

*American*

# WHITEWATER



**\$1.95**

AMERICA'S OLDEST WHITEWATER MAGAZINE

**March-April 1985**

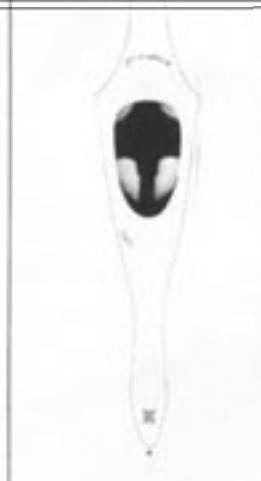
**Vol. XXX No. 2**

Newstand Date — May

# AQUABATICS



## 3-Dimensional Paddling Fun . . . Now Playing at a River Near You!



Experienced paddlers are a critical bunch. Any new kayak design that hits the river has to offer a bold new dimension, a sense of fresh excitement to win their approval.

The radical new Sabre from Perception meets those tough expectations. Small, flat and fast. Sabre is the 3-Dimensional kayak advanced paddlers have been waiting for.

Says designer Bill Masters: "When you're in your kayak, on top of the water, you're in an 'X, Y' plane — left and right, forward and back. But at the end of a drop, or whenever your boat plunges underneath the water, you're in a 3-Dimensional world. 'X, Y and Z'."

The Sabre allows you to respond to those underlying currents with a symmetrical

new Hydrofoil™ design. Hydrofoil makes use of the river currents through which it passes, the same way the wing of an aerobatic airplane makes use of air currents to lift and pivot. We call it Aquabatics.™

The Sabre can do on-point pivot turns or squirts while playing an eddy line. And its rugged Gyroflow™ molded construction will let you play as hard as you want.

It's a new dimension, a new style, a new action.

3-Dimensional Paddling. And it's playing now. At a river near you. Ask your Perception dealer. Or fill in the coupon and mail it today. We'll send you the details.

Specifications: weight 34 lbs. (15.4 kg), volume 50 gallons (189 liters), length 12' 2" (3.7 m), width 24" (60 cm).

Rush me a free copy of Perception's new color catalog and the name and address of my nearest dealer. (I enclose \$1 for speedy first class mail.)

Name   
Address   
City/State/Zip



Mail to: P.O. Box 686, Liberty, S.C.  
29657 803-859-7518

The  
American  
Whitewater  
AffiliationBoard of **Directors**

## President

MARGE CLINE  
1343 North Portage  
Palatine, IL 60067

**1982-1985**

## Tom McCloud

11352 Mobile Estates  
West Lafayette, IN 47906

## Jim Stohlquist

P O Box 291  
Buena Vista, CO 81211

## Mike Beard

400 No. Walnut  
Little Rock, AR 72205

## Kelth Thompson

1171 N 10th Street  
Laramie, WY 82070

## Fred Young

10401 Geneva Drive  
Roscoe, IL 61073

**Executive Director**

Charles Andre  
1083 Meridian Ct  
Lexington, KY 40504

## Conservation Director

**DeLafield Dubois**  
Box 4936  
Albuquerque, NM 87196

## Treasurer

Claire Geauman  
6301 Hillcrest Pl  
Alexandria, VA 22312

## Marketing

Risa Shimoda  
428 Page Ave #11  
Atlanta, Georgia 30307

## AWA Journal

**Editor-in-Chief**

Dave McCourtney  
Box 274

Powell Butte, OR 97753  
(503) 447-6293

**1979-1983**

## Ken Horwitz

c/o Romer  
Drawer 440  
Benton, TN 37307

**Peter N. Skinner**

Box 272, Snyder Rd  
West Sand Lake, NY 12196

## Ron Walters

Idaho State University  
Box 8118  
Pocatello ID 83209

## Contents:

## Page

**11 Dr. CWA** — by Chicago Whitewater Assoc.

**13 Paddlers Profile - Betsy Frick** — by David Wallace

**16 Canoes, Canyons and Dinosaurs** — by Kerry Edwards

**22 AWA's River Mom** — Interview by Dave McCourtney

**26 Kayaking the Grand** — by Randy Welch

**28 ABS Royalex Canoe Repair** — by the Canoe Doctor

**31 Effective Backstrap** — by Robert Patraw

**34 The Problem of Pinning** — by Rick Curtis, Tom Kreutz

**37 New Products**

**38 Bullwinkle's Corner** — by Max Wellhouse

## AWA STAFF BOX

## Apologies to:

for the story

**Incident on the Cheat. Author is**

**Fred Lally.**



**Fred Lally in action.**

## AWA STAFF

Editor: Dave McCourtney, Box 273, Powell Butte, OR 97753

Racing Editor Barb McKee 1167 Millstone River Rd Hillsboro, NJ 08876

Regional **Editors:**

Rocky **Mts:** Ed Sibert **California:** Rich Bangs **Northeast:** Mike Rodgers

Idaho: Rob Lesser **Midwest:** Fred Young **Alaska:** Jack Allen

Membership Director: Marge Weaver, 146 N. Brockway, Palatine, IL 60067

Advertising Director: Bert Uhr, 718 Laurel, Des Plaines, IL 60016

Conservation: Karla Matzke, Bob Patraw **Safety:** O.K. Goodwin

Affiliate **Coordinator:** Rob Forker

**Printing Consultant:** Jim Muhlhahn

Address Changes and Missing Journals: Contact Peter Skinner, Box 272, Snyder Rd., West Sand Lake, NY 12196. (518) 674-5519 (H)

AWA Products: Marge Weaver, 146 N. Brockway, Palatine, IL 60067

Equipment Performance Evaluation: Bob Patraw

AWA is published six times **yearly**. Single copies \$1.50 ea. Surplus back copies and

other AWA Products are available from AWA, 146 N. Brockway, Palatine, IL 60067.

1985 American Whitewater Affiliation. All rights reserved.

**Cover Photo: Kayaker in the Grand Canyon. Photo by Randy Welch.**

# Letters

## To The Editor

Dear Sir or Madam,

Dating back a dozen years I had been an AWA member from the mid-fifties on.

I am no longer very active in paddling, and still love the beauty of wild rivers. It gets my blood boiling when I see a beautiful wild river being destroyed and local people, fishermen and hundreds of paddlers (unfortunately) ignore it!

I am talking about the beautiful Chilliwack River in B.C., 1½ hours drive from Vancouver, the most popular and most scenic W.W. river in B.C. A mountain river flowing past snow capped mountain peaks and alpine meadows, presenting every grade of difficulty.

This once was a famous steelhead fishing river and recently a multi-million dollar fish hatchery was built to restore its fish stock again. Now the fishing is excellent for those who enjoy it.

However, the area has been opened up over the past 10-15 years. The river shores were not changed too much until in recent years. For one, cement retaining walls could not be built, as cement kills fish. Yet one individual who seems to have the protection of the various responsible government agencies has started it up, by building in continuation one then a second rock-mortar retaining wall some 30 feet out into the river, by doing so diverted the course of the river and causing the river to encroach onto the land causing washout of the banks. Naturally, he cut trees not only on his own but neighbors property, excavate river banks for backfill, etc. It is an ugly sight.

Now it has started a chain reaction, adjoining property owners are starting to construct retaining walls (which previously were not necessary!)

As the situation stands, about 4 years ago a property owner was heavily penalized for minor structural work. Two years ago I reported that an individual built his second cement wall 30' out into the river extending his property and starting a 3rd mortar structure.

