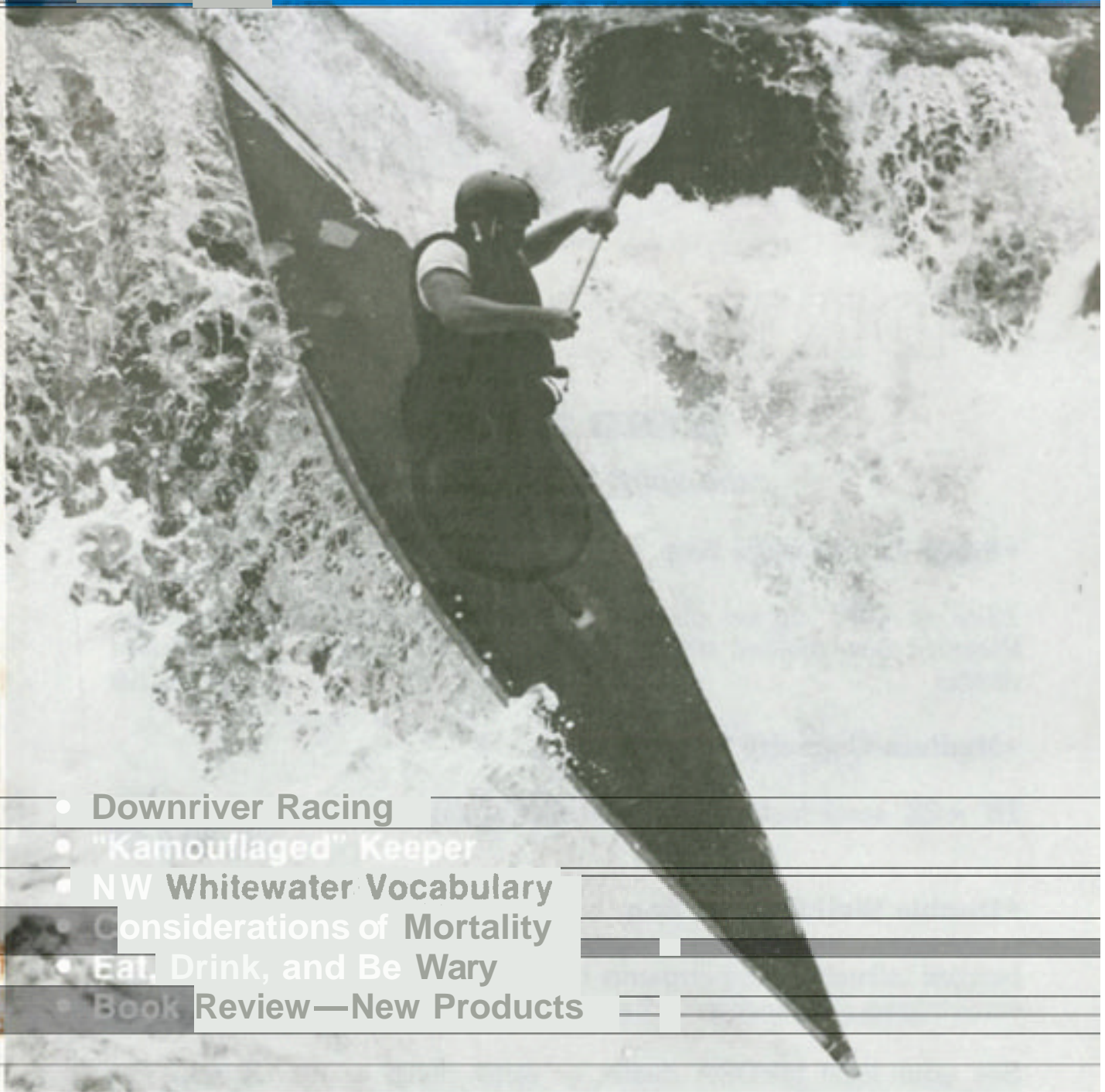


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AWA is published six times yearly. Single copies \$1.50 ea. Surplus back copies and other AWA Products are available from Pete Skinner.

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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 Sir,

It's not exactly whitewater, but it is an awfully nice river.

The Burke Dam Hydro Associates want to put a dam on the James River near Saltpetre Cave in Virginia. It looks like the proposed project would cut out about six miles of the river from the Cabell Dam to Lock Eight by diverting water through an expanded canal and tunnel system. Three powerhouses along the river are proposed.

The James River Basin Canoe Livery has filed a Motion to Intervene in the Preliminary Application for Permit of the Burke Dam Hydro Associates' James River hydroelectric dam project. I have enclosed a copy of that motion.

I thought this proposed project might be of interest to members of the AWA. Sylvia Brugh of the Virginia Canals and Navigation Society alerted us about this project and has more information and suggestions for how to get involved. You can contact Sylvia at 625 Pomander Walk, Alexandria, Virginia 22314.

I hope that the AWA can get involved to help us stop this proposed project and keep the James River free-flowing.

Sincerely,

Amy Karn Turner

James River Basin Canoe Livery, Ltd.

RFD 4, Box 109-A

Lexington, Virginia 24450

LETTERS TO EDITOR

Dear A.W.A.,

We all are proud of the First North Eastern Freestyle Championships 1984 held at the Sacandaga river N.Y. May 26, and wish to thank A.W.A. for being one of its sponsors.

For those of us who are not just river runners, but river players, it was a challenge, but most of all great fun.

We are already practicing for next years "second annual".

Thank you again,
Ralph Leibfarth
R.D. 1 Box 285
Petersburg, NY 12138

WRITERS AND PHOTOGRAPHERS:

We need your stories and black and white photos. Contact the AWA editor. Call (503) 447-6293 evenings. Hope to hear from you.
—Ed.

SAVE THE GAULEY & TUOLUMNE

With a tax free contribution to AWA's River Funds — Claire Gesalman, 6301 Hillcrest Pl., Alexandria, VA 22312.

The Fluvial News

What's Flowing in
The Boating Community

Perception's Fourth Annual Conservation Award

Each year, the struggle to save our natural environment becomes more far reaching and broader based. People from every facet of society, across the United States and Canada, are waking up to the continued environmental threat that faces us now and in the future. Many are banding together, some are working singlehandedly, to form an organized, legalistic resistance to the mindless misuse of our natural resources.

Perception presents the Annual Conservation Award each October to a group or individual who has contributed greatly to the preservation of one or more of our free flowing rivers. Last year, Perception honored Steve Taylor, a consulting engineer from Washington, D.C.

Taylor's conservation efforts have encompassed a handful of southeastern rivers over the years, including the Blackwater, the Ocoee and the James. Most recently, his attention was focused on the endangered Gauley River in West Virginia. Taylor's efforts to save the Gauley from an Army Corps of Engineers' hydroelectric project included: writing many letters and technical papers, testifying against the project before the U.S. Congress, and at one point, resigning his job to devote himself full-time to the Gauley cause. When the Corps announced it was withdrawing its Gauley proposal "for revision" last fall, Taylor deserved much of the credit.

This year Perception is looking throughout the United States and Canada for another such individual (or

group). Nominees need fill no requirements of age or geographic locale. He or she must have worked on a river conservation effort within the past year between September 1983 and August 1984. Nomination forms are available at your nearest authorized Perception retail dealership or through company headquarters. Write: Joe Pulliam, Perception, Inc., P.O. Box 686, Liberty, South Carolina 29657.

Perception advises all paddling clubs and conservation groups to make one nomination, with all members signing their endorsement. The ultimate decision on the winner will be made by Perception staff, based on the number of votes and the nature of the person's river conservation work. Announcement of the recipient will be made on October 1, 1984.

Wild and Scenic Poudre Bill in Congress

Representative Hank Brown, the Congressman through whose northern Colorado district the Poudre River flows, recently introduced a bill to make the Poudre "Wild and Scenic." The Poudre provides excellent Class III to VI boating just west of Fort Collins, Colorado, a relatively short drive for most of the state's residents.

The bill, H.R. 5185, would leave damming possible only at the mouth of the canyon, downstream from the most scenic section. It would also mandate study of the river further

downstream, as it flows through Fort Collins, for possible Wild and Scenic designation. This urban setting would be a first in the Wild and Scenic System.

