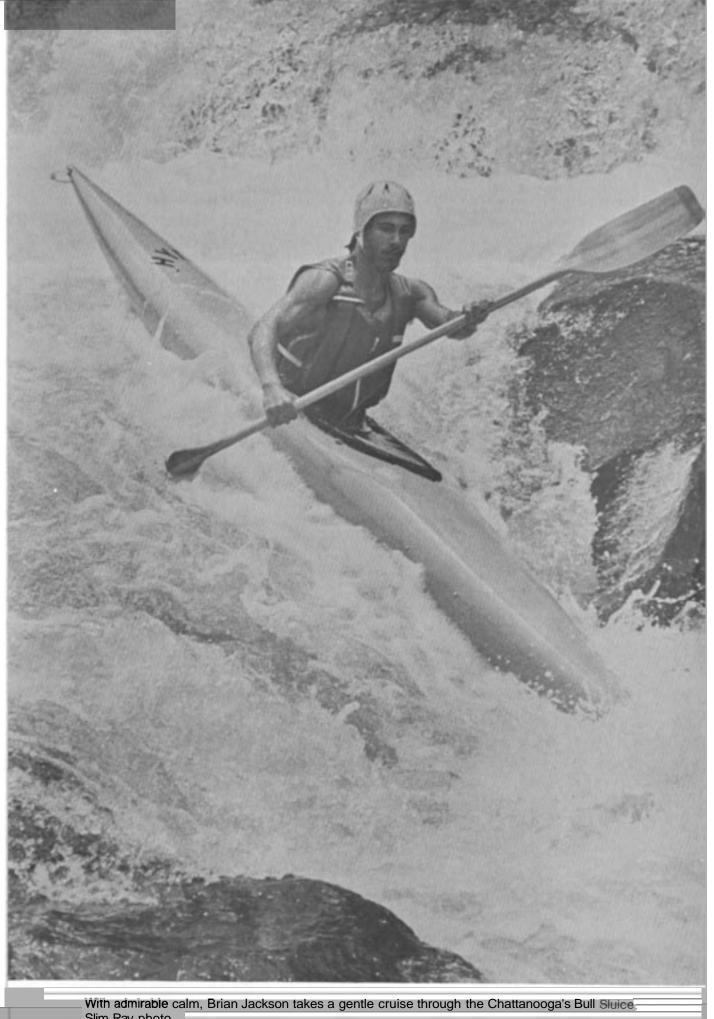


MAY-JUNE 1983



With admirable calm, Brian Jackson takes a gentle cruise through the Chattanooga's Bull Sluice. Slim Ray photo.

American WHITEWATER

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COVER: Paddling what he hopes to preserve, river lawyer Doug Ward flys on faith over Ager's Falls on the Moose River, site of a proposed hydropower dam. See Fluvial News, page 35. (Maskasky photo)

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Editor's Soapbox

Boat Registration

I had just finished my workout on Brainerd Lake, slammed my blade across my deck and was looking down. It was then I noticed something about my boat: there wasn't a number on it — yes, a lot of duct tape, that patch where I'd split the seam on the Savage, several memory-laden race insignias, but nothing that wasn't of my own choosing. I had made this craft. In the water and out it was part of me. I was proud of it and, most times, I was proud of what we had accomplished. Frankly, I liked his looks.

Now the state wants to change all that. New Jersey Assembly Bill #1511—The Boat Ownership Registration Act has been proposed. On December 6th, it breezed through the State Assembly and now, in June, it is in the Senate Public Safety Committee, and looks good to pass. This bill would call for a several dollar registration fee on all watercraft over 10 or 13 feet (the length keeps changing in committee, but any ICF—regulation K-1 or C-1 measures minimum 13 feet two inches). This would entail hiring extra government employees to charge and collect from me and all boaters an annual registration fee per boat. This revenue is the real reason for initiating the bill. Then I would be forced, as all Ohio boaters already are, to place a large license decal on my boat, so my craft could be checked on, reviewed, and generally inspected to make very sure that the state liked me and my boat enough to let us go on the water and paddle. (Well, they fingerprint babies, don't they?)

"Ah, but consider the benefits," my friend is quick to point out. (Yes, there are a few paddlers who believe in registration.) He claims truly that the moneys raised by the state's watercraft division could, if the state so chose, be used to fund safety education. The division could set up programs to inititate the newcomer. Also, they can hire riverbank police to make sure every boater has a PFD and the boat isn't overloaded. (I

guess that's a benefit.) They could instruct local police and rescue squads in river rescue techniques—once the clubs instructed them.

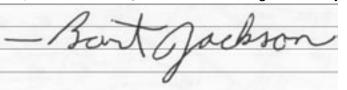
Yet somehow, this all seems to me that the state is asking (asking?) us to sacrifice one more freedom in the name of security, when actually the real reason is revenue. The government wants to tax a group that can give quick cash and demand virtually no service in return

Ohio has for several years demanded boat registration. The \$3 annual fee per boat has purchased several Watercraft Division employees and a trailer full of canoes who patrol lakes and more recently rivers. These people also sample water and marine life for pollution traces, an admitted benefit. In addition, the canoe school of the Cleveland Keel-Haulers three seasons ago received funds to educate up to 140 newcomers a year. (Without belittling the Keel-Haulers' excellent efforts, the local club I belong to educates far more than that number of non-boat-owning newcomers annually without one damn cent from the government.)

But despite any appeal to altruistic programs, I loathe in my gut the whole concept of registering with the state my boat, body, or anything. I truly believe that the clubs, national boating organizations, and Red Cross have shown themselves the willing and apt vehicles for boater education. Certainly the state can help. California iscurrently writing a textbook for the entire school system on boating use and safety. That's great; I'm all for safety education. Yet call me an S.O.B. individualist, I am neither willing nor see the need to see freedom pandered for safety.

I realize that my freedom to live alone and boat unexamined seems an airy and esoteric argument to the three-piecesuit, legalistic boys at government hearings. Freedom is something that too often lacks "standing" or the right to exist. But I want no decals on my boat. I want no license to live or license to paddle, and I will fight anyone who tries to restrict me. Any boater feeling this

way should call his state library's "bill room" and find out if such a boat certification bill is already in the works, and if one is, fight it every step of the way.



NOMINATIONS

FOR

AWA's Board of Directors

are now open

At the close of 1983, five members of the nine-person Board of Directors of the American Whitewater Affiliation will retire from their terms. In keeping with our constitution, AWA's membership must be presented a slate of nominees from which they will elect the five new board members.

So if you or anyone you know is qualified and would like to become an AWA Board Member, submit her or his name **BEFORE OCTOBER 1st** to Marge Cline, Board of Directors Nomination, 1343 N. Portage, Palatine, *IL* 60067.

HOW TO WRITE AWA

To Submit an Article or News Item:

Deadline for copy is 15 days prior to the month of issue (e.g. to be in the Sept.-Oct. issue, copy must be to the editor by Aug. 15th latest.) Articles should be under 3000 words (or easily serialized). All types of good quality photos accepted, prints preferred. Mail to Bart Jackson, AWA Editor, 7 Holland Lane, Cranbury, NJ 08512. Want to talk about a good idea? Call the Editor: (609) 448-8639.

Comments or Questions about the Journal or Seeking Paddling Information:

Write or call the AWA Editor at above address.

Your Not Getting your Journal or If you have Moved:

For any circulation problem, con-

tact Peter N. Skinner, AWA Circulation, Box 272, Snyder Rd., West Sand Lake, NY 12196. Be sure to include new address and code number off your mailing label.

To Join AWA:

Individuals send \$10 to AWA, Circulation Mgr., Box 1483, Hagerstown, MD 21740. Clubs send \$13 to same address. Be sure to include club name, contact, and address as you want it listed in the Journal.

To Advertise in Journal:

Contact Bert Uhr, AWA Ads, 718 Laurel Ave., Des Plaines, IL 60016.

Questions, Comments, Info about the Affiliation:

Contact Marge Cline, AWA President, 1343 N. Portage, Palatine, IL 60067.

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Write the AWA Editor today at 7 Holland Lane, Cranbury, N.J. 08512. If any or all of your letter is not for publication, please specify.

RIVER RATINGS

In principal, I would agree with Dr. Embick's opinions on river ratings. Having run a number of the rivers used as examples: Six Mile, East Fork Six Mile (just above the Hope cut-off), the Nena, and the Gulkana, I found the numbers given to be generally realistic.

I especially like the consideration given to water volume as a factor in pushing the "numbers" up or down. I'm not sure that the Devils Canyon is one of the best examples, however. This stretch of water, be it low (around 19,000 cfs) or high (around 90,000 cfs) is both hair raising and nearly impossible. It has to be seen to be believed.

I do agree that the current numbers do not convey much. As an example: on Section Three of the Chatooga, Dicks Creek is rated as a Class IV and Second Ledge as a Class III. Both rapids are five-seven foot, nearly vertical drops. At low water, Dicks Creek is probably more realistically a III or III+, whereas at high water a IV or IV+ might be more in order. Second Ledge on the other hand probably should be in the IV or IV+ range (depending on water volume), though opinions do vary.

I agree with Embick on the point of blanket pronouncements that open boaters should halt at some arbitrary point. However, I think that some cautionary note is still in order. A marginal intermediate (however defined), for example, could get into very serious trouble on Section Four of the Chatooga at Woodall Shoals (rated Class VI with its keeper hydraulic) and in the Five Falls area (Class III-V) where the river drops 75+ feet in around 500 yards.

Alaskan rivers present some unique challenges with their general remoteness and extreme water temperatures (warmest I ever encountered was around 50•<F). In addition there is the occasional bear, out fishing. I came upon one while kayaking on the Gulkana in 1980.