A dozen government officials from various departments concerned with this problem viewed the site. In protest they declared it not only damaging to fish and an unsightly structure, but illegal as no permits were filed or issued. They immediately suggested total removal of all cement work.

Now, two years later, the wall stands and had been continually expanded since. The course of the river at this point has been altered due to the structure. I keep on protesting against this ugly and damaging sight and finally was threatened by one official - "not to continue making waves and keeping quiet or else."

When officials had talked to this individual, they usually changed their tune in his favor. (The government finally did send him a letter, informing him to discontinue the cementing work). However, they look the other way and have ALLOWED him to keep on cementing without permits or penalties! Therefore it will be difficult for the government to stop others doing the same destruction to a most scenic wild river.

A lot is talked about river preservation and conservation by various interest groups, but no one gets off their butt doing something about it! They just don't care or give a damn about it!

In past years I made several conservation efforts and the only response I had ever received was from my American friends. But, I too, wrote many letters in response to their efforts, as foreign mail seems to have some effect (tourist dollars).

Coming to the point of this letter, I would like to appeal to the AWA and its conservation minded groups for support, to have the mentioned cement structure totally removed and stop others doing the same, destroying a natural wild river and its scenic beauty.

The mentioned sight is approximately 5%-6 miles upstream from the Vedder Crossing bridge. The alleged name of the person responsible for the extensive cement wall structure into the river is Mr. Kamols.

Please write that you oppose the unsightly, damaging cement structure, requesting its removal since it was built illegally without permits and would be a legal foundation for others to do likewise.

Address:  
Ministry of Environment  
Water Management,  
10334 - 152 A St.,  
Surrey, B.C. V3J 7P8  
Attention: G.J. Baker, P. Eng.

I would really appreciate if some letters in protest are sent to the given address.

Wishing good paddling and hi-water for the rest of the season, I remain, with warm regards,

Vern, Coquitlam, B.C.

Dear Dave,

It was nice to see an article about a woman paddler in your November-December 1984 issue; however, there was an error in Pete Skinner's piece. The entry "Other Worlds" by Cameron O'Connor won best of show at the Second National Paddling Film Festival in Lexington, Kentucky (not Tennessee).

We are justifiably proud of our Festival, the only one of its kind as far as we know. Your help in clarifying its location would be gratefully appreciated—we want the next one, February 28 and March 1 of 1986 to be even more popular. Spread the word!

Lynda Matussek  
Bluegrass Wildwater Association

## Acid Rain Haunts Smokey Mountains

GATLINBURG, Tenn. (UPI) — The Great Smoky Mountains National Park marks its 50th birthday with fears that acid rain is bringing "the ecological disaster of the century" to America's most popular wilderness preserve.

Officials say the lush 520,000-acre preserve of mountains, waterfalls, hiking trails and campground could be facing its greatest threat since the park's formation June 15, 1934, thwarted the schemes of developers secretly buying up the land.

"We have identified the effects of air and water pollution as our No. 1 problem," said Stu Coleman, chief of resources management for the park. "But it's one of those things that you just don't know what to do about."

Some 100,000 trout have died since 1981 in trout farms owned by Cherokees on the boundaries of the nation's most-visited national park, and TVA is investigating whether acid rain is the cause.

Half of the trout have died in four fish kills since February, officials said.

Atop the park's five tallest peaks, red spruce and Fraser fir trees that normally live up to 400 years appear to be dying after 45 years, said Dr. Robert Bruck, a plant pathologist at North Carolina State University.

"There is a definite decline phenomenon in the spruce and fir populations at high altitude in the Great Smoky Mountains," Bruck said. "This is of great concern."

"The Great Smoky Mountains is one of our most precious natural resources. If this degradation continues, it would be the ecological disaster of the century."

Tests of mountain rainfall have revealed heavy amounts of acid, but Bruck said more research is needed before acid rain can be pinpointed as the cause of trees' stunted growth.

Sulfur dioxide belched by coal-fired power plants is believed to be the main ingredient for acid rain.

"The acid rain that is falling is very profound," Bruck said. "We're talking about 100 times more acidity than you would find in pristine rainfall."

Bruck said a team of North Carolina State researchers is investigating damage to trees on Mount Sterling, Mount Guyot, Mount Le Conte, Clingman's Dome and Laurel Top. The plant pathologist said trees are picking up pollution from clouds that float past the tallest peaks.

Tennessee Scenic Rivers Association

# 1985 NSWC Race Schedule (Continued)

## MAY

- 4-5 Keweah River Races**, Three Rivers, CA (SL/WW), Dennis Waldman, 580 Rosecrans Ave., Manhattan Beach, CA 90266
- 4-5 Stillaguamish River Race**, Granite Falls, WA (SL/WW) NORTHWEST DIVISION SLALOM & WILDWATER CHAMPIONSHIPS, Clive R. B. Lister, 3136 A Portage Place, Seattle, WA 98102
- 4-5 West River Race (A,B)**, Jamaica, VT (SL), Ken Fisher, RFD #4, West Brattleboro, VT 05301
- 5 West River River Race (C,D)**, Jamaica, VT (SL), Ken Fisher, RFD #4, West Brattleboro, VT 05301
- 11 Westminster Slalom**, Simsbury, CT (SL), Ken Stone, 995 Hopmeadow St., Simsbury, CT 06070
- 11-12 Apple River Slalom**, Sommerset, WI (SL), Robert Schuetzler, 4408 Edmund Blvd., Minneapolis, MN 55406
- 11-12 S-Turn Slalom**, Great Falls, MD-VA (SL), Yuri Kusuda, 808 Ivy League Lane, Rockville, MD 20850
- 12 Schroon River Wildwater**, Chester-town, NY (WW), NORTHERN NEW YORK DIVISION WILDWATER CHAMPIONSHIPS, Bob Cooley, 606 S. Tool Street, Scotia, NY
- 18 Schroon River Slalom**, Chester-town, NY (SL), NORTHERN NEW YORK DIVISION SLALOM CHAMPIONSHIPS, Peter Kennedy, Wildwaters Outdoor Center, Warrensburg, NY 12885
- 18-19 CCRA Slalom**, Burlington, CT (SL), NEW ENGLAND CUP RACE #4, Jeff Dickson, 31 Elizabeth St., South Windsor, CT 06074
- 18-19 Rio Bravo Slalom**, Bakersfield, CA (SL), Mike Lekas, Box 2518, Lake Isabella, CA 93240
- 18-19 Dierks Whitewater Races**, Dierks, AR (SL/DR), OZARK-OUACHITA CUP RACE #2, CENTRAL DIVISION SLALOM & WILDWATER CHAMPIONSHIPS, Joyce Wellhouse, 3410 Ridge Road, North Little Rock, AR 72116

- 18-19 Crystal River Race**, Glenwood Springs, CO (SL/DR), Tom Steitz, Box 773714, Steamboat Springs, CO 80477
- 25-26 Plato Creek**, Grand Junction, CO (SL/DR), Brian Goodrich, 939 Mesa Ave., Grand Junction, CO 81501
- 25-27 St. Louis Slalom & Wildwater**, Scanlon, MN (SL/WW), Dan Thies, 2530 8th Street, Minneapolis, MN 55454