The bill is now waiting for hearings in the Subcommittee on Public Lands and National Parks (a Subcommittee of the Committee on Interior and Insular Affairs) in the U.S. House of Representatives. The chairman of that subcommittee is Rep. John Seiberling of Ohio. Seiberling reportedly may schedule hearings in May.

River runners can therefore help preserve the Poudre by urging Rep. Seiberling to hold the hearings, and by urging their own Congressman to co-sponsor the bill. All representatives' address and phone is: U.S. House of Representatives, Washington, D.C. 20515, (202) 224-3121.

Gauley Water Needed

The U.S. Army Corps of Engineers is not yet proceeding with its plans to build a hydroelectric plant that would damage river running on West Virginia's famous Gauley River, but even without the new project river running still depends on releases from the existing dam...and the Corps seems reluctant to time even these releases to benefit river running. The Corps apparently insists on releasing water both night and day during its annual fall "draw-down" of the reservoir. River runners point out that water releases at night are of benefit to no one, and should be saved to add to the releases during the day. A recent editorial in the Charleston, West Virginia, *Gazette-Mail* accused the Corps of "bureaucratic obstinence, perversity, and stupidity."

Steve Taylor, a consulting engineer from Washington, D.C., received Perception, Inc.'s 1983 Conservation Award for his research and testimony opposing the proposed hydroelectric project on the Gauley.

The 1984 Gauley River Festival is scheduled for September 22, at the Mountain River Tours Campground (on U.S. Hwy. 60 near Hico, West Virginia.) River runners can voice their views on water releases on the Gauley by writing West Virginia Representatives Bob Wise and Nick Joe Rahall, or asking their own Congressman to support legislation to preserve river running on the Gauley.

INTERAGENCY WHITEWATER COMMITTEE REPORT

River Information Digest

We are in the process of updating the River Information Digest for a 1984 edition. The "Digest" will be released after all river managers review the information, according to Peggy Fox, IWC Newsletter Editor.

Safety

The Middle Fork of the Salmon River experienced a river-running fatality this past summer. Two experienced non-commercial canoeists overturned their canoe in a rapid below Weber Rapids near Misty Falls. The husband-wife team were thrown into the river and the wife was able to swim to shore. Unfortunately, the husband got a foot wedged between two rocks, with strong current conditions holding him underwater. Thunderstorm activity elevated the river level that night, freeing the body, however, it was not recovered until eight days later by a fallen tree. The Challis National Forest personnel helicoptered him out from the Stoddard camp area.

Four non-boating drownings occurred on a section of the Lower Salmon River managed by the Cottonwood Headquarters of the BLM in 1983.

In a freakish set of circumstances, twin brothers drowned on August 2, and a brother and sister drowned August 4, all within a 20-square-yard area off of a beach at the Pine Bar Recreation Site. The site was closed down until it was determined if high water had changed the bottom structure, thereby causing, strong currents or undertows. However, the BLM was unable to find anything other than 'normal river current and reopened the site. Apparently, it was a tragic coincidence that the drowning occurred in such a short time in the same location.

The late spring moisture caused higher than normal run-off and reservoir releases, with the Upper Colorado reaching a peak flow of 8,300 cfs on July 13. It is considered a great year if the river reaches 4,000 cfs during spring run-off.

The Upper Sacramento is becoming popular. Eight commercial permits were issued in 1983, three more than 1982. A total of 299 user days were reported.

Outfitted and non-outfitted use of California's Kings River continues to increase. At this time, non-outfitted permits are not required and there are three commercial outfitters that are authorized to raft the Kings River. Each company can run one trip per day with a maximum of 60 people (including guides) per trip.

The Upper Colorado River in Colorado, with unexpected and unusually high water, was down 20% from 1982. The high water in June, with resulting bad publicity, was the culprit.

California's Kern River, despite high water through July of this year which forced cancellation of hundreds of commercial trips, Kern river use remained high. Outfitters reported 19,440 user days, down 10% from 1982, while non-outfitted use increased by almost 50% to 11,283 user days. Permits are required from May 15 to September 15, but only from 7 a.m. to 4 p.m.

We anticipate some changes in use of the Upper Kern this year. Beginning in the late 1970's, when the Kern first became popular, this segment of the Kern was broken into three runnable segments rated Class I.V. This past year, commercial outfitters began experimenting with the "unrunnable" portions, aided by skills, techniques and equipment they have perfected the Class V+ forks of the Kern. At certain flows the Upper Kern is now runnable, with many Class V and some Class V+ rapids.

The Middle Fork of the Salmon River issued 541 permits last year with 7,771 people floating the river between May 1 and September 13. 1983 was not a record year, but use is tending to stay around 8,000 the last few years. Privates comprised 39% of the floaters with an average party size of 9.5 and 61% were outfitted public with an average party size of 21.2.

Commercial activity on the Clackamas River has remained relatively stable with an apparent increase in use by private parties. Estacada Ranger District has no plans to limit use in 1984, however, the District hopes to begin sampling use this season and may be contacting other river managers for guidance.

The BLM received several complaints, written and verbal, this past season related to safety precautions during the high water. Complaints ranged from advertising the river as suitable for first-time rafters, which it normally is, to inadequate training of guides and inadequate equipment. There were a reported 55 boats that flipped in Needle Eye (Keyhole) and Yarmony (Hoyt) Rapids. There were several injuries and one death reported.

A lady from Massachusetts, who was contacted while attempting to return her lost wallet, reported that her trip in June had been her first (and last!!!) raft trip and was the low-light of their trip to Colorado. Needless to say, it was not a good PR year.

Fire Safety Reminder for River Users

Forest Service Region 6's largest fire in 1983 (only 310 acres) apparently resulted from a firepan being emptied near a floater's camp in Hells Canyon. A total fire closure was in effect at the time of the incident. In 1982, a small fire resulted from an outfitter burning toilet paper beside a cathole.

Legal Cases

Colorado Attorney General, Duane Woodard, has issued an opinion that clarifies rafters' and other river runners' rights to float through private property without first securing the owner's permission. Since the Emmert incident on the Colorado River occurred (see Colorado Supreme Court decision No. 28235), the General Assembly of the State of Colorado amended the Colorado Revised Statutes (C.R.S.) by adding a definition of "premises" (Section 18-4-504.5).

It is the Attorney General's opinion that "the intent of the legislature was to protect riparian landowners from trespass to the

privately owned banks and beds of streams, while ensuring those who float or boat upon those streams without intruding on real property would not be liable for criminal trespass." He further adds that "Section 18-4-504.5 decriminalized floating and boating over privately owned stream beds. The statute, therefore, does not authorize either law enforcement officials or owners of stream beds or of adjoining property to prohibit such activities."

All of this has no effect on the Emmert Decision per se. It does, however, point out that the precedent established by the State Supreme Court has been nullified by the State Legislature. Further information is available from the Kremmling and Glenwood Springs BLM offices or the Colorado River Outfitter's Association.

McCloud River in California is still in the news, according to the IWC Newsletter. As use of larger and more popular California rivers approaches capacity, commercial outfitters are looking for new opportunities. In 1982, application for commercial use of the McCloud was made by a Redding, California, outfitter. Since the river is broken by Lake McCloud, application was made separately for the Upper and Lower McCloud. After an environmental analysis, commercial use was denied because of impacts on private lands within the National Forest. The decision was appealed.

Grande Ronde River

The Oregon Division of State Parks and Recreation has begun a study on the Grande Ronde River for inclusion in the State Scenic Waterway Program. Future management of the river will become more active and a management plan will be prepared based on the data collected this past season.

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RACE NEWS

BEGINNERS — THIS IS FOR YOU!! WHITEWATER RACING 101

by *Dave Gardiner*

So you've just started paddling and now someone tells you that these tippy craft are actually **raced**, on whitewater no less. Perhaps you've even seen people in tiny boats paddling through pairs of poles in the deep end of the Brooklyn Center Pool. "What is going on here?", you ask.

Whitewater racing is indeed a sport, one in which Cascaders is very involved. We run and help run numerous races in the midwest ranging from beginner/intermediate to world class.

There are two types of whitewater racing: Slalom and Wildwater.