I think Dr. Embick has some ideas that deserve to be persued.

George W. Rippen Peachtree City, GA

C-2 PRY

Dear Bart,

I'm writing in response to Morley Hewins' letter pointing out the disappearence of the C-2 bow pry. It is obvious from the letter that Morley isn't truly aware of the revolution in C-2 slalom racing — the close cockpit boat. The 100% conversion from end hole to close cockpit in international and American racing proves that end hole boats are a relic of the past.

One of the major differences in technique between the two boats is the replacement of the bow pry with the cross bow draw. The reason for this change is very obvious if you have paddled each type of boat. In the end hole C-2 the bow person is located at the end of the boat, this makes a kayak style of spin very slow. Thus when entering an eddy, a pivot around a pry stroke is very effective; a crossbow draw in this situation puts a tremendous stress on the paddler and involves switching to the other side of the boat. The close cockpit C-2 turn is able to spin like a kayak due



to the central position of the paddlers. Thus when entering an eddy, the boat spins about its center. Placement of a bow pry when entering an eddy tends to stop the boat more than turn it. The cross bow draw turns the boat effectively and doesn't stop momentum. There is still the undesirable feature of changing sides, but the benefit of a more effective turn makes up for this drawback.

The disappearance of the bow pry stroke is not due to obsolescence, but rather the difference of the end hole C-2. If one is dated enough to paddle an end hole C-2 or a member of the open twoman canoe fraternity, the bow pry should be an integral part of catching an eddy—only sissies execute cross bow draws in these boats!

Sincerely, Chuck Stanley Sunnyvale, CA

GRAND PRIX

Dear Bart,

In answer to your question on how I feel about the Grand Prixstyleof slalom, I must answer as an individual since I have not conducted any extensive poll of fellow paddlers or of the Whitewater Open Canoe Committee. My feeling is that although it makes running a slalom easier, it surely reduces the skill required to compete in a race.

If we go back to the original concept of a slalom race: to simulate river conditions, we must admit that the skill is to paddle between the "rocks" (poles), not under them. Even as the penalties were reduced several years ago, the ground swell within open canoeing began.

The rules governing slalom originate with the International Canoe Federation (ICF) and are adopted by the National Slalom and Wildwater Committee of the American Canoe Association. Then the Whitewater Open Canoe Committee incorporates the NSWC rules into its own racing rules. I feel that if the Grand Prix style of slalom race scoring is adopted by the ICF and NSWC, the outcry from the open boat slalom racing communitywould

be strong enough for the creation of a separate set of slalom rules for open boats, (probably the old 10 second penalty/touch system).

I realize that the many races currently containing both open and closed boats would be faced with a real delimma. It is my feeling that at least where open boats are concerned, the Grand Prix style of slalom racing will never become a reality.

Sincerely, Keech LeClair Chairman ACA Whitewater Open Canoe Committee

Grand Prix Notes

On April 12th, the Six Flags Corporation sponsored a Grand Prix style slalom on their "Roaring Rapids" ride at the Jackson, NJ Great Adventure amusement park. While there, AWA took a very unofficial poll of the racers opinion of this style of racing. Almost all of the racers agreed while Grand Prix made for a faster course, the current slalom style was more challenging, demanded more, and was even more fun. Most preferred the current rules for major competitions but Grand Prix made a nice diversion.

A couple of interesting comments came out: top C-I'er Dave Hearn remarked, that what we've seen of it here "really ruins Grand Prix. Too many a weird offsets. In England they build a really fast course...but actually I prefer a regular slalom." Jon Lugbill agreed saying "It's not as good as a real slalom."

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The FLUVIAL

Some local tidbits and less publicized races that you won't want to miss

- Jeff Brown of 1420 78th Kansas City, KS 66111; (913) 299-0373 has just been appointed Race Information Coordinator for the Kansas Canoe Association. He will be collecting and disseminating to club members current racing info concerning Kansas, Nebraska, Arkansas, Oklahoma, Missouri, and Colorado. So if you want to get some KCA hotshots to attend your races, be sure to notify John.
- The 1983 Putney Marathon: July 17, 1983, 11 am Pre-registry encouraged \$5 per person. Registrar: Eric Evans, RFD #3, Box 167A, Putney, VT 05346. It's an 18 miler with two mandatory portages, Racing and Recreational Classes, Jrs. and Srs.
- Congratulations to Liza Emerling for winning The Most Humourous Racer award at KCA's last slalom.
- FIBARK's Famous Boat race weekend. This amazing June 18-19th weekend of boating includes a top competition slalom, expert, prize-winning raft race, the anything that floats competition, the swimming slalom, and of course, the renown 26-mile wildwater classic all along the swift Arkansas River. The whole town becomes a party on this one: parades, bike and foot races, and all kinds of fun. FibArk is really seeking Eastern racers for this one. Contact John Pyson, Race Registrar, Box 237, Poncha Springs, CO 81242.

GRUMMAN "CLASSICS" SOUGHT

In 1945, just after World War II, the thud of Grumman aluminum was first heard on the streams of America. Paddlers loved the old standard weight aluminum double ender and for nearly two decades following, it was considered by many to be the top of the line. If you have saved one of these crafts and cruised it past all the snickers of these fiberglass Johnny-come-latelies, you are now in luck. Your battered hulk has been transformed into a classic.

Grumman is now seeking the oldest double ender they can find to display at a series of nationwide outdoor shows. If you think you have such a boat, and would be willing to lend it for awhile, check your boat's serial number. The first of these over half million boats made over 37 years carry the serial numbers 1A-13 for the 13 foot, and A, B, C for lightweight, standard, or shallow draft. The owner of this oldest boat will receive a brand new Grumman Eagle canoe. So if you have a real oldie write SEARCH, Grumman Boats, Marathon, NY 13083 before August 31st.

AMERICAN RIVERS MONTH UNDERWAY

This June has been designated American River's Month and a multitude of events have been planned to celebrate. Here's a handful:

- June 4th. ARCC is running a Legislator/VIP raft trip which will tour officials down the Patomac's Mather Gorge.
- June 4th. The Great Urban Whitewater Race on the James River, Richmond, VA and June 4-5 race on the Rappahannock River. Call Rick *Mattox* (804) 780-1387.
- June 10-12. Second Yampa River Festival on the banks of this endangered river near Steamboat Springs, CO. Contact Yampa River Improvement Committee, Box 770545, Steamboat Spr., CO 80477.
- June 18. Harrisburg, PA: special observance festival planned by state government and local clubs.
- June 21. Eastern Outfitters Heart Fund Benefit. EPRO will be sponsoring

NEWS

The BoFloig Community

raft trips and donating proceeds to the American Heart Association. For list of trips call EPRO (615) 338-8619.

— Maryland Statewide River Photo Contest. Maryland Dept. of Natural Resources will be awarding cash prizes for river photos in color and b&w. Also, a month-long series of events and seminars will be held at the Tawes State Office Bldg. in Annapolis. Contact Derek Richardson, Scenic Rivers DNR, Tawes State Office Bldg. #C-3, Annapolist, MD 21401.

Little Miami, Inc. of Ohio will run a float trip to show legislators the streams of Ohio. Call Eric Porter (513) 351-6400.

PERMIT SCALPING

Western outfitters may soon be in a position to sell what they do not own and should not have — permits to public lands and rivers. If allowed, every boater, who ever again seeks a private permit will find his odds permanently reduced. Also, anyone who has ever used a raft for support or ridden in one will pay a higher fee, not for additional services, but to cover the costs of the permit-speculation market. Obviously this is not just a Western problem.

Recently the Del Webb Corp. purchased two Grand Canyon outfitters. With this they apparently "bought" the river permits that the outfitters had been receiving traditionally every season by rubber stamp from the Forest Service. Ten years ago, when the Forest Service and Bureau of Land Management (BLM) issued permits to a deliberately limited number of outfitters, they were granted as a privilege—not a right or piece of property.

Theoretically, according to law, these grants (and theentire system) were to be re-evaluated every one, three, or five years, depending on the river. Then permits would be issued anew. But somehow this never happened. Outfitters became entrenched, they kept on

getting the same number of permits without ever re-applying, to the point where now they expect them and believe they own this chunk of access to public lands

Now with the glint of speculation in their eyes, outfitters all over are seeking to sell out their firms and the permits they do not own. Previously, answering public protest, the U.S. Forest Service had tried to remedy this by developing a Competitive Award Permit system in which the outfitters would be evaluated and permits given to those who could "best provide for public needs" and "were already experienced". But on April 8th, the Federal Registrar announced the new Permit-Selling Proposal which would encourage all the old flaws of monoply, speculation, higher prices, and the institution of perpetual permits.

What you can do: R. Max Peterson, Chief (2300), U.S. Forest Service, USDA, Box 2417, Wash., D.C. 20013 is accepting comments on this issue through July and the GLM Director (341), 1800 C St., Wash., D.C. 20240 until June 30th. But don't write them directly. They are already on our side. Write your Congressman, mention this problem and ask him to use his letterhead and pass this concern of yours along to the above addresses.

—Thanks to NORS

FARMINGTON BLEEDS

If the new Chairman of the (greater Hartford) Metropolitan District Commission has his way, Connecticut's much-paddled Farmington River will be plunged once more into the leech. This tiny stream which already provides local drinking water and hydropower will be diverted yet again using existing dams. To stop this, contact Ron Pfeffer, Exec. *Dir.*, Farmington River Watershed Association, Box 98, Aron, CT 06001.

Fluvial News

RIVER CHECKLIST

The latest list of whitewater streams needing your help and letters to keep from going under.