## JUNE

- 1-2 Esopus Slalom Race**, Phoenicia, NY (SL), ATLANTIC DIVISION SLALOM CHAMPIONSHIPS, Sandy Jones, P.O. Box 284, Denville, NJ 07834
- 1-2 East Race Spring Slalom**, South Bend, IN (SL), Michael L. Martin, 25276 Aqua Dr., Elkhart, IN 46514
- 1-2 Snowmass Races**, Aspen, CO (SL/DR), Tom Steitz, Box 773714, Steamboat Springs, CO 80477
- 8-9 Land of Ah's Slalom & Downriver**, Manhattan, KS (SL/DR), Paul Sodamann, Kansas Canoe Assoc., 1432 Univ. Dr., Manhattan, KS 66502
- 8-9 Steamboat Spring Races**, Steamboat Springs, CO (SL/DR), Tom Steitz, Box 773714, Steamboat Springs, CO 80477
- 9 TriBoro Lehigh Downriver Canoe Race**, Northampton, PA (DR), Eugene P. Gallagher, 715 North New St., Bethlehem, PA 18018
- 13-14 Colorado Cup**, Buena Vista, CO (SL), ROCKY MOUNTAIN DIVISION SLALOM CHAMPIONSHIPS, Tom Steitz, Box 773714, Steamboat Springs, CO 80477
- 14-16 Southeastern Whitewater Championships**, Wesser, NC (SL/WW), Ben Maxwell, 2758 Stauton Dr., Marietta, GA 30067
- 15 3rd Annual Susquehanna River Celebration DR Race**, Harrisburg, PA (DA), Eric Vanderheyden, 491 Middletown Rd., Hummelstown, PA 17036
- 15-16 Salmon La Sac**, Roslyn, WA (SL/DR), Diane Troje, 4257 123rd Ave. SE, Bellevue, WA 98006
- 15-16 Fibark**, Salida, CO (SL/DR), Tom Steitz, Box 773714, Steamboat Springs, CO 80477
- 22 LVCC 2nd Annual Lehigh River Race**, Allentown, PA (DR), Eugene P. Gallagher, 714 North New St., Bethlehem, PA 18018



**22-23 Wausau I**, Wausau, WI (SL), MIDWEST DIVISION SLALOM CHAMPIONSHIPS, Don Sorensen, Mall Cafeteria, Albert Lea, MN 56007

**22-23 Cossatot Reef's Slalom & Downriver**, Gilham, AR (SL/DR), OZARK/OUACHITA CUP RACE #3, Joyce Wellhouse, 3410 Ridge Rd., North Little Rock, AR 72116

**23 Lowe River Race**, Valdez, AK (WW), Mike Buck, P.O. Box 1486, Valdez, AK 99686

**29-30 Durangos Races**, Durango, CO (SL/DR), Tom Steitz, Box 773714, Steamboat Springs, CO 80477

## JULY

**6-7 Eagle River**, Eagle, CO (SL/DR), Tom Steitz, Box 773714, Steamboat Springs, CO 80477

**7 Nenana River Race**, McKinnley Park, AK (WW), Peter Finnoff, Box 10300, Fairbanks, AK 99710

**8-11 1985 UNITED STATES SLALOM & WILDWATER NATIONAL CHAMPIONSHIPS**, Nantahala River, Wesser, NC, N.O.C., **US 19W**, Box 41, Bryson, City, NC 28713

**13-14 Chattahooschee Summer Race**, Atlanta, GA (SL/DR), Atlanta White-water Club, P.O. Box 33, Clarkston, GA 30021

**13-14 Sauk River Slalom & Wildwater Race**, Darrington, WA (SL/WW), Richard Shipley, 16046 Virginia Pt. Rd. NE, Poulsbo, WA 98370

**20 Arkansas State Championships**, Little Rock, AR (DR), Mike Crowell, 5514 Kavanaugh, Little Rock, AR 72207

**21-22 Eagle River Race**, Anchorage AK (SL/DR), Mike Grijalva, 3561 E. 20th Ave., Anchorage, AK 99501

**27-28 St. Croix Slalom**, Taylor's Falls, MN (SL), Robert Schuetzler, 4408 Edmund Blvd., Minneapolis, MN 55406

# The Masters Game

The inaugural MASTERS GAMES will take place August 7th to August 25th, 1985 in Toronto, bringing together 10,000 athletes from around the world.

The MASTERS GAMES have been created to provide long term goals in sport and to promote the ideals of "Sport for Life". They offer the inspirational message to mature amateur and professional athletes, that continuing sports competition at the highest level can be a life long pleasure.

There will be no flags and no national anthems . . . all competitors will participate as individuals, competing in the uniform of their sport. The MASTERS GAMES are solely for the purpose of providing fine competition for mature athletes in their own age group.

Athletes will participate in 22 sports and share in a multitude of events, ceremonies and cultural festivities that will make up the MASTERS GAMES.

The MASTERS GAMES will take place once every four years in different cities around the world. To qualify as a host venue, a city must be able to provide suitable facilities, eliminating the need for heavy capital cost in construction. The Games are funded through a combination of corporate sponsorship, government, and participant contributions. Athletes are responsible for their own travel and accommodation expenses and will pay a nominal registration and entry fee.

Included in the rapidly growing list of renowned Master Athletes are former Governor General of Canada, Roland Michener, the Honorary Master of the Games; Australian world-wide record holder for the sub four-minute mile, John Landy - Honorary Chairman of Athletics; and former National Hockey League super star, Jean Beliveau - Honorary Chairman of Ice Hockey.

Other former greats accepting Honorary positions in the Games include, World Cycling hero and winner of five successive Tours de France, Eddy Merckx - Honorary Chairman of Cycling; Vice President of the Chinese Table Tennis Association and World Champion of

## 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.

Women singles event at the 1961 World Table Tennis Championships in Beijing is Madame Qui Zhohghui - Honorary Chairperson of Table Tennis; and a Milan Fencing champion of many Olympic and World Fencing competitions, Eduardo Mangiarotti - Honorary Chairman of Fencing for the Games. Contact Suzie McKeegan, PO Box 1985, Station P, Toronto, Canada M5S 2Y7.

## CANOEING

CANOEING is one of the 22 sports selected for the first MASTERS GAMES. The Games will provide athletes with an opportunity to compete with some sort of the sports true legends in this multi-sport competition to be held August 7th to 25th 1985. This inaugural sport event is the first of this magnitude ever held in the world. Master Canoeists from around the world will be coming to Toronto Canada to compete in these historic games.

Different sport events have different age requirements and proof of age must be submitted with the competitors Official Games Registration and Entry Application.

The age categories for Master Women Canoeists are 30+, 35+, 40+, and 45+ years of age. For men, they are 35+, 40+, 45+, 50+, 55+, and 60+. There are exceptions in the C15 for where the average for men is 40+ including the coxswain. Exceptions also exist in the North Canoe where the average must be 42 and in the Marathon Mixed C2 the women's age categories are 30+, 35+, 45+ and 50+.

C4 is for men only and here the age categories run 35+, 45+, and 55+.

The age eligibility date for all CANOEING events is August 9 1985 with competition dates for CANOEING being August 9th to 13th 1985.

## UPPER YOUGH

Debbie Pepper of Friendsville, Md reports that, following the unsuccessful effort to prosecute those who carried out an illegal logging operation in the Upper Yough corridor, the Maryland Department of Natural Resources has decided

that the wild and scenic regulations are not enforceable. The Department has disbanded the advisory commission and no longer plans to do anything about the Upper Yough under existing law. Unfortunately, this indicates that the Department may go back to Annapolis next year for new legislation. From the private boaters' point of view this could be perilous. The Maryland legislature is a horribly ugly Class V or VI blind drop in which boating organizations never know how badly they may get trashed.