Whitewater slalom is similar to downhill ski slalom. There is essentially an obstacle course marked with gates that you run for time. Whitewater gates are pairs of poles that you must go through in a specified direction (upstream or downstream) and orientation (forward or reverse). To calm some fears this might cause, upstreams are placed in eddys, where the current is going upstream. The courses are usually 400 - 800 yards long and involve 15 to 30 gates. Penalties are added to your run time for touching gates or running them improperly.

Wildwater, sometimes called Downriver (there is technically a difference but it is unimportant here), is a race going straight downstream from start to finish. All that is counted is your time. The races are roughly 3 - 5 miles through anything from flatwater to Class IV (very difficult).

There are different boat designs for the two types of racing. Most of the boats that you see have evolved from slalom designs. The reason for this is that slalom boats are designed to turn easily and therefore are better for maneuvering in rapids. I said that most boats have "evolved" from slalom designs because the designs have changed dramatically in the last few years. The sign of a current slalom racing boat is extremely low volume — itsitsvery low on the water. Wildwater boats are higher volume and have a very distinct "V" shape to the entire hull. They do not turn nearly as easily as a slalom boat, are very unstable, but they are very fast in a straight line. I should note that to race in most races, **YOU DO NOT NEED A HOT RACING BOAT.**

Why race? First, it's fun. Second, it is a way to improve your skills. Racing, especially slalom, teaches you to make your boat do **exactly** what you intended. If you miss a gate, you can't pretend that you really didn't want to go there anyway.

Below is a list of races in the midwest with a brief description. These races are run every year on more or less the same schedule.

1984 CENTRAL DIVISION RACE SCHEDULE

August 15

Pan Am Cup Wildwater, Saxon, WI.

Expert only. If you aren't comfortable on class III whitewater, this run is a reason to work on it. There may be a cruising run related to this race, so if you can get up there during the week you can get some excellent cruising and also help with the race.

RACE NEWS

August 18, 19

Wausau II - Pan Am Cup, Wausau, WI.

Expert only — World Class competition slalom. You must qualify to be in this race. Anyone who is not racing is invited to come and help, as we are a large part of the group putting on this race. There will be teams here from Europe. It should be a great spectator event.

September 8, 9

St. Croix, Taylor's Falls, MN.

Intermediate/Expert Slalom. If you get into paddling you will probably spend a lot of time at Taylor's Falls this summer so this will be familiar turf. The water is usually reasonably warm and taking a swim is no big deal, so go for it. We put this one on.

October 6, 7

Last Ditch, Langlade, WI.

Intermediate Slalom. The "anything goes" race. If you are too shy to race anywhere else, put on a mask and paddle here. You may get an award for Best Costume (I'm not kidding). The only problem is that this one tends to be a bit cold.

ALASKA EVENTS

JUNE 16: Lowe River Race, (downriver) near Valdez, Alaska. Contact: Mike Buck, P.O. Box 1486, Valdez, AK 99686. (907) 835-5234.

JULY 8: Nenana River Race (downriver) near the entrance to Mt. McKinley (Denali) National Park. Contact: Jim Richardson, 2031 Cliffside Dr., Anchorage, AK 99504. (907) 274-6385.

AUGUST exact date to be determined. Eagle River Race (slalom).

Located less than 10 miles from Anchorage, Alaska. Contact: see above.

COLORADO EVENTS

JULY 28-29: August Arkansas Races, on the Arkansas River near Buena Vista, Colorado. Downriver on Saturday, slalom on Sunday. Contact: Brent Reitz at (303) 925-1796.

AUGUST 11-12: Durango Races, on the Animas River near Durango, Colorado. Downriver on Saturday, slalom on Sunday.

AUGUST 18-19: August Shoshone Races, on the Colorado River near Glenwood Springs, Colorado. Downriver on Saturday, slalom on Sunday. Contact: Brian Goodrich at (303) 243-280.

SEPT 1-2: Denver Days, on the South Platte River in Denver, Colorado. Downriver on Saturday, slalom on Sunday. Contact: Brad Koji at (303) 243-1849.

SEPT 8-9: Cool Down Races, on the Colorado River near Glenwood Springs, Colorado. Downriver on Saturday, slalom on Sunday. Contact: Eric Bader at (303) 494-2061.

SEPT 15-16: Canoe/Kayak Marathon on the Colorado River. Contact: Jerry Nyre at (303) 423-4314.

OCTOBER 5-7: 2nd Annual Professional Boatman's Rendezvous in Telluride, Colorado. Contact: Larry Hopkins, P.O. Box 1838, Telluride, CO 81435.



J. Lugbill/Bob Robinson — 1979 Savage Nats. — photo Jon Nelson

DOWNRIVER RACING

Part II

by Max Wellhouse

(Last issue Max covered slalom racing from a recreational paddler's viewpoint. Now he turns his attention to downriver racing for the novice.)

When you hear someone mention downriver or wildwater racing, you end up with a mental image that is pretty much self-explanatory. Unlike slalom where there are gates that dictate where and what direction you must go, in downriver and wildwater racing only the river's natural obstructions limit you as to where you can and can't go. It's up to the individual paddler which route is fastest. The difference between downriver and wildwater is one of difficulty; downriver being Class I-III water and wildwater primarily Class III+. The object is

much simpler than slalom as the racer's goal is to get from start to finish in as little time as possible.

As you might guess, downriver racing takes more endurance than slalom. Chances are you will spend 4-6 minutes on a slalom course whereas the average downriver race could range from 20 minutes to over an hour. Assets such as aerobic conditioning as well as a good sense of pacing yourself become advantages to the beginner. Again, as mentioned in Part I, the NSWC is involved in expanding grass roots level downriver racing in the US by sanctioning and sponsoring more beginner's races or at least having separate classes for cruising boats, Juniors, Masters, etc. For obvious safety reasons, downriver races are

not "shotgun start" events. Each paddler is started with a pre-set interval (usually 1 minute) so each one gets a clear shot at the river. Usually the faster classes will leave first so as not to create massive traffic jams as they catch up to the slower boats in the narrower rapids.

The drawback to this is you don't have any idea of how you stand half or 2/3 of the way through the race unless you have a friend standing on the bank at a certain spot checking everyone's progress. It takes tremendous mental concentration and discipline to keep paddling hard the entire distance. This is the challenge of downriver racing. Perhaps after your first race you were only 6 or 7 seconds out of the third place trophy but yet you still had plenty left when you finished. After the frustration subsides, you will have learned a lesson you can use in the future.

Since there is no reverse or upstream paddling in downriver, the forward stroke becomes a major weapon against the stopwatch. Paddlers using mostly arm muscles will tire quickly and even though their paddles are still flailing, they're just not moving the boat. The proper forward stroke involves the entire body. Let's face it, your back, shoulder, torso, and leg muscles are much stronger than your forearm and bicep muscles. Proper rotation of the shoulders and torso in either canoe or kayak will yield a much stronger stroke and save wear and tear on the smaller arm muscles. The theory of paddle hard in the rapids and rest in the pools is also a mistake. Paddling hard in the flat stuff and backing off a bit in the rapids allows you to concentrate on another aspect of the sport, water reading.



David Hearn — Yough 1979 — photo by Jon Nelson.

Chances are when you were first taught to paddle whitewater, your buddies or instructor pointed out the "upstream V" at the beginning of each rapid. Not only is that the deepest water, it's usually the fastest too. You must constantly focus on what your perception of that ribbon of water is that will get you to the finish line the quickest. Unlike cruising, you want to paddle just beside the big waves as catching very many of them in the chest will most certainly slow you down. For the same reason you will want to avoid big holes also. As you reach the end of a rapid, you must decide whether to follow that last little bit of current around the bend or take the short cut through the still water. The possibilities are endless.

Equipment is of secondary importance in downriver. In slalom there are many start/stop/spin/accelerate type moves that a lighter boat will have an advantage. The same is not true of downriver as once you've accelerated from the starting line, you shouldn't need to stop until the finish line. Therefore once your momentum is established, it's easier to maintain making a light boat of little advantage. Usually boats with pronounced "V's" in the bow and stern will be faster, but not always. On rocky streams where tight turns are common and pools are few, these boats are hard to steer and at a disadvantage. They also tend to be more unstable and novice paddlers end up spending more time bracing than paddling forward. I attended a race on the Buffalo a couple of years ago where you paid your entry fee

and everyone paddled the same model canoe provided by a local livery. You could use your own paddle as long as it was not a bent shaft. Everyone had an equal chance: a truly novel race idea!