☐ Delores. The McPhee Project under initial construction on this western Colorado stream has run into a 700% cost overrun and the Bureau of Reclamation has threatened to halt building. For more info call Herry Mallett, American Wilderness Alliance, 4260 E. Evans, Suite 8, Denver, CO 80222;.(303) 758-5715.

☐ West. Several Vermont towns have applied to FERC for a study permit to create a river-draining diversion tunnel from Ball Dam. Contact Conservation Society of Southern VT, Box 256, Townshed, VT 02108.

☐ Tuolumne. San Francisco, Modesto, and Turlock Irrigation Districts seek yet another dam which would ruin 27 of the remaining 83 undammed miles, plus Clavey Creek. W & S protection seems iffy. Write letter of support to Hon. Pete Wilson, U.S. Senate, Washington, D.C. 20510, the new Senator who's vowed to help this river.

☐ Pine Barrens Streams. New Jersey's Pine Barrens Coalition, the riversaving volunteers who aid the government's P.B. Commission in working out a management plan for this southern third of the state, seeks contributions and volunteers. Contact P.B. Coalition Legal Fund, Box 366, Vincentown, NJ 08088.

☐ Cache La Poudre. Colorado's last free-flowing stream while being studied for W & S inclusion is also being eyed by Colorado Water Conservation Board for a major water storage and hydroelectric facility. Contact Preserve Our Poudre, 152 West Mountain Ave., Fort Collins, CO 80524; (303) 226-5704.

☐ Susitna. The Alaska Power Authority is attempting once again to get an FERC permit to build two huge dams on the Susitna for 162.0 Megawatts and the biggest hydropower bill in the nation's history. Contact Eric Meyer, Northern Alaska Environmental Center, 833 Gambel, Suite B, Anchorage, AK 99501; (907)

279-6719.

☐ Grande Ronde. Right now, Oregon Legislature is considering a bill to include this river in state W & S, but Grand Ronde Power (subsidiary of Boise Cascade) has applied to FERC for a permit to dam the river. Write your Oregon Rep. or Northwest Rafters Assn., 10345 SW Ridgeview Lane, Portland, OR 97219.

OCOEE UPDATE

Well, the TVA never quits, but neither does the Ocoee River Council and the other forces of good. The TVA wants to restore a 1913 hydro relic which for over \$30 million could squeeze out a miniscule 19 megawatts of electricity. The problem is that the four-and-a-half-mile wooden flume would divert all of the Ocoee's average summer flow, leaving nothing but a rock bed and standing pools. The Ocoee River Council has pointed out that the cost for this project has raged far out of control and beyond any bounds of efficient return. "We are restoring a piece of living history" counters the TVA. And so the fight has

Last year the state of Tennessee sued TVA demanding that the Ocoee project needed a state-issued permit. The state lost the suit, but has appealed, this time with some new help. The EPA and the

Congratulations KCCNY

1983 marks the 25th birthday of the Kayak and Canoe Club of New York—one of the pioneer clubs in safety, instruction, and racing. Also, this first week of June, KCCNY will present it's 20th Annual Esopus Slalom. (It was on this course that Ed Bliss set the first reverse upstream gate this editor had ever seen.) Those wanting to enter this slalom classic send \$5 for the first class. \$4 for the second and third per person to Anita Lustenberger, Slalom Registrar, 86 Fargo Lane, Irvington-on-Hudson, NY 10533.

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Justice Department have filed amicus curiae briefs supporting Tennessee. (EPA contends that as non-point sources of pollution, dams should fall under state jurisdiction.)

If the state wins the appeal, TVA will have to seek a permit from the state Water Quality Control Commission. The Commission could require continued or even expanded recreational releases on the river.

TVA contends that their Ocoee No. 2 project is a "single purpose" project. There are currently 94 eight-hour recreational releases. TVA wants to reduce this to 82 a year from June to August and require outfitters'customers to make up the \$262,500 energy-loss difference at an additional \$3.75 a head. The ORC's more rational plan is to reclassify the Ocoee 2 as a "multipurpose project" combining history, power, and recreation, provide 110 days of recreational releases from the last weekend in March to the first in November and base the user fee on the cost of maintaining recreation facilities. You can help by appealing for the OCR plan to the Governor of Tennessee, your Representative, and your Senator.

-Thanks to Ocoee River Council

THREAT AGAIN: THE UPPER YOUGH

On March 21st, Sen. John Bambacus and Delegate George Edwards presented to the Maryland State Assembly Bill 1312 which would turn the state Wild and Scenic protection of the Youghiogheny Corridor over to the county. At a recent hearing on the bill, Bambacus and Edwards testified that as representatives of the landowners, the need for this bill was to assure protection of the Youghiogheny Corridor against mining and clear cutting. But in effect what this bill actually would do is force the corridor to yield to any federal or state project and, most importantly, it would allow county residents to vote to close the corridor to public access. This would kill paddling on one of our nation's most popular boating streams.

Fortunately, at this same hearing, one corridor landowner stood up and testified that he had talked with many other landowers and was told that they wanted to mine the coal along the river. Lobbyists, including ARCC, The Sierra Club, Trout Unlimited, and Upper Yough Expeditions are trying to defeat this bill and initiate national protection and public rights to use the river.

Bill 1312 has been presented before the Senate Economics Committee which chose to hold it over for summer study, temporarily retaining state protection. The Maryland Dept. of Natural Resources and the Yough Advisory Board will be trying to work out a solution.

It is obvious to any who have ever seen it, that the Yough and its surroundings are an extremely valuable natural and recreational resource. If you want to help keep your Upper Yough wild send a letter to Gov. Hughes, Governor's Mansion, St. Circle, Annapolis, MD 21401. For more information, contact Rick Sturgill (Yough Advisory Board member), Box 158, Friendsville, MD 21531; (301) 746-5808.

—Thanks to Rick Sturgill

GAULEY UPDATE: GOOD NEWS - BAD NEWS

The fate of West Virginia's Gauley River, and the Army Corp's Long Tunnel diversion from Summersville Dam that would destroy three prime whitewater miles of it, is still up in the air. A lot has happened recently in the struggle to save this river.

1st — On February 16th Eastern Professional River Outfitters's Pres. Marc Hunt, Congressman Bob Wise (D-WV), ARCC's Chris Brown, Friends of the Gauley and people of a broad based opposition testified at a hearing before the House Public Works Committee which was examining the Long Tunnel diversion, along with 31 of the 168 Federal water projects proposed this year. Committee Chairman Robert Roe (D-NJ) was so impressed that he stated Continued on page 35

—AWA BOOK REVIEWS-

SOME POSSIBLE ADDITIONS TO YOUR BOATING BOOKSHELF

AWA constantly seeks new books and films on boating, the environment, and generally related topics. We welcome outside reviews from interested readers. Or if you would like a book or film reviewed, just send a copy to the AWA Editor. (Please include book price and author biography notes if not listed.)

DUDH KOSI RELENTLESS RIVER OF EVEREST

produced by Guild Sound & Vision Ltd.

52 minute film, 16mm & videocassette, color, sale: \$1200/rental: \$60/video-cassette: \$405.

Available from Indiana University Audio-visual Center, Bloomington, IN 47405, (812) 335-8087; 1977.

Regardless of how it was told, the story of seven British boating bachelors trekking high into the foothills of Everest and kayaking down the fierce, cold, remote waters of the Dudh Kosi River in a 13,000 foot descent, has just got to capture the mind of anyone who has ever hoisted a paddle. Fortunately, in this film, the story is sensitively and extremely well documented.

The film starts with seven of England's best climbing the 130 miles up from Katmandu to the Kumbu Glacier, where it melts into the Dudh Kosi. Scenes of 10 year old girls packing 50 pounds of boating gear, ancient Tibetian monestaries, and dazzling snowy peaks set the mood. At the river, the boys make the world's altitude record put-in and begin their incredible run. The paddling lasts 10 spectacular days with pinnings, lunchings, boat shatterings, and some grand rides.

The filming is clear and remarkably well done considering the situation. One finds very little of the cinemagraphic trickery so pervasive in American films; just sharp shots at amazing angles. Each boat had a camera bolted on the deck, giving one more of a paddler's eye view. All is edited to a documentary that is much more than a mere travelogue.

Like a chat at the Explorers' Club, a truly British narrator delivers an understated commentary, broken by occasional voice overs from the paddlers themselves. The whole tone is exciting, but not hyped. And while terms are defined for the unitiated, the expert will not find the narration simplistic or patronizing.

The shots of the rapids, as all pictures, tend to diminish the real danger, but through the rolling glacial milk one continually notes a lack of eddies and an incredible water speed-approaching 30 mph. The icy whiteness of the runoff hides huge holes. One of the most magnificent scenes is of a 15-foot falls with a giant stopper where Nick Hopkins was slammed through, pinned, and took his first swim in seven years. The rescue performed by Mike Jones, still hindered by snow blindness, isafrightening piece of drama.

When the party arrives at the takeout 10 days later only two of the 11 "canoes" (what we call K-1's) they trekked in, remain paddleable. They hit shore, wait, and at last a helicopter lifts them out to Katmandu. All in all, here is a film that will give the weekend whitewaterer a totally new concept of exploration and danger. Well worth seeing.

-Reviewed by Bart Jackson

KANUby Ulrike Deppe & Jurgen Gerlach

Hardcover, 160 pages, 10½" x 8¼", entirely color photos, \$24.

Published by Stalling (German), Available in U.S. from Becky Judd, Hampshire College, Amherst, MA 01002; 1981.

It is German and it is beautiful. It is a

pictorial essay on the ways of whitewater in a country that loves it. Miss Deppe and Mr. Gerlach, both slalom and wildwater champions since 1969, have shot and sensitively assembled a collection of photos that portray the whole variety and extent of the paddling experience.