## NEW ORGANIZATION BEING FORMED

Several CCAers who have been working on technical and legal issues regarding river conservation have formed a new, non-profit consulting organization, River Research Systems. It is assisting citizens' groups, boating clubs, and others around the country who are fighting river battles in the agencies, courts, and legislatures and who do not have access to the high-level professional expertise necessary to win these battles.

River Research Systems is endeavoring to provide these groups and clubs with technical and legal research and analytic work on various river issues and to supply documents (letters, memoranda, testimony, briefs, research papers, studies, etc.) which are business-like, objective, and the highest professional caliber.

If this sort of work appeals to you and if you have technical engineering skills, a legal background, training in economics, or other skills that may be useful, there is a place for you in River Research Systems. You can have any fancy title you like and even be a member of the Board of Directors. In addition to the immense satisfaction to be had in defeating unwise hydro projects and other threats to river recreation, sources of funds are being developed to pay for the work, acquire computer capacity, etc. Anyone interested can call Steve Taylor, 587-1204, or Pope Barrow, 546-4912, Washington, D.C.



---

# The Fluvial News

---

*What's Flowing in  
The Boating Community*

WHITEWATER

The Water Development Commission's initial report, which discussed eight potential damsites, stated the following conclusions regarding the "needs" to be met by damming the Clarks Fork.

**Irrigation:** "At present, there are but limited needs for development of Clarks Fork waters for the Wyoming portion of the basin; the Montana portion does have late-season irrigation needs. Water shortages are not frequent or severe on the Clarks Fork."

**Hydropower:** "A Missouri River Basin Commission power-needs modeling study suggests that no additional generation capacity is needed in northwest Wyoming due to its interconnection within the power grid."

**Flood Control:** "The Wyoming portion of the Clarks Fork experiences less than \$10,000 of flood damage annually."

**Municipal/Industrial:** "There are no in-basin municipal or industrial demands."

It seems that damming one of the last, and certainly the most scenic, free-flowing river in Wyoming is a ludicrous undertaking when the dubious "benefits" are considered.

The results of the geotechnical feasibility study of the Paint Creek dams site will be available in early January 1985. The report will include preliminary plans for a dam if the site is found to be a workable alternative. Cost estimates will also be presented so the Water Development Commission can request funds for dam construction from the 1985 Wyoming legislature.

---

The Planning and Conservation League Foundation is proud to an-

nounce the release of a new publication dealing with the preservation of the North and Middle forks of the American River in California. These beautiful rivers are threatened with destruction by the Auburn Dam and reservoir, a project proposed by the US Bureau of Reclamation. PCLF proposes that the land acquired for the reservoir project be used to create a new Upper American River National Recreation Area, which would replace the reservoir project. There is ample precedent for such a move: the Delaware River was placed in a National Recreation Area after the destructive Tocks Island Dam was stopped. When Devil's Jump Dam was abandoned in Kentucky, the Big South Fork National River and Recreation Area was created. Finally, after High Mountain Sheep and two other dams were abandoned in Idaho, the Hell's Canyon National Recreation Area was authorized by Congress.

The new PCL Foundation study reveals that the canyon of the North and Middle Forks of the American and their 48 miles of rivers are an important national recreational, cultural, historical, and aesthetic resource. The canyons are already used by over half a million people a year, and these numbers could greatly be increased if the area were developed as a National Recreation Area. The Middle Fork and North Fork of the American River are important whitewater and quiet water boating resources, and are used by many thousands of boaters and commercial raft passengers each year.

This proposal completes a series of studies which showed that the Auburn Dam project is wasteful, destructive, and unnecessary, and that viable

# The Fluvial News

What's Flowing in  
The Boating Community

alternatives are available. Economic studies by the University of Montana, the Department of Interior, and the California Department of Water Resources have shown that the benefit/cost ratio of the project is far less than one to one. The dam would cost the taxpayers far more than could ever be repaid by the sale of water and power. The Department of Water Resources has published studies showing that there are viable alternatives to the flood control and water supply purposes of the project. The power aspects of the project can easily be replaced by trading energy between California and the Pacific Northwest.

The new PCLF study was transmitted to Congresswoman Sala Burton, who has promised to ask the National Park Service to review the conclusions and recommendations. The PCL Foundation requests local, state and national conservation groups to support the concept of replacing Auburn Dam with the Upper American River National Recreation Area.

The report was prepared by Anna Haines, a graduate student in regional planning at Cornell University, and Dr. Bea Cooley of Friends of the River. The study was directed by Dr. Gerald Meral, Executive Director of the PCL Foundation, and a former Deputy Director of the California Department of Water Resources. Financial assistance was provided by various units of the Sierra Club, Friends of the River Foundation, and professional outfitters. Copies are available from PCL Foundation, 1228 N St. #33, Sacramento, CA 95814 for five dollars.

## WILD AND SCENIC STUDY RIVERS LOSE PROTECTIONS

WASHINGTON, D.C.: Ashocking new policy has been declared by the U.S. Department of the Interior: that Wild and Scenic study rivers where studies have not yet been released are no longer protected.

The policy immediately affects the Gauley, Yampa, Cache La Poudre, and some 30 other rivers presumed to be protected from water projects by the Wild and Scenic Rivers Act. The 6-year study period for these rivers expired Oct. 1, 1984.

In the Oct. 15 letter to Senator Robert Byrd (D-WV) concerning the Gauley, Interior Department Assistant Secretary Roy Arnett states: "Since the Gauley River study period has expired, and the report has not been submitted, it seems that FERC (Federal Energy Regulatory Commission) could now process hydroelectric applications for development on the Gauley..."

ARCC is challenging Interior's position through direct communications with the Department and encouraging Congressional oversight. A court case is also possible.

The Wild and Scenic Rivers Act provides for two protected periods for rivers under study for the national system. After Congress designates a river for study, the National Park Service, Forest Service, or Bureau of Land Management are given a length of time (usually between 3 and 6 years) to complete the study. Then, when the President submits the study to Congress, a 3-year clock starts ticking. The river remains protected while Congress considers its fate. If Congress has not acted after 3 years, most of the river's protections expire.

continued in next issue

## DR. CWA

Q. What kind of person would paddle a pink Dancer?

A. This matter of boat color is a very serious one to many people. Rather than give my diagnosis of only pink Dancer paddlers, I've decided to list the various colors and the meanings that may be given to each. Combined with my internationally famous article on astrological signs and the paddler, this will give you an excellent handle on what kind of boater you are dealing with before you ever meet him/her.

**Black:** This is obvious. Look at the person paddling the black boat. He is overweight, flabby, a lousy paddler, and only slightly better than a rafter on the evolutionary tree. A woman never paddles a black boat, only an insecure male who fears wimphood. Black boats are impossible to spot when in the water.

**Blue:** A soothing color, the color of the sky on a sunny day. A pale blue boat soothes the soul as well as the eye. Thus, the paddler who has a pale blue boat is likely to be a raging lunatic who is always out of control. His/her blue boat was prescribed by the shrink. A dark blue boat is another matter. Purple, the color of royalty, indicates stability, steadfastness, and a feeling of being better than everyone else.