Finally, many races that offer both a slalom and a downriver in the same weekend, will offer a "combined class". This requires that the paddler race both the slalom and the downriver in the same boat thereby also taking the equipment hassle out of the race. There is usually some sort of "Watermeister" or "Queen of the River" award for the winners usually some one who doesn't excel at either discipline, but does fairly well at both. The WWOC crowns a National Champion in three combined classes and perhaps the NSWX should start a similar project.

Should you want more tips or information about beginning competition, Eric Evans and John Burton have published a book, "Whitewater Racing", which is an excellent orientation to the sport. If it is not available at your local paddling shop, contact John at the Natahala Outdoor Center, and he'll tell you how much money to send for the book and postage (around \$8).

Again on behalf of the Central division of the NSWC, I cordially invite anyone interested in trying out the sport to visit one of our races or a race near you in 1984. It will be an experience you won't soon forget.



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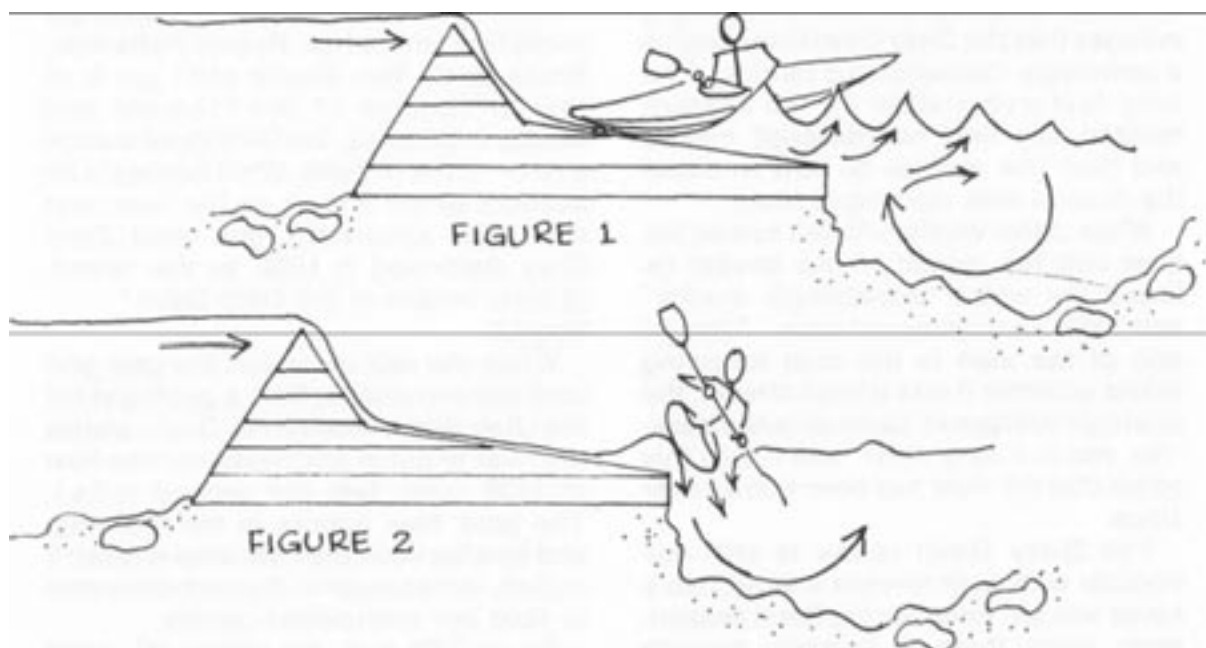
A "Kamouflaged" Keeper

Here's a unique situation/experience worth relating. Occasionally you may notice that your boat itself creates a hydraulic or a pillow. Big barges being pushed up big rivers generate big standing waves in front of them. In a kayak sometimes you can hover just upstream from a rock on the pillow which forms between your boat and the rock. Here is a nasty one I encountered on Laurel Hill Creek in western Pennsylvania. There is a 5-ft wooden barrage called Whipkey Dam. It creates an unusual steep standing wave below; this forms because of the design of the outrace ramp. It looks like a nifty 100-ft wide surfing wave. In fact, by easing out onto the wave parallel with the current it is just that (Figure 1).

The problem "develops" (and I mean develops) when you turn to go downstream off of the wave. As soon as your boat turns sideways the high-speed flow generating the wave is impeded by the hull. This allows the now-slowed water to plunge downward, which changes the surfing wave into your basic dam keeper! (Just for the length of your boat!!!) The result is that you get swallowed—with accompanying strain, struggle, and no brace at all—just real awkward (Figure 2).

It serves to remind one of the saying: "Stay Away from Trees and Man-Made Obstacles!" and add: "No Matter How They May Tempt You!"

Jim Stuart





THE DIRTY DEVIL RIVER, FROM MUDDY CREEK, TO POISON SPRINGS CANYON

by Alan Hembree

North and East of the Henry Mountains and Southeast of the San Rafael Swell lies a no-mans land called the Burr Desert in Utah. It is through this expanse of loose sand dunes and shimmering mirages that the Dirty Devil River begins a seemingly inauspicious journey. The only features visible on the eastern horizon are two non-descript mesas, and their low profiles do little to dispel the illusion that 'nothing is there'.

When John Wesley Powell turned his boat into the mouth of this stream he found the water "exceedingly muddy" and "with an unpleasant odor." Then as one of the men in the boat following asked whether it was a trout stream, the boatman William H. Dunn shouted back, "No, she is a dirty devil!" and it is by this name that the river has been known ever since.

The Dirty Devil today is still not popular with river runners and probably never will be. Even during flood season, most years there is scarcely enough water to float a kayak, except as one Bureau of Land Management log indi-

cates - "with the utmost of patience."

The high water spring of '84 was a rare exception and when Russel Patterson, Bruce Beck, Ben Everitt and I put in at the confluence of the Fremont and Muddy tributaries, the Dirty Devil was on a roll — bank to bank. What follows is an account of our 5 days on the river, and brief side excursions into what Zane Grey described in 1930, as the "wiedr, ghastly breaks of the Dirty Devil."

May 26

While the rest of us sort the gear and load our provisions, Ben, a geologist for the Utah Water Resources Dept., wades the river at put in and measures the flow at 1200 cubic feet per second (c.f.s.). The peak flow occurs in the morning, and by afternoon the river level is down 2 inches, still enough in the main channels to float our overloaded canoes.

So at 3:00 p.m. we shove off, amid

Continued on page 21

THE WHOLE RIVER CATALOG

Access to Gear

THE WHOLE RIVER CATALOG, published three times a year in AMERICAN WHITEWATER, is an AWA service designed to link up our readers with the best and most convenient sources of boating supply, instruction, and general whitewater paraphernalia. Prices for a full year's participation in the catalog range from only \$40 to \$90, depending on type of listing. If you know a supplier who would like to appear in the Whole River Catalog, just send the firm's name and address to AWA, Whole River Catalog, Box 1483, Hagerstown, MD 21741-1483 and request further details.

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So at 3:00 p.m. we shove off, amid dreary mud banks and with a faint, unrecognized apprehension that the river would abandon us in the middle of nowhere.

Shortly we run aground on a submerged sand bar and end up pushing and dragging the canoe to the opposite bank before the water is deep enough to float again. This comes to be an all too regular occurrence and we are anxious to get to the deeper more constricted portion of the river.

As dusk approaches, now 12 miles downstream we pull our canoes to the side and hastily make camp on unlevel terrain. Everyone washes out the mud and sand that has become layered in the bottom of their shoes, thinking, all the while, that the petrified sand dunes of the Navajo formation, here and there encroaching upon the stream channel, would promise a better day tomorrow.

Before going to sleep, in order to measure the rise and fall of the river the following morning, Ben places a couple of sticks in the stream bed. One good thing - we have not seen hide nor hair of a single other human being. We are alone.

May 27

As the Dirty Devil runs its course to the Colorado, the Navajo Sandstone forms cliff walls of increasing height, and the anticipated channel constriction starts to occur with intervening periods of widening.