All the photos (aside from a handful of black and whites, all are color) are sharp and of excellent quality. But more important, they are well composed. One sees more than boat and body hoisted from the foam in an ender—an in-focus facial expression, glimpse of river pattern and perhaps background scenery all combine to make this interesting stunt into a thrilling experience. Translation of the captions is unnecessary.

For those who believe that hair is the only boating, the Extremes Wildsasserfaren section will more than satisfy and turn the gutsiest paddler slack-jawed. Racers, both slalom and wildwasser will find their own world well depicted, including a marvelous page of racing facial expressions. There is also a very good section of flatwater racing, a sprinkling of rafters throughout and scenes of something seen very rarely in this country, organized kayak polo.

One thing I learned from viewing this volume, which I do again and again, was the German infatuation with paddling in all its forms, in all types of craft. Have you ever seen a C-10—10 little sprayskirted paddlers all flailing their Kober blades while beside them cruises a slalom K-1 with a rudder? Inflatable kayaks, rafts, wooden war canoes, Grumman-style aluminums, and the ever popular foldboat are all seen cruising through every type of scenery.

But it's not all an in-boat, on-the-river pictorial. Streamside flowers and canyons, a boater squatting on his boat, competing for lunch with a hungry donkey, loading up for an expedition atop an elephant, all are there. These pages show one nation's love affair with paddling. That much is German. But the empathies each boater feels with these photos cross all boundries.

—Reviewed by Bart Jackson

THE GRANDIOSE RIO GRANDE

by Walter F. Burmeister

Paperback, 128 page, 6" x 9", 90 color photos.

Available from Creative Holiday Guides, Box 7097, Charleston, SC 29405; 1978.

Walter Burmeister, author of the classic Appalachian Waters series has probably described more rivers in print than any other man in the world. But unlike his watershed series, this book takes one part of one river and glories in every aspect of it. The author calls it a "composite of personal impressions" based on his four trips from Praesidio to La Linda (Texas' Big Bend Nat'l Park area) between 1973-76. It is also an amazing collection of facts including the fossil, geological, historical, plant and animal, and paddling records of the Rio Grande.

The book is well laid out with a nice blend of pictures and print. Burmeister shows here a chock-full, informative style that flows easily and is not stilted. The depth of detail, the amount of researched statistics and anecdotes amazes. All is poured into this travelogue tale as the author cruises his foldboat downstream. One learns from this book.

For the paddler planning a trip, all the basic data is listed. From Praesidio to La Linda, the river is broken up into fewmile segments each showing the estimated running time, gradient, classification, scenery type, and any specific rapid descriptions and warnings. There are, however a few faults that flaw this book as a river guide. First, it rambles. It is difficult to find a specific piece of information without hunting. The map (which along with the table of contents is hidden in the back) lacks detail and I would be loath to use it as my only trip map. One paddler who has for many years run the Big Bend section complained that the book was too complex and contained some definite errors. She didn't specify, but I pass this opinion on to you.

Continued on page 36

Return To The MIDDLE FORK

A lot can happen to a boater and a river in 40 years

Part II

by Eliot Dubois

In the previous issue, Eliot Dubois, one of whitewater's true pioneers, recounted his 1942 solo run of the hitherto unrun Marsh Creek and the Middle Fork of the Salmon, made as a young Yale grad, just before entering World War II. Eliot then told of his preparations for his second Salmon trip, made in 1982, where the battles were more with bureaucracy than remoteness.

In this concluding part, the author describes his second cruise on "The River of No Return", showing what four decades and a leap from obscurity to popularity can do to a river.

After visiting with Ted Anderson and Mac Thompson in Challis, my wife Barbara and I drove to the put-in at Boundary Creek, bypassing by automobile the sixteen miles of creek and river that had to be negotiated by early boaters. One mile in that secion has a drop of 80 feet, the steepest on the river.

We camped at Boundary Creek. In the middle of the night, my son Del and the rest of the New Mexico contingent arrived, exhausted from their long drive. There were ten of us, and although Barbara and I were twice as old as any of the rest, we knew that on a river, age differences tend to evaporate.

The launch site was a revelation. In all the whitewater boating that Barbara and I had done, a put-in spot was a wide place in a road next to a river. Here was a well-appointed campground, a well planned staging area, a well-designed launching ramp, a well-trained Forest Service person. From a neat little building marked "Office" came the cackle of radio communication from headquarters in Challis. On the outside of the office was posted the water level, recorded

that same morning 30 miles downstream and to the hundredth of a foot. We gathered for a pre-trip briefing. We signed documents. There was so much organization that I wondered if we were about to blast off for the moon.

I was astonished by the number of people launching boats and starting out on the river. We were the seventh and last party to start that day. The number of people ahead of us was easily double the number of people who had ever run the Middle Fork before my 1942 trip. Once on the river, it was a strange sensation to be in a parade of boats, to be a part of traffic jams at the larger rapids, to witness collisions of rafts running through the S-turn at Pistol Creek.

Still, I had many positive reactions. First, I was able to connect so much of what I saw in 1982 with what I remembered from 1942. Often, going through a rapid, I would shout to Barbara and Del, "I went over that gravel bank on the left," or "I landed in that eddy." Another favorable reaction was that in spite of the heavy river traffic the banks were free of trash. Campgrounds were clean with no evidence of hard usage.

At our first campsite, three young Forest Service employees landed their sweep boat to check out the campground. These people were friendly and enthusiastic. Obviously, the Forest Service is doing a good job in the physical care which it takes of the river and its banks. The low-impact camping rules work, thanks to both employees and boaters.

I was curious to see what changes had occurred in the rapids after forty years. The first one came shortly after we started downriver. Sulfur Slide was

In 1942, a different people lived in the canyon for different purposes... They were the last remnant of a frontier community.

recognizable but was much different from when I had last shot it. In 1936 flash floods had blown out variousside creeks bringing vast quantities of material into the river. Additional talus slid directly in from the canyon walls. A great natural dam of broken rock had thus formed below Sulfur Creek. The river had backed up behind this dam, but then punched through with a new sluiceway.

By 1942 there was a considerable lake on the upstream side of the dam and the entry to the sluiceway was not much below the dam's top. The channel was steep and narrow. But in 1982 I found much less impoundment of water above the dam, and a broader and less steep channel.

Two other landslide rapids, formed at the same time, the Chutes and Cannon Creek, have similarly changed. As time goes on, these rapids will be further eroded, though I suspect the next forty years will see less change than the last. At any time, there may be major rock slides in the canyon or blowouts of side creeks, starting the cycle over again. Rivers are places and forces of change.

Other than the three rapids mentioned above, I could see nochange. Of course, I was relying on memory and trying to compensate for a difference in water level; in 1982 we had about 2,000 cfs. The configuration of most major rapids looked very familiar to me, I was even able to identify some individual rocks. The places that had changed the least were drops over ledges of resistant rock, for example: Velvet Falls, Pistol Creek, and Tappan Falls. For one rapid, Haystack, I have a calibration better than memory. My 1942 film shows rocks which are easily identifiable in shots taken in 1982. One rock lies there, shaped like the head of a lizard, with a wide crack down the center of its neck. My 1942 picture suggests the beginning of a crack. Not much of a change, I suppose. I predict the lizard will remain intact for another forty years.

I also looked for changes in the

canyon. In 1942 there was great deal of exposed slide-rock and downed timber on the slopes beside the upper river. The three natural dams were scenes of impressive desolation. In 1982 I found that the contours of the canyon walls were softened by new growth. Trees grew on the upper surfaces of the natural dams. In 1942 the trail paralleling the river was quite conspicuous. In 1982 the trail had blended into the landscape. Another change obvious in 1982 was the devastation caused by the fires of 1979. Time will heal those scars.

Our second day on the river, I received a shock. We had just passed Pistol Creek and were drifting down an easy stretch of river. Perched on the left bank was a row of vacation cottages. Nice enough I guess, some even elegant, but out of place in a wilderness. Behind them, according to our map, was an airstrip providing quick access from the outside world. These cottages as well as guest lodges and ranches along the river are built on private inholdings within the National Forest. In 1942 there were people living in the canyon, either permanently or on a seasonal basis, but they were different people, in the canyon for different purposes.

Five miles beyond Pistol Creek, I asked Del to land at the mouth of Pungo Creek. Barbara and I walked through a thick stand of ponderosa pine to the remains of a cabin where I had spent the night. My host had been a trapper, cow puncher, and prospector. In 1942 there was a sparse scattering of cabins along the middle portion of the river. The people in these cabins lived off the land. They looked for gold and other minerals; they raised vegetables; they kept a few head of cattle. They were hospitable folk, eager to welcome the infrequent boating party and more than eager to describe their own adventures over a plate of spuds, beans, and cutthroat trout. Today, that opportunity for social interaction is gone, along with the rem-

nant of a frontier community.

But the frontier replaced an earlier community. Two days further downstream, we camped at a spot where we found flakes left by Indians making tools and arrow heads. The Sheepeater Indians were driven out of the canyon only a hundred years ago, and the frontier people slowly moved in.

Nostalgia for the lost frontier, for the canyon of forty years past, or for the freedom of whitewater boating in earlier days weren't my only preoccupations on this trip. There was too much to enjoy. We proceeded down the river in a leisurely fashion, taking the maximum allowed eight days. As a passenger, I saw more scenery than I did on my first trip, when my eyes were mostly on the river. I took the oars for some of the easier stretches and learned that handling a heavy raft is quite different from handling a canoe or kayak. You have to make the momentum work for you.