**Clear/Natural:** The paddler whose boat has no color added is a paddler whose ego is under control. He/she is confident of their personality and ability, and does not need a boat to express their inner self. The natural paddler is likely to be a fine person and an excellent boater. It should be no surprise that my boats are natural.

**Green:** The color of unripe things, of envy; the hue associated with sickness and nausea. Need I say more?

**Orange:** A fiery, dynamic color. Orange paddlers like to call attention to themselves. They wear skimpy, tight-fitting suits, flirt a lot, and are always careful to make sure that every hair is in place. They tend to paddle pretty well because they know they can't blend into the crowd. Orange boaters are never far from a mirror.

**Red:** The color of passion and courage. A red boat indicates an active person who grabs for all the excitement that life has to offer. Along the way he/she encounters a lot of rocks. The red boat has a lot of patches and duct tape on the hull. Red paddlers are sexy, but rough.

**Striped:** A complex situation. If the stripes make the boat look like an animal (zebra, bumblebee, okapi) it indicates a serious identity problem. The paddler isn't comfortable with his boat unless he can think of it as a living thing. If the stripes are colorful, it is an indication that the owner is a fun-loving party type who sees the boat as a party favor. It's all in good fun until the sparklers and Roman candles are added.

**Violet:** A delicate, ethereal color. The violet paddler is a sensitive type who likes wild flowers and pretty clouds as much as good whitewater. Don't depend on a violet paddler for a rescue.

**White:** The color of purity and fastidiousness. (Great word, isn't it?) The white boat characterizes a clean boater, one who hates dirt and clutter, and one who will do all the chores in camp just to be sure it stays clean and neat. A sucker.

**Yellow:** Another bright, pay-attention-to-me color. Yellow boats are about halfway between orange and blue. The yellow boater want to be noticed, but is too repressed to go orange. This type of person can blow up at any time and is not to be trusted.

**Gray:** This color is somewhere between black and white. Gray boat owners are significant because they can never make decisions. Hence, their boats are often wrapped. Never put a gray boat owner in the bow.

**Names:** Anyone who would put a name on their boat should not be allowed on the water.

And, finally, **pink.** Any person who paddles a pink boat, and a Dancer no less, is obviously secure.

(Dr. CWA is a regular columnist for the Chicago Whitewater Association's monthly publication, *The Gradient*. We hope to expose you frequently to his insurmountable wisdom in the future. The Editors)

## 1985 ACC Race Schedule

The Arkansas Canoe Club will host 5 slalom and 4 downriver races this year at various rivers around the state. Below you'll find the dates, locations, and contact persons as well as what type race is scheduled. This year we're adding team races to the slalom competitions and inaugurating the **OZARK-OUACHITA CUP SERIES** for our three whitewater races. We encourage paddlers of all skill levels to come join in the fun as the atmosphere at these races is unlike that in other parts of the country. For more information in general, write Max Wellhouse, Race Director, 3410 Ride Rd. NLR, AR, 72116. Se ya on the water.

212 (SL, OC) — **TEXARKANA POOL SLALOM**, Dan Hammock (214) 838-5970.

4113 & 14 (SL, DR, OC) **3RD ANNUAL BIG PINEY SLALOM AND DOWNRIVER RACES** Big Piney Creek, Long Pool Campground. Joyce Wellhouse, (501) 758-4716.

5/18 & 19 (SL, DR, OC) **DIERKS WHITEWATER RACES**, Lower Saline River, Horseshoe Bend Rec. Area near Dierks, AR. Joyce Wellhouse (phone # above).

6122 & 23 (Tentative) (SL, DR, OC) **COSSATOT REEFS SLALOM & DOWNRIVER RACES**, Lower Cossatot River, East of Gilham, AR. Joyce Wellhouse (above).

7120 (DR, OC) **ARKANSAS STATE CHAMPIONSHIPS** Arkansas River, Little Rock, AR. Mike Crowell (510) 664-4832.

9121 & 22 (SL, OC) **PINNACLE V FLATWATER SLALOM** Pinnacle Mtn. St. Park West of Little Rock, AR. Joyce Wellhouse (phone above).

SL — Slalom Race, DR — Downriver Race, OC — Open Canoes Allowed.

## Perception 1985 Conservation Award

Applications are being accepted through May 17, 1985 for Perception's 1985 River Conservationist of the Year Award.

Now in its fifth year, the award is given annually to a group or individual who has contributed significantly to the preservation of one or more of our free flowing rivers. Last year, Perception honored Dr. Gerald Meral, executive director of the California Planning and Conservation League.

Meral has been involved in more than a dozen river issues in California over the past fifteen years, and was instrumental last year in the grassroots movement to save the threatened Tuolumne River.

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

Says marketing director Joe Pulliam, "Historically, the award has been announced in October. We're moving our schedule up this year, to coincide with American Rivers Month in June. We're hoping this simple scheduling change will focus even greater attention on some worthy individual and his or her efforts to save a threatened free flowing river!"

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 June 1984 and May 1985. Nomination forms are available upon request. Write: Joe Pulliam, Perception, Inc., P.O. Box 686, Liberty, South Carolina, 29657.

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

# PADDLER'S PROFILE — BETSY FRICK

by David Wallace

WHITE WATER

Living in Reno, Nevada lends itself to many forms of mountain recreation. The nearby Sierra Nevada gets abundant snow for fine skiing, and then come spring we get to paddle on that melting snow. The Truckee River has several runs from class II to III+, and are all within 20 minutes of town. This proximity to good training runs for beginners, and intermediate to expert runs in nearby California, makes for great boating. I know it's tough, but somebody's got to live here!

Longtime Reno kayak guru Charles Albright has doggedly taught weekly free roll sessions year round for several years. This, combined with lots of willing trip leaders, produces a crop of new boaters every year.

We have several good female boaters, but the rising star in Reno womens kayaking is Betsy Frick. Betsy started kayaking after a summer as a raft guide. As most of us have surmised, kayaking compared to rafting is like comparing a 300 ZX to a Greyhound bus (no offense to rafters, we love your support!). She

quickly converted to kayaking with a maniacal zeal in July of 1983.

Betsy definitely kayaks in the white-water fast lane. The winters here are too cold for "civilized" boating (my opinion), but Betsy and several local crazies paddle through the winter. In her first season, March of 1984, Betsy's group put on the Truckee in inclement weather. By the takeout the weather turned to snow and chains were required to get back to the put in! One month later she was on the class IV North Fork of the Yuba in California. On this particular run, "Maytag" (like the machine) is the biggie — Class V. After watching two successful expert runs, Betsy herself made a clean run. Keep in mind that at this point she had been kayaking for only 10 months.!

In addition to being incredibly "ballsy", she maintains a cool and intelligent head while on the river. If things are not right for her, she knows when to portage. But unlike many female boaters, Betsy often goes for the "hair" routes.



Betsy Frick paddling the Chili Bar Run, South Fork of the American River.



Betsy cliff diving on the South Fork of American River.

After boating all winter of her first season of 1983-84, she attempted the class V West Walker in June of 1984. For those of you not familiar with California rivers, the West Walker was for years one of the definitive expert runs. "On the critical edge", as characterized by *Sierra Whitewater*. With its average gradient of 105 FPM, and two miles of 180 and 130 FPM, it indeed is a smoker of a run.