According to Ben's sticks, the river level has risen 3 inches overnight, but after 10:00 a.m. it begins to drop and does so noticeably the remainder of the day. In the wider stretches, sand bars now lie exposed and we find ourselves pulling our boats as we did the day before. This time however, we have learned to shed our shoes, and walking barefoot on the cool sandy bottom is some compensation in the searing sun.

The first side canyon to arouse our curiosity, a small narrow one on the north side, lacks a name. The scarcity of vegetation makes walking easy and the high overhangs keep us in cool shade most of the way. "Just the kind of canyon I ordered," exclaims Beck, "120° up there and 65° down here."

Farther down river, a small fresh water spring trickles out of Pasture Canyon so we eddy turn the canoes, and have a look. Here as with most places on the Dirty Devil, cane grass and willow predominates over Tamarisk.

In contrast to the lush growth of the spring bottom, the slickrock high above is a moonscape virtually devoid of plant life. Chert flakes, worked by a human hand, remind us that once, earthknowers confronted the harsh realities, day by day, of survival in this land; and that the game, Desert Bighorn and Mule Deer do still await us out there, their eyes peering out into the vastness from some inaccessible, windswept ledge or hidden recess in the rock.

"Hello!" I yell, "hello!" the canyon answers, "HELLO — Hello!, Ohhh!"

When I get back down, Ben has dug up a cane grass rhizome. He cuts off a piece and hands it to me. It is tender, juicy, and surprisingly sweet!



White River Sandstone Canyon.



Beached Canoes on the Lower Dirty Devil River.

Early afternoon finds us at Robber's Roost Canyon. Here the Navajo Formation breaks off into sheer vertical walls towering hundreds of feet overhead and throwing the entire shoreline into shade. In places a small spring seeps up at the convergence of the side canyon wall and bedrock floor before disappearing under the sands, only to reappear again farther up. But this canyon is wide and the sun beating down upon us unmercifully, soon drives us back to the shade of our beached canoes.

We make an early camp at Angel Spring. Here groundwater in the porous Navajo Sandstone drips out of the cliff face above the impervious shale and clay of the Kayenta Formation. This contact we theorize is the prime source of fresh spring water in this country.

Beck cooks a mean taco, and this evening is no exception. Having stuffed ourselves, we take a leisure walk up the Angel Trail, the infamous escape route of Butch Cassidy and the Wild Bunch. At several junctures, the way up appears boxed out to any animal less agile than a Bighorn, the obstacle revealing itself only at the last moment, as an illusion. Halfway up we lose the way and fail to find a route to the top before dusk sets in.

"Russel, how do you suppose the Wild Bunch ever got their horses up this thing?"

"I don't know — but I do think we ought to head back before we lose our way down!"

May 28

Morning greets us with the sounds of bawling cattle, and whinnying horses.

Through the dust and clamor two cowboys with wide brimmed hats ride toward us, wondering no doubt who in the Devil's name could be down here. We likewise, delay for a moment the packing of our boats, and sally forth to meet the proprietors of this Devil's herd.

"Well, Ben Everitt! what brings you to these parts?"

"Lavar Dells how are you? We're down here running the river!"

"You know, I've always wanted to do that."

"What brings you down here?, where's your wings?"

"Well, when times is good I fly, when is bad I ride a horse. You know, my father has run cattle down here in this country ever since I was a kid."

"Have you ever punched cattle over the Angel Trail?," I ask.

"No, I usually take the cattle over the lower sand slide here, but I have ridden horses up and punched cattle over the

beaver box trail which is a lot tougher than the Angel Trail. How's your float trip going?"

"We haven't been able to stay in the channel," Beck complains.

He laughs, "That's good news! We haven't been able to stay out of it!"

After the exchange of a few more pleasantries and some advice on where to find the last fresh water, Lavar wishes us well and explains that he "better catch up with this bawlin' herd."

Ben's mud sticks indicate the overnight rise in water level compensates for yesterday's late afternoon drop. The spring runoff is on the wane.

Around the bend, however, the river begins cutting below the Navajo Sandstone and Kayenta mudstone into the sheer cliffs of the Wingate Formation, narrowing the channel considerably. We no longer have to wade the sand bars. It seems too good to be true, but eventually Beck expounds: "There is not a more esthetic way to travel than by canoe. You can pack all the gear you need for a comfortable camp and a good meal with a modicum of maneuverability, and without the work of a raft."

At Beaver Canyon we pull over for a sojourn up canyon. This is the first extensive side canyon to the south and it has a sweet water stream flowing out its mouth. Upstream is a large beaver pond, and I have heard there are more super-blanket beavers per square mile in this stretch of the Burr Desert than in anywhere else in Utah.

How can we sense the flavor the Indians life? Just think about this Canyon. For hundreds, maybe thousands of years, man and beaver lived side by side in this narrow oasis, the hunter and the hunted. Now only the beaver remain.

Ben thinks Beaver Creek may originate from a recharge basin miles away in the Henry Mountains. Could there be pan fish in these beaver ponds? Squawfish? I want to explore these canyons mysteries more intimately, but the banks are choked with Tamarisk, and we soon tire of brush popping.

For the last 3 days we haven't seen a

cloud in the sky, so at Larry's Canyon we chance it and paddle cross current to a high flash flood sandbar, and camp.

Just upstream on the south side is a twin hanging canyon with deep water plunge pools below massive Wingate amphitheaters. It has no name either. Scarlet Penstemon and Miners Candle still color the sand dunes, and everywhere is an abundance of Indian Rice Grass — just as it must have looked across much of this country before it was overgrazed. The reason for its abundance? - a thin ribbon of knee deep quicksand guarding the canyon mouth.

When we stopped here earlier the channel was deep and swift enough to almost sweep me off my feet. Ben had waded the river and estimated the flow at 700 c.f.s.



Ben Everitt & Russel Patterson.



Beck and **Hembree** dragging the canoe along.

May 29

On this our 4th day, the river is down 2 inches from the previous afternoon, and we still have 25 miles to travel. With only 5 days provisions we decided to forego exploration of side canyons and narrow the gap as much as possible.

The Dirty Devel obliges us by steepening the gradient. This is the deepest part of the canyon and 1800 ft. sheer walls, with tapestries of black desert varnish towering above us.

At the mouths of Twin Corral Canyon and Sam Mesa Canyon we hear an unfamiliar hiss, and negotiate our first small rock rapids.

Farther down the river cuts through the Chinle Conglomerate, the same formation that produced the Petrified Forest of New Mexico, and we glide past jumbled down rock slides, dark sandstone spires, and balancing rocks.

In places large boulders create a diversion that must be run. The steadily increasing height of the sandbars and the driftwood lodged atop these boulders serve mute testimony to the ferocity of flash floods that sometimes ravage this canyon.

We moor the canoes just above the rapid at Happy Canyon, a total run of 18 miles in 6 hours.

While Beck cooks another fabulous meal in his dutch oven, this time an Italian casserole, Ben walks up a gravel slide to a high bench above camp. There in the Chinle outcrop he encounters what he is looking for; whole petrified logs from the same forests of that period in New Mexico.

After dinner, Beck concocts a cobbler in his dutch oven out of Granny Smith apples, Bisquick, and Kool Aid. Not bad!

I have a theory on why food tastes so good in a wilderness. It's because the air is cleaner. The more polluted the air, the less the appetite, as any cigarette smoker can testify. Fresh air gives the system time to cleanse itself.

Before I go to sleep I open the dome flap on the roof of my tent. The Milky Way in the night sky is still remarkably clear and bright.

May 30

Last day. We eat a liesure breakfast to the low rumble of rapids. Dirty Devil River water we find, when settled overnight, also makes good coffee. "No need to add salt or egg shells to settle the grounds," Ben says.