Wherever possible we fished, though all fish caught in the river must be released. Barbara caught a fifteen inch cutthroat. At one side creek, we caught enough trout for a big dinner. We ate well, though at first I thought we were overstocked with potatoes and beer. We camped at delightful spots, one of them equipped with a hot spring.

Most parties running the river go too quickly through the Impassible Canyon, (the name given to the last twenty miles) usually because the campgrounds in that section are without privys. We had facilities for carrying out human waste, so we camped at two sites there. The second was a spot I'd camped in forty years earlier, the lower cabin of the hermit Earl Parrott. We drank a toast to the ghost of the old eccentric.

For some reason, we saw few other parties in the Impassible Canyon, and we had that sense of isolation that is one of the best features of a wilderness adventure. We imagined that there was nothing else in the world but the ten of us on our four rafts, floating between high cliffs, dropping over a succession of step-like rapids, and drifting through deep pools below. At higher stages we would have encountered big waves and more challenging hydraulics, but even

so the rapids were interesting. Some of the rapids from Hancock down are only rated as Class III but we enjoyed them as much as any because the river swirls among large boulders, and visibility ahead is limited.

Finally, we drifted out of the canyon of the Middle Fork and onto the Main Salmon. There is a cabin at the junction, but I suspect it's not the same one that Gus Peebles lived in in 1942. After a short run on the Main, we came to the takeout and beached our rafts on a concrete ramp.

We had that feeling of elation that comes after an outstanding river trip. I had the personal satisfaction of knowing that although the Middle Fork has been changed in some ways, it still retains its essential character and its ability to provide a rich set of experiences for those who travel on it.

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Tom Berhowitz on the Raventhezon (Marge Cline photo).

Opposite Page: hanging bridge on Rio Colca.

you're going to brave the Amazon and flow through the tropical rain forests, why not go all the way and do it in a balsawood raft, made locally, just for your journey. SAAS will make one for you, or for those really going native, they will provide the expertise and guide you in making your own, large enough for the entire family. To find out more, contact Special Andean & Amazon Services, c/o Fred Alleert, Washington 1849, Lima, Peru; tel. 234060-247554.

But for those of you whose main quest anywhere is hair, Laslo Berty is your man. Back in 1975, guts runner Laslo journeyed south and explored the Amazon's tributaries by the score. From his own hard-knock expertise, Laslo formed Amazon Headwaters now located at Rio Bravo S.A., Sol 900, Cusco-Peru. One of the more widely spread Peruvian rafting companies, Amazon Headwaters offers whitewater raft and/or kayak trips on both coastal and Amazonian streams. In addition, Laslo will help you explore as deep into the jungle as you want to go, on as difficult water as you can possibly handle. It's a great place to find your ultimate challenge.

The Pacific Coastal rivers in Peru have a optimum running season of January through March. Prime time for the Amazon basin lasts from May through September. So why no see the world's largest wilderness on the world's largest hunk of water.

COSTA RICA. Quick now, without running to your atlas, tell me exactly where this nation is. (Look in southern Central America, just between Panama and Nicarauga.) But be it known or not, this small mountain-spined country separating the Pacific from the Carribean holds an awful lot of whitewater that is just now being discovered. Richer in adventure than the gold Columbus suspected, Costa Rica is the West Virginia of Central America. Though slightly smaller in size, it holds as many paddleable streams, the same impossible roads, and an increasing number of outfitters to guide you there.

Pat Muller of the Chicago Whitewater Association last season journeyed with several others to the jungle-lined mountain streams of Costa Rica, which the group ran by kayak, raft, and canoe. They began with the Rio Chirripo (the more southernly of the two so-named rivers). A wider version of Pennsylvania's Savage, Rio Chirripo kicks off with six unbroken miles of Class III (ranging from II-IV), dropping at 100 feet per mile.



Float down the gentle Amazon on a balsa raft you made, courtesy of (SAAS photo)

The scenery was lush, jungly and fascinating. Ferns, flowers, and cows. At one point, a heavy canopy closed overhead completely, funneling the paddlers through a mysterious woodsy tunnel.

The following day, the Chirripo joined the Rio General and the boaters proceeded on a 55-mile run frequently used by Costa Rican Expeditions, the local raft outfit. The river widened and increased in volume. Frequent ledges gave the stream more of a pool-drop character; with a style similar to the Ocoee and New. Class IV was standard, with an occasional Class V.

Days followed with snorkeling, dining with mountain farmers and shoreside lobster fishermen, and even witnessing a bullfight. (In a more humane handling, money is taped to the bull's head and any from one to 50 volunteers try to grab the big bucks. The contest stops when the bull is tired.)

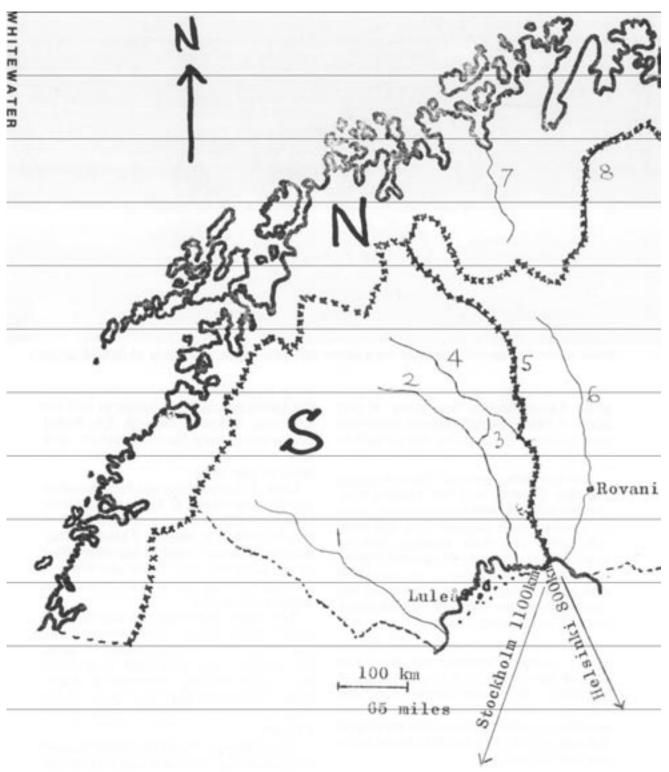
On the last day of their expedition, Dave Scott and Tom Berkowitz scouted out the Raventhezon up north, near San Jose. They reported that the section the group had originally planned to run was too flat and the one below contained some incredible Class V-VI hair. The two entered this broad lower part which was a jumble of holes and high rocks. One

third through this never-ending rapid, the battered paddlers opted to pull out and trek it home through the forest. Fortunately, they found a laborer and, with a little convincing, hitched a ride back to San Jose.

Later, Pat train scouted the Raventhezon between stops at Azul and La Junta. Here, just below Dave and Tom's nemesis, they found a "terrific, if intimidating" section of solid Class IV tapering down to frequent Ill's. So it's all still there in Central America's Little Switzerland and waiting to be run.

Two major outfitters run jaunts down there: Adventures International, Inc., Dave Scott, Pres., Box 54476, Atlanta, GA 30308; (404) 524-5821; and Costa Rica Expeditions, Michael S. Kaye, Pres., Apostado 6941, San Jose, Costa Rica, C.A.; tel. 23-99-75, telex, 2917-CREAR.

One final note however. Getting down to Costa Rica is not without it's hassles, both legal and logistical. Pat's group finally ended up having to list their boats on their passports. And, while the outfitters tried their hardest, Pat recommends that anyone seriously considering a venture with Adventures International art Costa Rica Expeditions contact her first via AWA for the lowdown.



Scandanavian Rivers

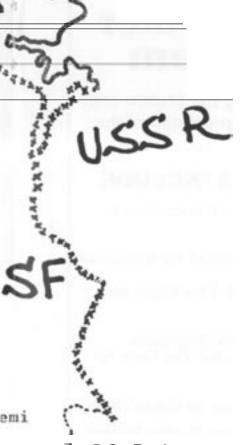
- 1. Pite River
- 2. Kalix River (Summer Relay '83) 3. Tarendo River
- (bifurcation)
- 4. Torne River

- 5. Border River (Konkamo-Muonio)
- 6. Ounas River
- 7. Alta River
- 8. Tana/Teno River
- 9. Kuiva Gränspaddlare

NORDKALOTTEN

Give it a Chance!

by P.G. Toolanen



P.G. *Toolanen* veteran of *Scandi*-navian waters and president of Sweden's Kuiva Granspaddlare Club lures us up to his pristine world where the rivers are "outstanding, exotic, and challenging':

We call it Nordkalotten—The Top of Europe. That beautiful land in the northern parts of Sweden, Finland, and Norway containing reindeers, midnight sun, the Artic Circle, and Europe's last remaining wilderness. All of these attract southerners and those from other continents. Yet it's a land outside canoeists have yet really to discover.

Up our way, you can still find virgin waters due to the fact that it is a vast area with less than a million people sparsely spread throughout. Weekend whitewater runs and longer expedition routes are not overly well established as in Maine and other lands too-loved by trekkers. In addition, the folks in the south of each Nordiccountry have a sur-

prisingly limited knowledge of Nordkalotten, even though all of Sweden's and Finland's major rivers are located up here.

All the rivers on the above map are suitable to run and several of them hold Class V-VI rapids. Put-in points are easily accessable. The ice breaks up in mid-May and the short spring turns very fast into summer in June. (The rivers the author describes are all above the Arctic Circle, on a parallel with the northern third of Alaska.) Around midsummer there comes the second flood, with high waters from distant mountains giving rather tough conditions for paddlers. The lower waters in July offer safer, though very ample levels for paddling, but more mosquitos to fight. August, after the second flood, is another good time to come boat the top of Europe.