Betsy, in the company of expert boaters, got into trouble in the "steep" section near Tollhouse flat. Going over in the nearly continuous holes and froth makes for difficult rolling to say the least. The Walker is a run you DO NOT want to go over in. After a short swim, she boated on a few more miles and took another longer swim. This resulted in wrapping her plastic kayak, but she did not lose her paddle. Nothing really hurt but her pride, she elected to be "shuttle bunny" that day.

This brought Betsy down to earth a bit, and she will be more prepared mentally and physically for her next class V run. When she feels she's ready, the West Walker is on her "must do" list.

Betsy loves to kayak, and loves in many forms. In her small one bedroom apartment hangs her Taurus on one wall, and an Olympic flatwater racing kayak takes up the floor area. Several evenings during daylight savings she trains in the flatwater boat. Weekends

are spent running rivers and slalom racing.

In her first racing season she quickly progressed through the beginner and intermediate slalom classes, and on to womens expert K-1. She also races in the downriver class, and in mixed C-2. This fierce inner competitiveness has helped her to also win first place in two triathalons: the Eppies Great Race Triathlon and the South Lake Tahoe Triathlon. Both involve kayaking in place of the swimming. This lady is tough!!

When not running rivers, Betsy works for the U.S. Geological Survey as a research hydrologist. In addition to paddling and working, she is in the process of completing a masters degree in hydrology.

Boyfriend you might ask? She often runs around with a hairy old dude who makes her go telemark skiing instead of winter boating. IF she wants to. This lady is very independent as you may have guessed.

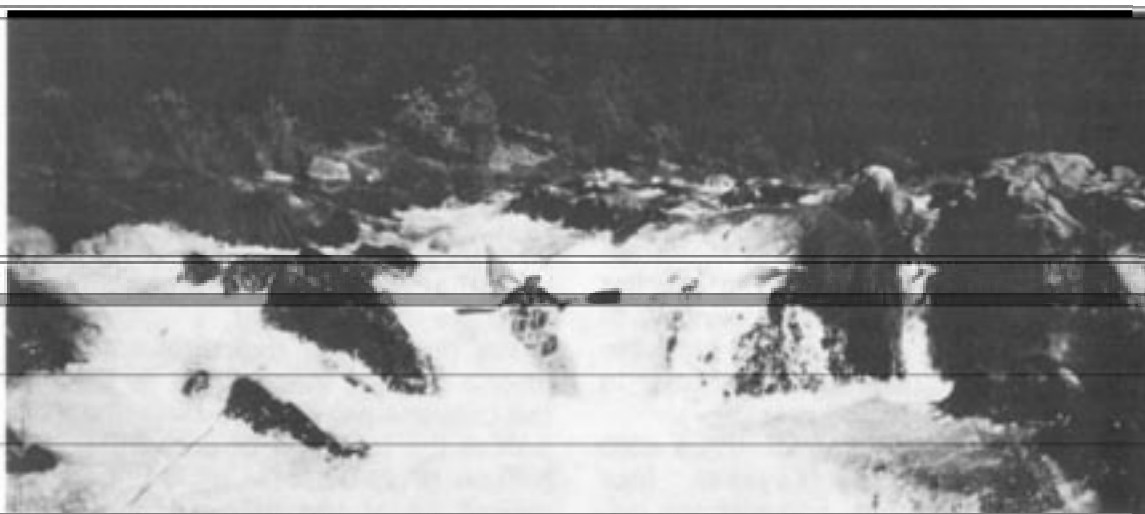
Thankfully, more and more women are getting into kayaking. It is not uncommon on a run like Chili Bar on the South Fork of the American, to see several women paddle twirling, endoing, and yahooing with the best of 'em. That dark haired one whooping it up while doing an endo just might be Betsy.



**Class V "Maytag", N. Fork of the Yuba, California.**



**Betsy Frick and Charles Albright - Eppies Great Race Triathlon.**



**Betsy running the Middle Chute of Rainnie Falls, Rogue River, Oregon.**



# Canoes, Canyons and Dinosaurs

by Kerry Edwards



Jeannie Younghaus and Lyn Berry running second drop of Triplet Falls. Photo by Ray Crockett.

It wasn't supposed to be 17 degrees on the 25th of October, but as we reluctantly crawled out of our sleeping bags at 6:00 a.m. in Brown's Park there was no question but that it was and that we were in for a cold trip.

We scraped the ice off our cars and began the shuttle knowing that when the plane dropped us off on the dirt road next to the ranger station in a few hours, we would be committed to a cold trip on the Green River through Lodore, Whirlpool, and Split Mountain Canyons. A month earlier the trip list had stood at the permit maximum of 25. Now only twelve hardy souls were left. Two blustery snow storms in Denver had scared the rest off.

The group consisted of three solo open canots, one kayaker, four tandem open canoes, one with the luxury of a removable spray cover which was to come in handy. I had been told a

few days earlier that the flow was expected to be 2500 cfs. That seemed high in light of the fact that Fletcher Anderson in *Rivers of the Southwest* says that 1000 cfs is a typical flow, but everyone on the trip was either an advanced open boater or an excellent kayaker so I decided to forge ahead.

How could we call the trip off? Permits were rare and we were lucky to get one of the two launch days left in the year when I had applied for the permit in early September. I was to find out later that in fact we were paddling on 3500 cfs that weekend.

We put on the river around 1 p.m. after a thrilling plane flight up through the canyons provided by Dinaland Aviation at the low cost of only \$10.00 per person (\$125.00 total including being picked up at the take-out and being driven to the airport in Vernal, Utah).



Gates of Lodore - Photo by Ray Crockett.

The Gates of Lodore slowly swallowed us up a few minutes after putting on the water. Being the trip leader, my thoughts were mixed as we entered the canyon. Only one of the group had paddled the river before and that was six years previously and memories had faded. The temperature had risen to about the high thirties or low forties but still a cold wind found its way through our wet suit seams. The water temperature was 43 degrees. A swim itself would not be too dangerous since we all wore wet suits and everyone was experienced in rescuing people and capsized canoes from wide and fast western rivers. If anyone went over, everyone would respond immediately. The problem was the aftermath of a swim. Deep canyons mean a lot of shade, and out of the sun the air was downright cold, swift action would need to be taken to warm up any swimmers and ward off hypothermia.

The combination of sunshine and shade also wreaked havoc with river reading. Going from the sunshine to the shade on the river was a journey into the unknown. Winnie's Rapid, the first named rapid in Lodore was one of these journeys. The roar could be heard in the shadow but by the time the situa-

tion was comprehended it was too late to stop and scout. However, everyone successfully negotiated the rapid, some with a strong brace off the big pillow on the rock in the middle, others with a quick ferry to the right. From there on it was almost continual Class II water to the top of the unnamed drop just above Upper Disaster Falls. This drop we stopped to scout.

We decided to run the unnamed rapid on the left and despite some maneuvers which I took to be skilled surfing in a hole, but which were really desperate strokes to escape the river's grasp, everyone was successful. The kayaker with us, and a couple of adventuresome (foolhardy?) souls, ran Upper Disaster blind and eddied out below. Since it was cold, windy, and the sun insistent on settling below the horizon, I decided the rest of us should scout it. The decision was rewarding. Not only did we all have a choice in where we ran it, some on the left with a short bit of lining near the bottom and others on the right, but while scouting the rapid we were treated to the rare delight of walking right up to 2 bighorn sheep who were more curious than scared and stood and stared at us until we were within 30 feet.