Beck, a river outfitter of 12 years experience, is down looking at the Happy Canyon Rapid. Happy Canyon is the most extensive canyon in the Dirty

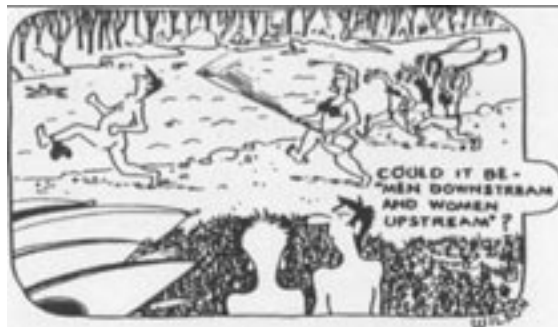
Devil system, and drains a vast amount of territory. Accordingly, the rock rapid below its mouth is the most challenging we have encountered so far. On a scale of 1 to 6, Beck rates it 2.5.

After securing our duffel in the canoes and a short discussion on strategy, we climb in and run it. It gives us all a modest, but undeniable sense of achievement.

Beyond, the main canyon narrows and becomes more sinuous. Here we become walled in by near vertical cliffs of White Rim sandstone that plunge straight down below the water line. Now and then we find ourselves paddling under low, overhanging rock shelves, and alcoves. At one hairpin turn, the river sweeps us against the far wall and water pours over the gunwales almost sucking us under a submerged overhang.

After bailing out, we continue on, drawing and ruddering our way through the horseshoe bends and curves of this rock labyrinth. Seven miles and three and one-half hours after Happy Canyon Rapid, we turn upstream for the final time, and ease our canoes into the backwaters of Poison Spring Canyon.

Ben Everitt stayed behind in Hanks-ville an extra day. When he left for home, he noted that the Dirty Devil at Muddy Creek, then comprised but a single, small meander beneath the south bridge span.



Beck and Hembree gliding along.

Northwest Whitewater Vocabulary For Guppies & New Arrivals

awesome: while scouting, any section of whitewater on the very edge of being unrunnable.

Bobs Hole: on the Upper Clackamas % mile below Big Eddy; a good place for boaters to get Maytagged if their washer at home is broken.

Bush: short for Breitenbush by Detroit.

bush league: guppy boating.

Coombs Maneuver: running a waterfall in bad form and getting trashed at the bottom.

crash: synonymous with Coombs.

Crooked River: Oregon's version of the Colorado.

das Faltbot: what happens to your kayak when trying to run a slot sideways that is narrower than the length of your boat.

designer gear: equipment that looks good and costs a lot but doesn't work well.

dumping: tipping over upsidedown.

endo: short for end-over-end: cartwheeling the boat.

Flash Gordon: naked Dave.

guppy: a beginning boater.

Harvey: a legend in his own time; celebrated his 1000th day of boating on 1/1/84 and already has 20 more; boats Monday - Sunday from dawn to dusk.

Hochfeld Maneuver: dumping in a hole just above a major unscouted drop and then running it upside-down and backwards, finishing off the sequence by doing uncontrollable endos at the bottom.

hole: a river obstruction that knows your greatest fears.

hot dog: wears designer gear and always shows off; has a following of guppies.

idiot patrol: they consistently make the same-mistakes on the same rivers.

King Guppy: a class IV boater who, during a period of temporary insanity, associates with or leads a pack of guppies.

maggot: what squirms around in cow pucky; a term reserved to describe your best friend.

Maytagged: being trashed around in a hole out of control.

mega: a prefix often associated with Mega Mitt, mega first aid & survival kit, mega kayak rack, & any other endeavor which has no economic potential.

Mueller Maneuver: ramming a cliff headon full bore in a kayak, and being terribly sorry for the incident later.

neophyte: below guppy; someone who only boats in 90 degree weather; starts the season in I-water without a roll and finishes still without a roll in I+ water.

off brand: definitely not designer.

Ostrand Maneuver: getting boxed into a blind canyon.

popup: a partial endo.

Punch Bowl Falls: on the West Fork of the Hood just $\frac{1}{4}$ mile upstream with its confluence with the Main Fork of the Hood.

roll: maneuver used to recover from dumping.

suicide squad: consistently makes the same mistakes on different rivers.

360: the third and last rotating mode possible when not window-shading or endo-ing in a boat; going around in circles.

throne: where the King Guppy sits at home.

TPF: the toilet paper factor; degree of a boater's anxiety about the upcoming run that can be measured by the number of times they squeeze Charmin.

trashed out: having been put through the Maytag.

Wind River: the Harvey special.

window shade routine: being repeatedly and uncontrollably dumped and involuntarily rolled-up again with a cycle that you wish would quit soon.

Considerations of Mortality

by Peter Skinner

More than a dozen years have passed since paddling became my favorite pastime. Hundreds of river miles later, reflections on the reality of our fragile connection with life are worth noting. Five close calls for me in three years seem like too many to dismiss as mere aberrations in what we may delude ourselves is an inherently safe sport.

The Swim

Because of deep snow pack in 1983, Idaho's village of Yellow Pine is inaccessible by wheeled vehicles about half the year. First beginning as melt water drips, then growing to a raging torrent, the Salmon's East Fork plunges down a steep drop into a boulder garden S-bend with multiple unavoidable pour overs. At the 3000 or so cubic feet per second flow rate, the whole stretch was marginally runnable, even by Idaho's most seasoned water afficiandos.

Of course, I couldn't resist the temptation to join the other two western buddies on this drop. I felt good and had paddled this kind of water for more than a week out there.

Following my two long time friends down this fearsome flume required precise, high intensity moves at critical times. What actually happened, however was that the boat responded to my strong stroke by turning unexpectedly far to the right and colliding with a rock on the side at 20 miles an hour. Thrust forward in the cockpit and dumped upside down with a popped sprayskirt far off my intended course, I wasn't too surprised that my full boat roll did me little good, other than getting me upright just prior to the hellacious pour over I just had to miss. What followed, after a valiant fight while buried in the hole, was a mile long swim in frigid whitewater and horrible holes I never want to repeat.

Safety Conclusions: Never paddle tough stuff with unfamiliar equipment. Don't assume your skills will remain consistent with other paddlers just because they are your friends.

A Death

No one likes the word, but some of our friends will die on the river. One of our dearest paddlers, Chuck Rollins, met his end in Idaho's Clearwater in 1982, covered in some depth in AWA's Journal during that period. In spite of the fortuitous availability of the best of safety arrangements, the river's dark side got the better of us.

Because Chuck was so much a part of our lives, his demise still haunts us all. We clearly recognize, now sadly, that Chuck's refusal to stay in shape, both physically and in terms of riverskills, led inexorably to a situation from which no one could extricate him.

Safety Conclusion: We can't expect to paddle safely if we *get* out of *shape* and neglect to sharpen *our* skills.

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A Resuscitation

West Virginia's upper Gauley run, due to its precipitous boulder drops has historically been considered a Class V river run, reserved for top notch experts in covered craft. Its' notoriety, beauty and accessibility has of late, however, drawn even more paddlers, some of which should paddle easier rivers.

It was this trend which caused me, in 1983 to casually accept responsibility to include John, an experienced open canoeist, as part of my group. After some initial difficulties, John's apparent confidence gave me a false sense of security. Disaster soon struck at House Rock, 1000 feet above the famed Iron Ring rapid.

Tipped over and then swimming 500 feet in front of the river wide giant rock presented John and I with a difficult decision. Should he hang onto the canoe and risk being squashed between boat and rock or swim free and risk being carried under the huge rock?

Choosing the latter, John immediately disappeared beneath the middle of the rock. Frantic maneuvering failed to locate any signs of my charge. Miraculously, however, John's motionless body floated out behind the rock three long minutes later. Quick resuscitation revived him and a raft carried one very lucky John to the hospital to guard against secondary drowning.

Safety Conclusions:

Never accept responsibility for guiding paddler's whose skills you are unfamiliar with. Paddlers lacking a reliable roll do not belong in the Gauley or other Class IV-V runs. Just because lots of paddlers gravitate to a particular run doesn't downgrade its objective dangers.

A Near Miss

Colorado's huge snowfall of 1984 drew adventurous paddlers from all over the U.S. to its meltwater torrents. No exception was Aspen's Roaring Fork. Bank full at a historic high level of 3.8 feet, the Slaughterhouse and Woody Creek sections contained an inordinant number of trees in its boulder blocked channel.

Paddling this whitewater bonanza, we played merrily, chasing enders, surfs and fast ferries. Safely avoiding two trees in the flood, seven of us cavorted, oblivious of an insidious submerged log blocking half the river.