We also have some special events coming along our way this season. In July '83 a paddling rally along the 400 km popular stretch of the Kalix River (#2 on map) will be held to show paddlers' interest in conserving the river from the hydropower exploiters. (Oh yes, we have them up our way too.) A similar rally was arranged in summer, 1979 and was quite popular. The coverage by mass media for this one promises to be even more extensive.

By the way, note #3 on the map—the Bifurcation River. Thisstream is not only a tributary, but a river in itself, carrying its water from the Torne across to the Kalix—thus giving it one parallel with the Amazon of Brazil. (Whatever that parallel is, it's not geographic.-Ed.)

With this glimpse into Nordkalotten, I hope to stimulate the curiosity of you American boaters and perhaps inspire a few of you to make the journey to this part of the canoeing world. From Kuiva Granspaddlare, I offer you our best sauna-regards. We are always seeking

new paddling partners and would be happy to put you up and show you our streams.

The Kuiva Granspadlare has been an American Whitewater Affiliate for over three years now. Jf you are interested in a top of Europe adventure, contact them *c/o* P.G. Toolanen, Box *2074*, *950-94*, Overtornea, Sweden.

Boating Baggage

Getting your boat overseas and to that remote river is not, in many cases, the horrendous problem it was just a few years back. First of all, don't assume you've got to lug it with you. Foreign outfittersfrom whom you can rent kayaks and clubs from whom you can often float a loan are increasing in numbers daily. (C-1 and C-2s are another matter except in Europe.) It's advisable to check with these groups prior to leaving anyway for up to date info on ground transport, river conditions, and potential paddling partners.

But if you must take it with you, odds are that with a little schedule flexability, you can find an airline whose freight shipping measurements will not have you sawing your craft into three parts and glassing it back together in some strange land. Just don't count on having your boat ride on the same flight with you. You may have to send it a few days early and have it stored for you at the airport. Shop around for prices with the freight and passenger departments of all major airlines in yourarea. Weight allowances will usually afford you some gear storage space in the boat. Tie on, then duct tape a nylon potlid to the cockpit.

Paddles can travel with regular baggage and should be taped together with foam at tips and between blades. Wrapping them in lifejackets is just asking for trouble. The rigermarole may be enormous, but remember, there is always a way.

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TRAINING

Part III — Day by Day Schedule and Techniques

Ron Byrd, Roy Gentry & Jim Simmons

Show What It Takes To Build Whitewater Brawn

In this final article, the authors set up a daily schedule for the average competitor, adaptable for all levels, which implements all the plans and techniques proposed in their earlier writings.

Ron is a Professor and Exercise Physiologist at Louisiana State University; **Roy** is an Associate Professor and Exercise Physiologist at Northwestern State University of Louisiana; and **Jim** also an NSU Associate Professor, teaches Physical Education and Recreation. All are whitewater instructors.

In our first article, we discussed some basic exercise and training concepts. In the second we explained how cyclical training could be worked into a paddler's program. "All right." you ask, "When are you guys going to tell me what to do Tuesday — then Wednesday, Thursday and so on?" The answer is now and here it is. Here are the training tables, training inventions, and concrete examples.

The preceding articles were written to make you understand why you should train in a specific pattern and allow you to adjust the tables given here to your needs. Familiarity with Parts I and II will also make the use of overload, progression, cycles, and varying emphasis in these tables obvious.

One more thing, all the examples here assume that the individual enters the training program in above average condition. This isgenerally, though not always true of boaters. Assess yourself initially. For gawd's sake, be honest. if you begin this program with a poor or superior level of general fitness, study the chart and make individual adjustments.

General Conditioning

Every athlete has two relatively independent body systems requiring generalized preparation: aerobic and anaerobic. The anaerobic metabolic system can best be brought to high levels by resistive training — using free weights or weight machines. Despite the proof of legitimate research, two myths still pervade this field of training. Let us set the record straight: first, free weights and barbells are superior to any weight machine in sports training. Second, resistive training delivers little or no cardiovascular benefit of the magnitude necessary for endurance sports. No matter how hard you lift, weightsjust ain't gonna do much for your wind.

Better wind and cardiovascular endurance demands supplementary aerobic training through the use of rhythmical breathing exercises such as walking, jogging, running, cycling, or swimming. Running or jogging (there is no generally accepted difference in definitions of the two) is our choice for paddlers and we recommend Cooper's aerobic point system (The New Aerobics) * as a general guide.

Day-to-day work-rest cycles for these two training media should overlap at the outset so that the workouts are alternated, e.g. Mon.-Wed.-Fri. running, Tues.-Thurs.-Sat. on weights, with Sunday a day of rest or recreational games. Thus, the anaerobic metabolic system rests on the days that the aerobicsystem is taxed, and vice-versa. This should

^{*}by Kenneth H. Cooper, 1970. Now available in paperback from Bantam Books, New York City.

Table 1 - AEROBIC SCHEDULE¹

Preliminary Stage

Week	Days	Distance	Time	Aerobic Points/Week ²					
1	MWF	3 miles	25 min.	42					
4	MWThF	3.5 miles	28 min.	80					
8	MWF	5 miles	38 min.	87					
8	TThS	2 miles	15 min.	33					
Preparatory Stage									
1	MWF	4 miles	29 min.	69					
1	TThS	2 miles	14 min.	33					
3	MWF	3 miles	23 min.	41					
3	TTh	1.5 miles	11 min.	16					
In-Season Stage									
1	MWF	2 miles	16 min.	22					
10	MWF	1.5 miles	12 min.	24					
20	MWF	1.5 miles	12 min.	24					
		Transiti	on Stage						
1	MWF	2.0 miles	16 min.	33					
5	MWF	2.5 miles	20 min.	42					
10	MWF	3 miles	25 min.	42					

^{1.} This sample schedule should be applied at selected times during the year for the average competitive paddler. The stages are explained in previous articles in this series. Note that this schedule blends with the Anerobic Schedule (Table II) and demands two workouts a day.

allow adaptation of both without the cumulative fatigue that would eventually result if each system was taxed daily at the outset. As the need increases for greater volumes of work, it will be necessary to add more days per week. At this time a heavy-light-heavy-light cycle is instituted. Above and on the opposite page, Tables 1 and 2 show one example of how the boater can blend these concepts into a single training schedule.

Specific Conditioning

Specific conditioning procedures refer to those which more nearly mimic the exact requirements of paddling. It is well established that the closer the relationship between the conditioning exercises and the task in question, the more efficient is the training. Like the

fine tuning of a TV set, this part of the conditioning process is accomplished only after the coarse tuning (general conditioning) is done. The aim of specific conditioning is to develop more strength and better endurance in exactly the same neuromuscular patterns of movement that are used in paddling. In other words what you do on the river, you do on the land.

The Integrated Program

The model presented in this article was designed with an "average" competitor in mind. Perhaps our conception of what is average is acceptable to the reader, perhaps it is not. For this model, two workouts each day are necessary. If that seems excessive, then goals must

^{2.} Adapted from *The Aerobics Way*, Kenneth *H*. Cooper, M. Evans & Co., New York, NY, 1977.

Table 2 - ANEROBIC SCHEDULE¹

Preliminary Stage

Week	<u>Se</u> ts	Reps	Days	Day	Squats	Pulls	Deadlift	Bench Press	Circuit ³		
1	2	7	TTh	Τ	Medium ²	_	Light	Heavy	Medium		
4	3	5	TThS	Τh		Heavy	Light	Medium	Light		
8	4	4	TThS	S	Heavy ²	Light ²	_	Light	Heavy		
Preparatory Stage											
1	4	3	TThS	Τ	Heavy		Light	Heavy	Medium		
3	3	3	TThS	Τh	—	Heavy	Light	Heavy	Light		
5	2	3	TF	S	Heavy	Medium	_	Light	Heavy		
In-season Stage											
1	1	3	TF	Τ	Heavy	Medium	Light	Heavy	Medium		
10	1	3	TF	F	Light	Light	Light	Light	Light		
20	1	3	TF								
Transition Stage											
1	2	4	TThS	Τ	Medium	_	Light	Heavy	Medium		
5	2	5	TThS	Τh	_	Heavy	Light	Medium	Light		
10	2	7	TThS	S	Heavy	Light	_	Light	Heavy		

1. This resistive training schedule, designed for anerobic body conditioning, should be applied at selected times during the year for the average competitor.

The material in this program was modified from programs developed by Stone and Garhammer at the National Strength Research Center at Auburn University in Auburn, AL.

- 2. Heavy refers to lifting as heavy a weight as possible for the requiredrepetitions. **Medium** requires a 10% drop and **Light** calls for a 20% reduction in the weight used on the heavy day.
- 3. The Circuit referred to includes leg curls, lap pulls to the chest, and twisting situps.

be realistically set to coincide with reasonable expectations of success.

The point is that one's returns are proportional to one's investment. That is, the concepts within the model are sound, but because of differences in values, abilities, and goals, modifications will be necessary. Goals and motivation are very individual. To make this or any training program work, you have to first sit down and decide what you want to do in boating. Then, realistically ask if your will power and daily living schedule allow necessary training

time. Then you must adjust your goals and training. And remember, the plans and information in these articles should be viewed not as writ in stone or scientifically impractical, but as a flexible set of tools that can be applied, in whole or in part to anyone or any sport.