Solo Paddler Dave Cialone paddles a quiet stretch of Whirlpool Canyon.

We ran Harp and Triplet Falls in the cold of early morning with the accompanying adrenalin a welcome addition since it circulated warm blood to cold toes a little faster. We scouted both, along with another unnamed rapid. Harp Falls was a straight shot down the middle requiring only strong braces to stay upright in the big waves and angled side currents. Triplet was a little trickier. The first drop of the three was a series of big breaking waves which filled up many of the boats. However, there was a large eddy on the left to hit and bail before the second drop. The second drop was the most difficult. It was a left turn with big rocks on the outside where the majority of the current went. I could see where rafts could get into trouble here.

The maneuverability of our canoes made the run much easier. The turn was a tricky run right on the inside, because of numerous rocks there, so everyone except one tandem boat decided to thread the needle between the big rocks on the outside, and the little rocks on the inside. They were rewarded with a roller coaster ride. The tandem exception slalomed between the rocks on the inside without any trouble. The third drop of Triplet was almost nonexistent.

Hell's Half Mile was another story. When we stopped to scout it, it looked intimidating from the top. Large, angled, breaking waves guarded the entrance to the rapid which continued for half a mile. However, we thought that perhaps it could be safely run. The view from 30 yards below changed that opinion in a hurry. Just below the large breaking waves is a rock which at lower water levels rafts find difficult to avoid. We did not have to worry about the rock. It was completely submerged and causing an horrendous hole with at least a 6-8 foot vertical drop into it. There were other rocks and holes in Hell's Half Mile, but this was nasty and unavoidable. The angular breaking waves above it almost assured that anyone who entered the rapid was certain to also enter the hole. Our lone kayaker confirmed that hypothesis when she ran it intent on missing the hole on one side or the other. She ended up going right through it. There was no question, running that hole in loaded open canoes with another half mile of significant boat wrapping rapids below it was foolish especially when the water temperature was 43 and the air temperature even lower. We lined the top 30 yards on the left and ran the not-insignificant rest of the rapid on the left of the downstream island.

It had taken us four hours to do the few miles between Pot Creek and Hell's Half Mile. Lodore Canyon was absolutely breathtaking but the attention we were having to pay to the river meant that we didn't have enough time to enjoy it. The short fall days resulted in no time for side hikes if we were to

complete the trip as scheduled. The river eased up between the bottom of Hell's Half Mile and the confluence with the Yampa at the spectacular Steamboat Rock. With this change of pace we could enjoy the scenery more as we spent the rest of the day in typical Colorado-Utah paddling style, struggling against the upstream wind until we made the campsite.

unnamed rapid hiding in the shadows like Winnie's rapid, was the only one to do damage. In the rapid a couple of boats broached on rocks one 'successfully extricating itself, the other swiftly walked to shore in shallow water after dipping an upstream gunwale and going over.



Pauline and Kerry Edwards running a tailwave at the bottom of the second drop of Triplet Falls.  
Photo by Lyn Berry.

The continuous class II water from there on down to the campsite at Pot Creek made Lower Disaster falls unidentifiable, certainly to the disappointment of no one since everyone was eager to get to camp and out of their wet suits before the sun went down. The campfire that night was a necessity, not a luxury, with everyone huddled close for warmth. We retired early since we all knew the next day would be most challenging. We would have to face Harp Falls, Triplet, Hell's Half Mile and numerous unnamed rapids in between. As it turned out, an

The sun was still shining when we pulled into camp and began supper but that was soon to change. Overnight a snow storm descended on us. We awoke to 2-4 inches of wet snow and frozen tents. Needless to say, motivation for getting up was low and launch time was set back. Our early morning breakfasts were interrupted by a yell of 'Kayak in the water!'. The snow had made the river banks extremely slippery and the kayak, complete with life-jacket, spray jacket, spray skirt and paddle inside had slid silently down the bank and into the river. Luckily



Dave Cialone lining the top of Hells Half Mile.

enough, someone happened to look over at the river between spoonfuls of hot cereal and saw the drifting boat. A quick reaction from a noble canoeist saved the kayak before it had gone too far downstream.

Loading the boats that morning was a chore. All the vinyl waterproof bags were stiff because of the cold and folding them up was hell on the fingers. Tie down ropes, wet from the previous day's rapids were frozen hard and refused to slide smoothly through the d-rings. Snapping our spray cover on was about the limit for our abused fingers. The first few hours of paddling that day will long be remembered. Intermittent snow drifted down on us. Low clouds settled between the canyon walls giving us the sense that we were paddling in a tunnel. Class II water in Whirlpool Canyon kept us on our toes. We were expecting to have to scout Greasy Pliers rapid but the view from the boats at the top indicated a long roller coaster ride on big (3-5') waves and we ran it blind whooping and hollering at the exhilaration of the leaping boats. By now the weather had started to clear and we made Rainbow Park, our original destination for that day by 1:00 p.m. just in time for lunch.

There we put our heads together. We could camp there that night and paddle Split Mtn. Canyon the next morning. But then the weather was sure to be cold if not downright dismal again with more snow. We had four hours of daylight left and could paddle through Split Mtn. today, camp at the take-out (or find a motel in Vernal), and have time to visit the Dinosaur museum the next morning before having to drive home. The majority vote was to paddle through that day. Since a couple of members of the party had paddled Split Mtn. before we decided not to scout but follow the experienced boats.

The initial drop of Moonshine Rapid was insignificant. The second not so. The big waves throughout the rapid obscured a fairly large hole across the middle of the river at the bottom. Some people (some out of luck, some out of luck and a modicum of skill) missed the hole. We were not so lucky. Rising to the crest of the immediately preceding wave I suspected we were about to drop into something nasty. I yelled at Pauline to paddle hard just as we crested the pillow above the hole. When we hit the aerated water in the hole it completely submerged our 17' Tripper. Pauline was so far underwater



Take out at Split Mtn. Landing - Photo by Lyn Berry.

that her low brace was level with her neck! The second it took for the boat to rise to the surface seemed like an eternity. But a loaded Tripper was not about to move downstream when completely submerged. When it rose we threw in a couple of strong strokes, emerged on the downstream side of the hole and eddied out left in the hope we could warn the others. We had a spray cover on and submersion was inconsequential.

The open boats would not fare as well. The waves were so large, and the noise of the water so loud that warnings went unheard and paddle signals unseen. Most everyone behind us missed the hole by luck except for Terry and Joanne. They followed us and dropped directly into it. Again the boat submerged, this time without a cover but the gear which was well secured to the bottom of the boat functioned as flotation and they like us were able to escape the rivers grasp and eddy out to bail a boat filled right to the gunwales with water.

The experience in Moonshine led some of us to scout S.O.B. Once again big waves everywhere with a lot of holes on the right. We ran it left center through some breaking waves that popped the spray cover from the cockpit around Pauline. Our bailing task was slight though compared to everyone else. Even the solo paddlers in high volume Blue Hole OCA's had a lot of water to bail in Split Mtn. We weren't able to identify Schoolboy Rapid because the rapids seemed continuous. Dave Cialone commented that he couldn't believe that the rapids we were running between the named ones

weren't named. Surely on any other river those rapids would credit delightfully threatening names.