In the space of 30 seconds, merriment turned to horror as three of us, chest pinned and spun under the huge log and swam, one made it over — barely, and a fourth escaped around the end with a blown spray skirt. The continuous non-stop Class V water eventually led to a mile long swim for Risa and the loss of my new kayak. In spite of these difficulties, we considered ourselves outrageously fortunate to escape without injury.

****Safety Conclusions:**

You cannot properly watch where you are going when playing on a river. Today's penchant for river play must give way to conservative paddling during flood conditions and on unfamiliar runs. Reliable hand rolls should be part of our skills repetoire.

Under Raft Pin

The Hudson Gorge near the take out is a mild mannered Class II float, best suited for liesurely reflection and lively discussions with friendly folk in the party. It was here that a perhaps rare, but foreseeable accident befell me this Spring.



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Peter Skinner in action!

Yakking away with passengers on the back of a raft floating this stretch, I was rudely surprised when the raft struck a rock and abruptly stopped. Under it I rolled, pinning on the very rock which had blocked its path. The combination of water and raft pressure prevented me from dislodging myself from this airless vise. Eventually, the raft was removed. More than a little chagrined, I quickly extricated myself from this dangerous predicament.

****Safety Conclusion:**

Stay away from rafts. There is no air beneath them.

Some of you by this time must think I am ill-starred, at best, to grossly incautious, at worst. The truth is probably somewhere in between. I am however, not alone. Others I know during the same period have suffered similar problems.

I can only conclude therefore, as the sport matures, as has skiing, more and more avoidable accidents will occur.

Our familiarity with Class V river running and increasing interest in river play (as demonstrated by the exponential growth in "hot dog" contests) inevitably breeds contempt for the tradition respect of fluvial dangers. If we are to remain alive, each of us must rededicate ourselves to adherence to the precepts of safe boating, most of which are set forth in AWA's safety code.

Several close calls in as many years would convince many to take up TV or checkers instead. Paddling won't let you go, however. Because of shared responsibilities, intimate personal associations, and the exciting communal challenges of whitewater athletics, friendships formed here cannot be thrust aside. Other activities cannot be simply substituted.

We have little choice, then, but to try harder to be careful - play in safe places

Eat, Drink, and Be Wary

Editor's Note: Our thanks to the California Wilderness Coalition for allowing the reprint of this article.

by Thomas Suk

In recent years, land managers have been warning the public that water in many areas may be contaminated and should not be consumed without proper treatment. The cause of most concern is the intestinal protozoa *Giardia lamblia*. This article will explain what *Giardia* is, how it is transmitted, and how you can protect yourself (and others) from becoming infected.

Simply stated, *Giardia* is a microscopic organism which lives in the intestines of many mammals. Common symptoms of infection include extreme diarrhea, flatulence, anorexia (loss of appetite), malaise (weakness, discomfort), nausea, weight loss, abdominal bloating and cramps. What is not often understood is that many persons and animals can have *Giardia* in their systems and not become noticeably or seriously ill. It has been estimated that 2-20% of Americans may be infected, depending upon the community and age group studied. Problems occur because many persons do not know they are infected and may transmit the disease to others, and also because *Giardia* can be transmitted between humans and animals.

Giardia has a two-staged life cycle. In the intestine, it exists as a mobile life form known as a trophozoite. Trophozoites multiply and some turn into dormant cysts. When excreted, trophozoites die rapidly, but the cysts can survive for long periods in the environment (especially in water) until they are ingested by another animal. The cysts then "hatch" into trophozoites in the digestive system and the cycle repeats. Thus, *Giardia* can only reproduce in an animal host, and cannot propagate itself in the environment.



Trophozoite

It is important to understand that *Giardia* is transmitted only by direct or indirect fecal-oral contact, because the infective cysts come from the feces of men and animals. This has many implications. *Giardia* may be acquired from water or food which has come in contact with fecal material. There are many ways for fecal material to reach lakes and streams: Direct deposition by humans or animals into water, and deposition near water where the cysts can be carried into the water by runoff, rising water levels, erosion, or on the feet of humans or animals. Cysts may also be carried to water on the haircoat of animals who roll in feces.

There are documented cases of people catching *Giardia* after eating food prepared by individuals who had not properly washed their hands. Any time you touch fecal material (your own or otherwise) you run the risk of infecting others if you don't take the time to clean your hands. It is important that back-country users consider this mode of *Giardia* transmission, instead of worrying solely about contaminated water. I have met outdoor enthusiasts who rarely, if ever, wash their hands in the backcountry. Many of them feel that soap produces unacceptable impacts on wildland ecosystems. In any event, if you are not going to soap up, watch out for others by being careful about where you put your hands. (If you do use soap, dispose of all washwater in deep soils far away from water. This applies to biodegradable soaps also.)

But how can you tell if water is contaminated with *Giardia*? You can't. If there are (or have been) humans or animals upstream of where you plan to drink, you can assume that the water may contain cysts of *Giardia*.

If you suspect Giardia contamination, there are methods of water treatment which can reduce your chances of becoming infected. You can boil the water, filter it, or treat it with disinfectant chemicals.

It has been shown that a water temperature of 100°C will kill Giardia. Thus, if you bring water to a boil at sea level, you are probably safe. However, as you increase in altitude, water will boil at lower temperatures, and therefore it is impossible to reach 100°C. At higher altitudes, it is a good idea to boil water for a few minutes for an added margin of safety.

Many portable water filtration devices are available which are claimed to be effective against cysts of Giardia. It is a good idea to shy away from the cheaper models such as the "pocket straws" and pour-through types. Their pore size are probably large enough to pass Giardia cysts, and their reliability is questioned by experts. The problem with filters is that the pore size must be so small to eliminate Giardia that some type of pump is required, which makes them expensive.



Cyst

A good combination of reliability and convenience is found in the Swiss-made Katadyne Pocket Filter (available through Katadyne, c/o 4515 Willard, Chevy Chase, Maryland 20015 and Quality, Inc., P.O. Box 1871, Boulder, Colorado 80306). It weighs only 23 ounces but usually costs over \$150. With proper care, the Katadyne Pocket Filter can last for many years. The First Need[®] Filter is similar to the Katadyne but it is lighter and costs only \$50 initially, but you must buy replacement filters which cost \$25 each (available through General Ecology, Inc., 151 Sheree Blvd., Lionville, Pennsylvania 19353). Both of these filters rely on a hand pump and are capable of filtering about one quart of water per minute. The useful lifetime of these filters can be extended by using a large pore filter ahead of the finer filter to prevent premature clogging. These filters are probably the most convenient way to treat your drinking water. They

eliminate the need for boiling or chemical purification; however, they are expensive.

Treatment with chlorine or iodine chemicals is the third method of water treatment widely used in the outdoors. These chemicals can kill Giardia, but their effectiveness depends upon many factors, such as water temperature and pH, the chemical concentration, and the time of contact before you drink the water. Many manufacturers provide tablets with premeasured chemical doses. DO NOT try to increase the effectiveness of the chemical by adding more than the recommended dosage. If you want an extra margin of safety, heat the water in the sun or your sleeping bag, and let the chemical work for as long as you can before drinking. Contact times listed by manufacturers should be considered absolute minimums.

Aside from water treatment, there are ways to reduce the potential for the continued spread of Giardia in wildland areas. Human waste should be buried far away from water. Pets should be kept out of water (or left at home) and their feces should also be buried far away from water. Lastly, be conscious of your own actions which may result in direct or indirect fecal-oral contact.

Thomas Suk can be contacted through the California Wilderness Coalition, P.O. Box 429, Davis, CA 95616.



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Book Reviews

Washington Whitewater, by Douglas North & Lynn Conant, 160 pages. 895 North Publishing, 3030 14th Ave. W., Suite 205, Seattle, WA 98119. \$8.95.

At last, a comprehensive book on the short but rugged Washington rivers. 15 rivers are covered in the guide. Intermediate rivers include: Cowlitz, Naches, Upper Sank, Skagit. Expert rivers include Suiattle, Wenatches, Tieton, White Salmon, Nooksack (N. Fork), Klickitat, Snoqualmie, (Middle Fork), Methow, Middle Sauk, Green River Gorge, Skykomish.