The key to successful application of the principles and procedures laid out in this three-part series lies in systematic planning and record keeping and dedication to adhering to this organized approach once it is begun. Science is here to stay. We've used it in the design and

Table 3 - SPECIFICS SCHEDULE¹

Preliminary Stage

									Cross	
Week	Sets	Reps ²	Days	Day	Cranking	Forward	Reverse	Draw	Draw	Brace
1	1	8	MF	M	5 min.	Medium	Heavy	Medium	Heavy	Medium
4	2	6	MF	F	5 min.	Heavy	Medium	Heavy	Medium	Heavy
Preparatory Stage										
1	4	3	MWF	M	3 min.	Light	Medium	Heavy	Light	Medium
3 5	4	3	MWF	W	3 min.	Medium	Heavy	Light	Medium	Heavy
5	3	3	MF	F	3 min.	Heavy	Light	Medium	Heavy	Light
In-season Stage										
1	2	3	MF	M	3 min.	Medium	Heavy	Medium	Heavy	Medium
10	1	3	MF	F	3 min.	Heavy	Medium	Heavy	Medium	Heavy

- 1. These specific training exercises must be modified in style to the individual. They are to be applied at set times of year in coordination with the other schedules.
- 2. **Reps** refer to repetitions of weight work only, not cranking, which is measured in minutes and sets. Cranking should be done at the highest intensity possible, with a rest between sets allowing the heart to drop to 120 (20 beats in 10 seconds).

construction of our kayaks and canoes; it's only logical that we go one more step in applying science to conditioning. Better bodies in better canoes, all through application of science, can add to our enjoyment and safety in the fascinating sport of whitewater boating.

Cycle Cranking. For improved cardiovascular fitness closely related to the demands of paddling and for local muscular endurance, any commercially available stationary cycle may be set upon a table of convenient height and cranked rather than pedalled. Good cycles have variable re'sistance settings and may be adjusted for any individual. Most will require clamping of some sort to eliminate lateral movement when the load is heavy.

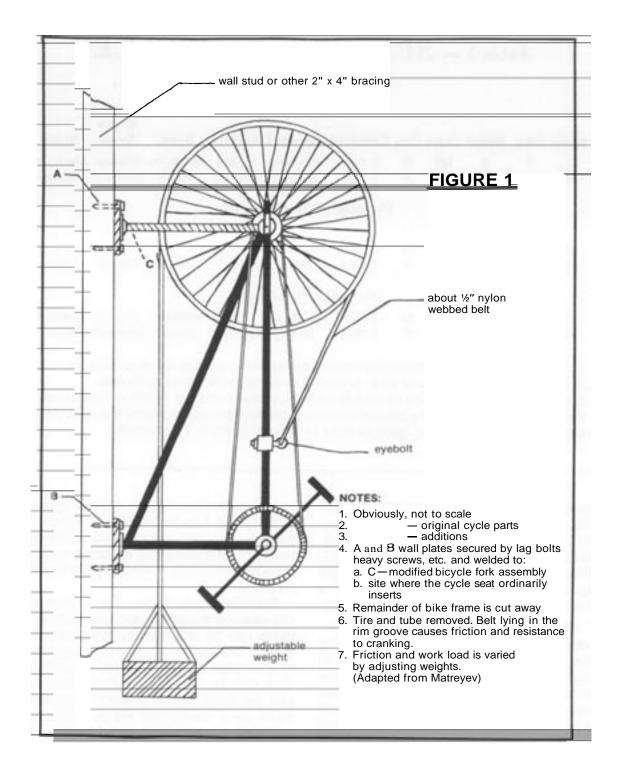
A less expensive alternative would involve modification of any old bicycle. Minor cutting and welding would allow a sturdy, permanent wall mounting in a garage or other such area (see Figure 1). In either case, fundamental concepts of progressive overloading by intensity and/or duration of cranking will yield

improvements in fitness closely related to paddling. The alternative pushing and pulling involved in cranking while not precisely like paddling, employs most of the same muscles in remarkably similar patterns.

Resistive work. To develop strength of the specific muscles used in paddling, a cable can be attached to the blade of a paddle and run through a pulley system to a variable weight load (see Figure 2). This can be an at-home installation or can be done using a weight machine such as a Universal Gym. Different orientations between the kneeling or sitting paddling position and the resistance will allow almost perfect imitation of the muscular activity used in any desired stroke. Principles of basic weight training applied to this sort of exercise will very effectively and efficiently develop muscular strength and endurance in the exact patterns used on the river.

Technique Work

However, you can pile Or, muscle and run like a panther, but it will all go for

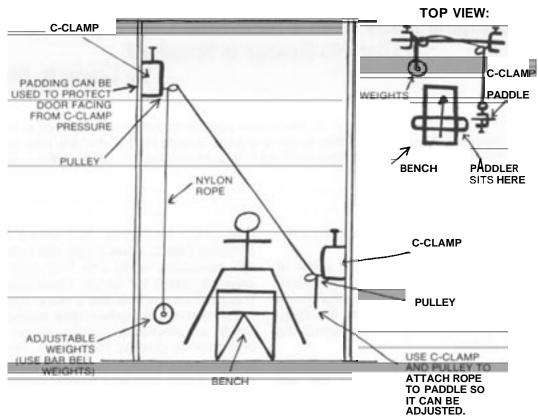


naught if, as a boater, you don't master the physical skills of paddling and gain a high-level understanding of paddling strategies. All paddling should be done seriously, concentrating on the proper technical aspects and avoiding sloppiness. The amount of time necessary is inversely proportional to one's skill and experience. Yet even the experienced competitor who is embarking on the structured conditioning program set up here must devote a hefty percentage of his training to technique.

It is remarkable to the uninitiated how being in top physical condition can have such a marked effect on one's technical performance. With good conditioning, that razor edge of skill remains much longer. And as you get in better shape, you push back that old expected fatigue

FIGURE 2 Resistive Work To Build Strength and Endurance

DOORWAY



that subtly, slowly erodes your skill level. The new reserves of strength and endurance allow one to safely and confidently attack situations that once would have been avoided or half-heartedly tried.

The quantity, intensity, and emphasis

taken in technique paddling will be determined by whether one is training for wildwater or flatwater competition. While skill is now the prime goal, this part of the conditioning package adds the final touch to fitness development.



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SCARS & LESSONS

Limping Away from a Near-Miss Can Teach You That No Rescue is Standard

by Leann R. Diehl

Leann sent this article to A WA "to alert other paddlers to the hidden dangers of the throw rope and to persuade them to carry a good strong knife." But she also seeks the conclusions of other paddlers reading this accident report. Write A WA—we all need each other's advice.

It happened suddenly, unexpectedly, and I wasn't prepared.

I was thrown into the cold arms of danger and the one piece of safety equipment I tried to use only tightened her embrace. The other piece of equipment I needed, I had never spent the money to buy.

I was lucky that afternoon. I suffered no permanent injuries, but I did get some eye-opening lessons about the hidden dangers of safety equipment. It all came about last summer. My partner John Schreiner and I were paddling Pennsylvania's Lower Youghiogheny River. Two nights before, the skies had dumped torrential rains on Ohiopyle and the river was swollen with an answer to every paddler's prayer. The gauge at the put-in was buried beneath a thick, swirling brown current.

With the river at six feet, paddling was more a test of guts than skill. The first day, we decided to paddle the Loop. It was like a cliff-hanger ride on the Disneyland roller coaster. But the next day, the river was down to a more challenging 3.7 level. We flexed our initiative and agreed to paddle the whole river.

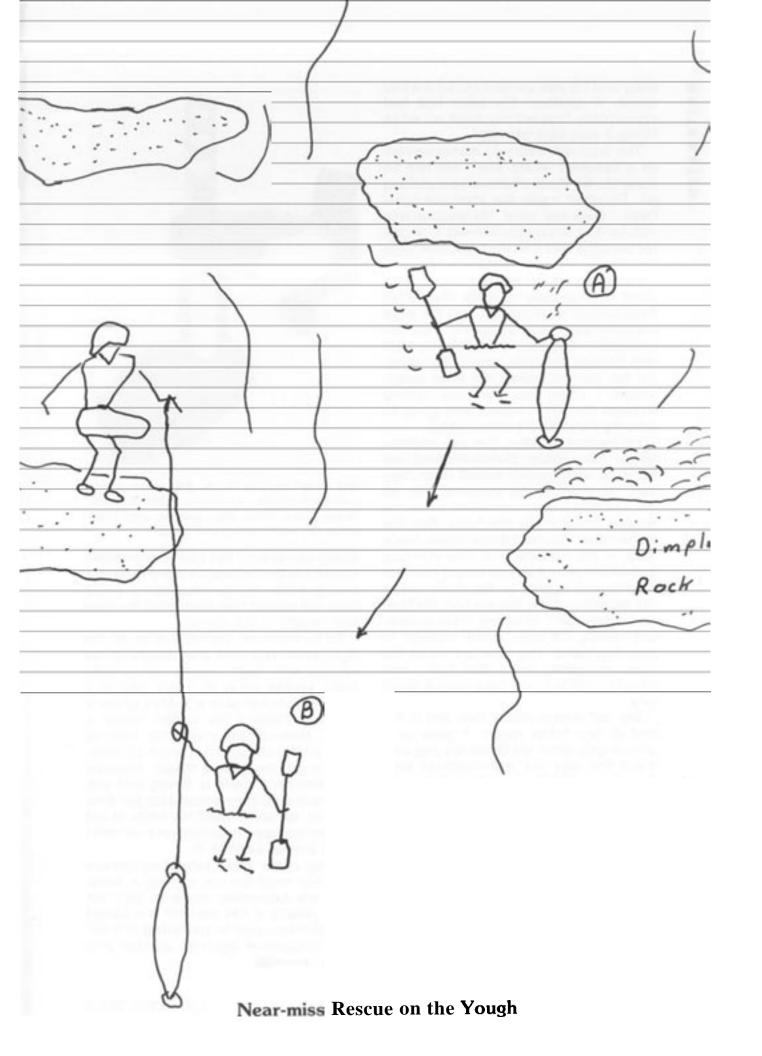
Getting through the Loop was fun and easy. The sun was skirmishing with the clouds, the wind was balmy, life was feeling good. But then I was cut down to size, humbled by the quiet but very real power of the river. Maybe it was overconfidence or lack of concentration or

just plain bad luck, but when I hit Dimples Rapid, I was a hair too close to the pounding eddy line that eats unaware boaters for lunch. I was quickly snapped up for that day's tasty dessert.