The Washington rivers are known for cold glacier water, short, 5-15 mile floats, and limited to 1 day floating. Most of the rivers are located in the Western half of Washington where the Cascade Range drains into Puget Sound. Two hot runs on the White Salmon and Klickitat flow into the Columbia and are closer to Portland, Oregon than Seattle, Washington. Also, new rivers draining on the east side of the Cascade Range, are being used for private and commercial floats. Rivers such as The Tieton, Naches, Methow, and Wenatchee are receiving attention.

North has researched and completed a thorough inventory of rivers. The book includes water level graphs, put in, take outs, rapids, scenery, map and location of rapids, and a river log similar to John Garren's books. The river log is an absolute fool proof guide that gives the first timer an excellent overview of the river.

The diagrams of each difficult rapid for the various rivers, shows

the research and time North put into his work. North has completed an excellent effort, and the book is the best on Washington. This book should be around for a long time. You certainly will get your monies worth.



Kayakers on big drop of First Box Canyon—Piedra River, Colorado.

Book Reviews

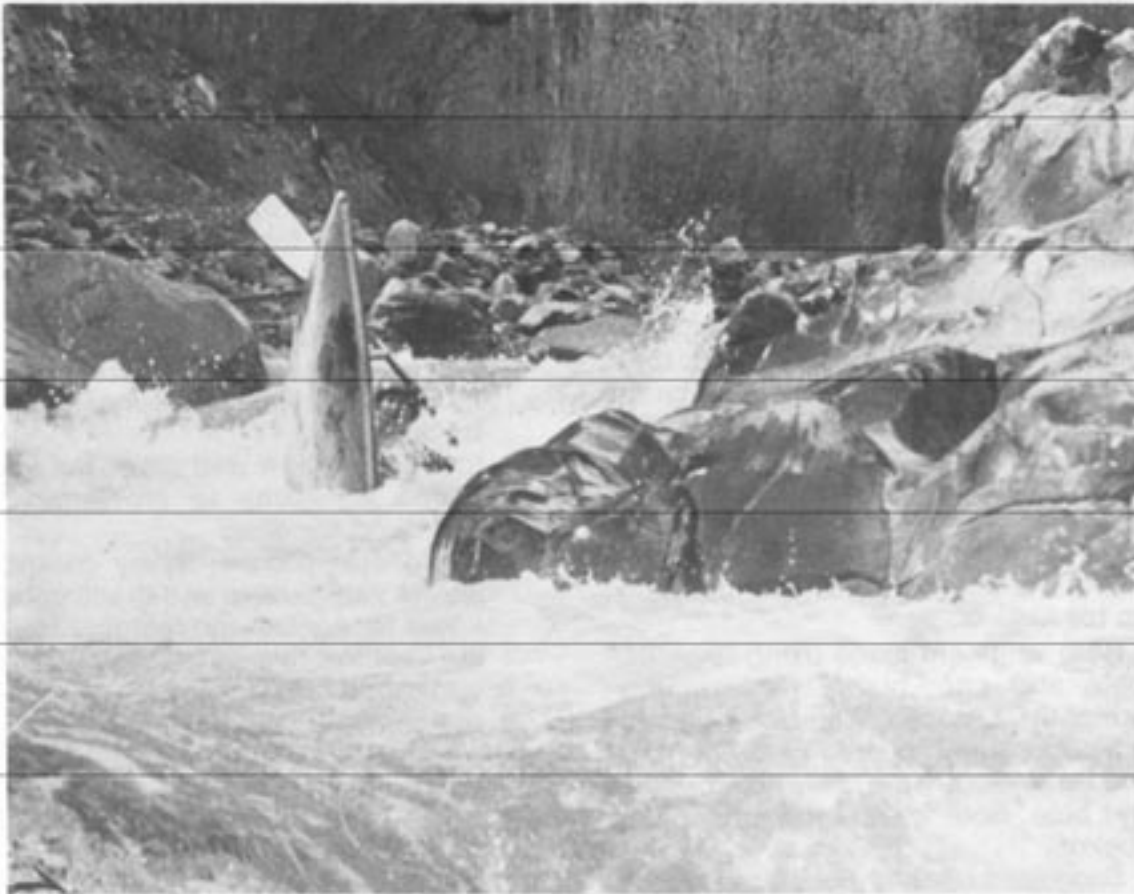
Floaters Guide to Colorado,
by Doug Wheat. 296 pages. \$10.95
includes postage. Falcon Press,
P.O. Box 279, Billings, MT 59103.

A lengthy and long awaited book on Colorado Rivers has arrived. Author Doug Wheat has done an excellent effort to bring us the history, geology, exploration, maps, and location of rapids. Vital data such as river flows, land ownership, and physical data.

The book covers the East Slope rivers of the Rocky Mountains such as The Platte, Arkansas, and Rio Grande. It also covers the rivers of the Western Slope such as Gunnison, San Juan, Dolores, Upper and Lower Colorado, Upper and Lower Green, and Yampa. Though these

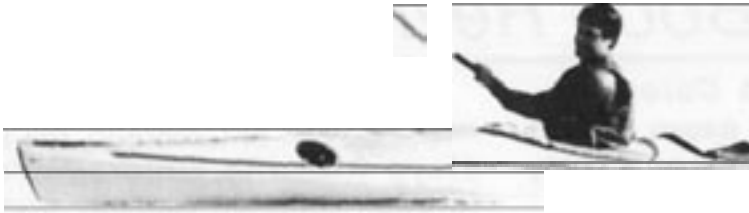
rivers go out of Colorado, the book stays with the Colorado River through Cataract Canyon, and follows The Rio Grande and Rio Chama to New Mexico.

I enjoy the introduction of each river and its historical background. A type of river log with times of rapid approaching would be helpful. However, the river maps are adequate and do give mileages. The overall scope of the book and a guide to Colorado Rivers show a rise in popularity to river running. You will find this book an asset to river runners and a valuable source for historical information and river know how. I highly recommend the book to familiarize yourself with Colorado rivers.



Bob Verdig in The Animas River Canyon, Colorado.

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Perception Introduces Lifevests

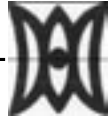
New to Perception's line this spring are two new lifevests designed and manufactured for the ultimate safety of kayakers in whitewater situations.

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The sister model of RiverVest, Defender™ is a traditionally styled vest with a bottom flap which can be turned up for kayaking.

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dition, Hearn is the only American ever to win the Europa Cup, the most coveted title in European whitewater racing.

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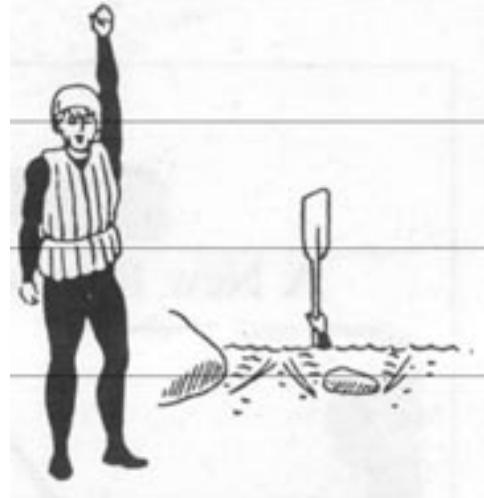
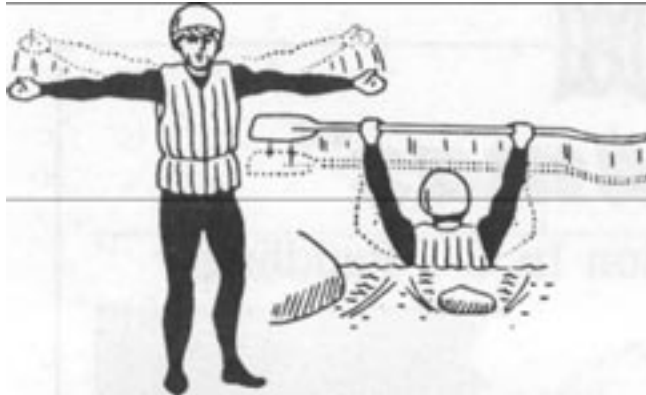
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