For some unexplainable reason, I made an uncharacteristic move and immediately pushed the panic button. In two years of paddling, I'd proven to be one of those grin-and-bear-it stoics. I'd endured all the typical bloody wounds, scraped knees, quarter-mile swims and still had a great time. But on this day, my resolve was weak. Without even a stab at a roll, I pulled the rip cord and popped to the surface, clinging to the gigantic rock that was creating the rabid, hungryeddy line.

John pulled into the eddy and tried to talk me intograbbing the end of his boat. I knew that was the right thing to do, but panic gripped my judgment. Perhaps one of those magnificient Hollywood slaps across the face would have rattled the ole brain back into socket, but John was working too hard just staying upright in this small, insatiable eddy.

The Next Rescue Attempt: John paddled from my midriver eddy, over to the river right, behind the larger, quieter eddy below the huge, center river rock. Climbing out onto this large rock, John planned to throw me his safety rope and tow me and the boat across the current, into his larger, quieter eddy. It would be a hard pull. The current between my



eddy and his was constricted by the two rocks, in addition the eddy line had repeatedly flipped my boat on edge filling it with tons of water.

The boat was about as maneuverable as a beached whale and I felt like an insignificant piece of seaweed clutching on. So when I saw the rope sail overhead, I felt a real relief. My reaction was natural and seemingly correct: I lunged for the rope, tied it to the boat, and hung on, hoping for an easy pull to shore.

I then swung out into the current with John holding onto his end. The heavy boat surged downstream and the rope snapped steel-taut. Suddenly, I felt the circulation in my hand cut off. The rope was twisted painfully around my wrist. As the current pulled the boat downstream I could feel the rope cutting through my skin. I knew I was going to lose my hand to the safety rope!

I screamed to John, "Let go—pleeeze let go!" He said laterthat for the first time he knew what people meant when they said "blood-curdling screams". He let go. Quickly I unwrapped my wrist and moved away from the boat. But the throw rope, like most throw ropes, had a loop in the holding end (the non-bag end which John had just let go) and that quickly got caught in the rocks below the water's surface. In a second, the boat was once again straining downstream, but luckily, I'd been quick enough to save my hand. The boat pulled at the rope, struggling to be free, but it was caught in what could have been a death grip.

We had always had a loop tied in the end of our throw ropes. It gave us a secure grip when we threw the bag and that's the way the manufacturer sent them to us. This time, we lost that throw rope to the rocks. But our other ones were quickly untied to allowfree flowing rope to move safely through the water.

Obviously, we learned that throw ropes can be dangerous. They can easily wrap around legs, ankles, and necks, if the swimmer is upset during a rescue (and what swimmer isn't a little off guard?) Taking the loop out of the end is one solution, so is educating paddlers about the hidden dangers in



The Tekah Survival Knife: \$39, three-and-a-half-inch blade. Available from Sharper Image, Dept. 8702, 755 Davis St., San Francisco, CA 94111; (800) 227-3436.

safety equipment. But a more significant solution is the imperative need to carry a strong knife. In my situation, I could have cut myself free, even after the rope was caught in the rocks.

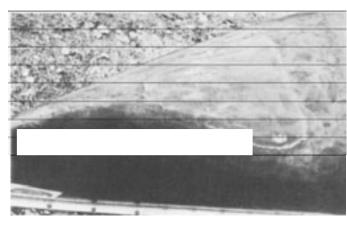
To be effective, the knife must be the right kind. Not one that needs to be opened with both hands, not a knife that's tucked away in a dry bag or a swimsuit pocket or in a T-shirt under a life vest. Rather, the boater needs a good, steel-strong knife that can be worn on the chest within reach of either hand in a quick-release sheath, because the need for a knife is timely and you may have only a few seconds to act. One paddler we know used his knife to cut his way through the bottom of a raft after being pinned beneath it.

Many clubs have safety equipment lists, but most do not include a knife. They are expensive, close to \$50, but then, what's a life worth? It's called precaution—and in paddling it's our best insurance against diaster and doom.

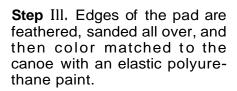
THE BOAT SHOP

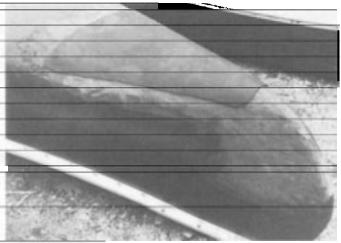
ROYALEX REPAIR

Tired of that inch-thick pad of duct tape uglifying your Blue Hole bow? Dave Brown of Great Falls Canoe Repair has the best yet answer. Unlike Kevlar felt and other grunch pads, Dave's new repair piece becomes an integral part of your ABS canoe. Below is a rough idea of how the magic is performed.



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The cost of all this? \$75. Not bad for reclaiming a clunker. In addition, Dave Brown, who also does aluminum boat repairs, is willing to train livery operators and "individuals in selected territories"

in this process and help spread the skill. If interested contact him at Canoe Repair Shop, 9328 Old Courthouse Rd., Vienna, VA 22180; (703) 281-4380.

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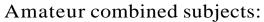
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Fluvial News

GAULEY UPDATE

Continued from page 11

there are too many nationally-important projects to authorize one with so much opposition. But the fight is by no means over.

2nd — Meanwhile, the town of Summersville and Noah Corporation have applied to the Federal Energy Regulatory Commission (FERC) for a permit to build a hydropower plant at the base of the existing dam. This would significantly damage any water release schedule. FERC virtually never turns down any outfit for a project permit.

3rd — Nevertheless, the Corps of Engineers is being swamped with mail continually pressuring it to give up the Gauley ruination. By the Corps own count **94%** of the 486 letters received from 40 states have asked them to stop this foolishness.

4th — However, the Department of the Interior has completed its study on the Gauley judging it "Eligible but not Suitable". Sez which? This little gem of Interior doubletalk means that the 25.7 miles of magnificent river coursing through a beautiful hardwood forest makes it perfectly eligible for Wild and Scenic protection. But somehow the river failed to jump the administration's suitability hoops, e.g. the amount of land currently publicly owned along the river, acquisition costs, local sentiments, and are there any resources (mining and timber) which could profitably be picked clean first. This wonderfully devious, new plot of the Department is a deliberate attempt to further gut the Wild and Scenic protection system. Let's get the Wattage out of there.

5th — Therefore, if you want to help join the fight to save the Gauley, write Hon. Robert Roe, Chairman Subcommittee on Water Resources, send it to Joe Italiano, Editor House Committee on Public Works, 2165 Rayburn House Office Bldg. Washington, D.C. 20515. Also, write Citizens for the Gauley River, Box 7165, Cross Lanes, WV 25313.

-Thanks to ARCC, EPRO, & KCCNY

GAULEY RIVER FESTIVAL

Come on down on September 24th for the Gauley River Festival sponsored by the Citizens for the Gauley River. There will be a slalom race during the day, and bluegrass music, equipment raffles, films, and exhibits during the evening. All profits will go to the CGR.

MOOSE RIVER UPDATE

AWA recently announced the formation of a special task group called "Save the Moose River" to focus efforts of environmental groups and citizens concerned about damming of the river at Ager's Falls near Lyons Falls, New York. The group's attorney, Doug Ward of Albany, is pictured on this issue's front cover sampling the drop on which the diversion dam is to be built.

One meeting has already been held between representatives of the coalition and more are to follow regarding numerous issues surrounding construction of the 5.6 megawatt hydro-facility. The developer, Long Lake Energy Corp., has offered to develop certain recreational aspects of the mile-long river corridor and make significant modifications of the diversion structure penstock, and powerhouse to mitigate the project's scenic, paddling, and other impacts.

Negotiation is underway on other issues including arrangements for recreational water bypassing and public access. Long Lake hopes to finish fishery impact studies early this summer, complete negotiations with the NYS Department of Environmental Conservation and the Coalition, and file a final construction license application to FERC by July of 1983. If NYSDEC decides that bypass of more than 140 cfs will be needed to protect the fishery, Long Lake has indicated the project will be economically unfeasible. Georgia Pacific Corporation, however, has indicated that they would then be interested in developing this stretch. The Coalition plans meetings with that company soon to establish lines of communication to facilitate future negotiations.

BOOK REVIEWS

The Gradiose Rio Grande

Continued from page 13

Throughout these pages one discerns a lot of the Burmeister personality and philosophy. The author loves the river and its canyons. He also loves the Mexican natives, loathes civilization's encroachments, prefers the foldboat over any other, and profers a defined set of rules for outdoor travel. These feelings are intensively opined. For me they are an addition. I have always had more pity than praise for the author who sweats out an entire volume deliberately devoid of his own opinions for "objectivity's sake".

Here is a book that talks all about a river that a man has grown to love by paddling it. It is not exactly a guide, though you will learn from it. It is not a coffee table book. Indeed, some of the photos lack proper composition and a few are out of focus. But despite all that. one cannot fail to come away marveling at the sheer lovliness of this area and be enticed to perhaps make that next expedition the Rio Grande.

—Reviewed by Bart Jackson

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