Ingelsby Rapid was the last named rapid in Split Mtn. I had noticed it from the air and thought it looked tricky but was unable to correlate what I had seen from the air with what I was looking at from the water. There was a big rock in the middle. The left looked like the better channel although there were certainly some good sized waves down the left side. Everyone ran it left but some of us too far left. It really should have been run on the left right next to the rock since there was a hole center left invisible from upstream. Most everyone missed it but hole riding was our forte that day. We hit it probably at just a slight angle but this was enough to turn the boat sideways just before it submerged. Only strong braces by both of us kept the boat upright until it emerged from the foam and we were able to get some quick strokes in to straighten it out.

From there to the take-out the river was easy and we quickly made the last mile to the landing where we beached the boats, wriggled out of wet suits, and one deranged soul did a naked dance around his boat until the unloading was complete. We were happy to have done the trip but I think many of us were thankful it was over. The cold weather and exceptionally high water (for that time of year) had made the risks greater than we had anticipated. However, I'm sure all of us would do the trip again at a moment's notice. It was an experience to be cherished.

# Interview with AWA's River Mom: MARGE CLINE



Interview by Dave McCourtney

How did you get the name "River Mom"? After I had been paddling for several years, I met a young man who was as enthusiastic as I was. David's mom was a "sometimes" paddler, and since Mike my youngest son was then only three and too young for the trips, we used to switch kids. I'd take David to the river, and his mom would watch Mike. David soon started calling me his river mom and the name just caught on with the many people in CWA's classes who I helped introduce to the rivers. I like it!

When did you start paddling canoe or kayak? What rookie experiences did you have? About ten years ago, I was leader of a Cadet Girl Scout Troop and had to find something to keep the kids interested and busy. We decided it would be fun to learn how to canoe, and so enlisted the aid of an instructor and took a basic canoeing course. We then figured we were ready for the real thing and planned a river trip. Fortunately, it was on an easy and low water river, for we had several near-disasters; there was a very close call with a strainer, we wrapped one canoe around a submerged tree trunk, hypothermia came very close to setting in as

after we put-in, it started raining and the kids were not properly prepared to be soaking wet all day. I even remember hitchhiking from the takeout to find the shuttle-bunny mom who was supposed to pick us up and wasn't there when we arrived. Then, on the way home, the canoe trailer was blown off the hitch by very high crosswinds on the expressway. Fortunately, a sympathetic truck driver stopped and helped us right the trailer and reload the eight canoes which were laying all over the road. I realized after that first trip the need to learn much more.

How have your skills progressed each year? I didn't make too much progress paddling a kayak the first couple of years, mainly because I was too busy fighting being afraid. During the third year, I realized that if I ever wanted to paddle anywhere other than Wisconsin, I had to learn how to roll. Many, many pool sessions later, it finally happened; I learned how to right the craft. Learning control also came slowly, again I believed stifled by fear, but was greatly accelerated by my decision to try slalom racing. Having to get where the gates were, forced me to try maneuvers I had never



attempted before, and I have learned to make the water work for me instead of just taking me down the river. In the last couple of years, the confidence level has received a great boost by racing and learning how to paddle a C-2. I find myself willing to run places in the C-2 that I would not feel comfortable in solo in my kayak. (Could it have something to do with who's in the stern?) Right now, I feel fairly confident in Class III-IV water in either boat, and thought the C-2 roll has yet to come on the river, we have seldom needed it. Perhaps the greatest skill I've come to possess, however, is the acquisition of river sense. This skill only comes through the years, and I hope I will always be able to judge what my own abilities are and never be afraid to say, "I'll carry this one".

How involved in racing are you? Can you explain the race schedule to rookies like me? I participated in six races last year and worked as Chief Starter at the Pan American Races in Wausau. I race mainly because I look at racing as a very valuable training tool. It has vastly increased my control, thus made me a better "cruiser". Also, I greatly enjoy the camaraderie and sharing of techniques that I have experienced among competitors. Some of the top racers make the whole thing look easy, but I still find it a great challenge to make all the gates of even a simple course. If you join the NSWCC, a national race schedule is sent to

you and it's really quite simple to plan a racing/cruising trip around the dates listed therein. The schedule indicates whether races are downriver or slalom, and most of them with the exception of the Divisional Championships, offer beginner as well as expert classes. New racers were greatly encouraged at the events I attended.

What exciting rivers have you paddled? All rivers excite me. Being basically a conservative boater, I really don't need or want Class IV-V water to turn me on. Probably the most exciting trip of last year for me was the New River in West Virginia, because nine years ago, it was the first whitewater I had ever paddled . . . in a raft. It looked a lot different from my 13' kayak.

What has your closest scrape with the River Gods been? Getting recirculated in a hole the first time we rafted the Wolf put the fear of God in me right from the start. Since then, a couple of close calls to others have made me do a lot of thinking about who I'm willing to go down the river with. Thoughts of - are we all capable of running this water; can we help each other if one of us needs it; do we watch each other close enough? - always occur to me on the way to the put in. Having a tragedy occur to another paddler in your party is almost as bad as having the experience yourself.



Marge Cline at 5' Falls, Peshtigo River, Wisconsin. John Karch photo.



Mom's Mistake rapid on Lawn Creek, Alabama.  
Rescuer Roy McLain.

How does paddling on the West Coast compare to the Midwest? I'm not a very good one to ask. I've only paddled a couple of rivers in Oregon and a couple in Wyoming. What I did notice though, was the water was very cold, it was very, very fast, and there seemed to be fewer rocks visible, probably due to the high water levels at the time we were there.

What fantastic river expeditions would you like to go on? If time and money were of no concern, the Nahanni in the Northwest Territories of Canada.

Tell us about your family. Do they paddle? My husband, Bob, and I started paddling together, but in the last couple of years, he hasn't had time to do much because of new business. Fortunately, he's generally agreeable to my taking off on a whim, and I've been known to leave a note on the table saying, "I'll be home Sunday night, went to the river". All four of the kids have tried it at least once, but Mike, our youngest, is the only one who

seems to have fun getting cold and wet. He's had his own kayak for four years, and now 11, I occasionally take him on some of the easier trips.

What type of activities does the Chicago Whitewater Association have to keep the membership active? Is this the core of the paddling community? To answer the second part first, if you mean the "core" of Chicago's paddlers, the answer must be yes.

Our membership has grown from 14 to over 300 in 11-12 years, largely due to a very active winter time pool program. If you mean "core" nationwide, the answer is "no". Many other clubs around the country are also continually recruiting interested new paddlers and from what I've observed in my travels, do a superb job giving help and support to newcomers.

CWA activities in addition to the pool classes include several pool slaloms and a river slalom on the Wolf in the spring. We welcome the New Year in with a six mile flatwater paddle through the icebergs on the Fox River, followed by cross country skiing. We have a Weird Food Frolics - an evening to bring the weirdest concoction possible and feed your friends. A night of musically entertaining ourselves till the wee hours is known as the Hoot-Toot-Plunk and Boom Jamboree and ranges from Bluegrass to Bach. A fall, seven course, candlelit dinner in the woods generally attracts 100 members. Many of our paddling trips are "get on the phone, get the water levels, then call a few friends and go" type trips, although we do organize and promote several large beginner trips in the spring for our new paddlers. Perhaps, one of the ties that binds many Chicago paddlers together is the long hours we must spend getting to the river. You get to know your companions quite well after a 14 hour drive to West Virginia. We also publish a monthly newsletter, THE GRADIENT, which I have edited since 1976. Our membership is quite willing to write up their experiences for all to share, and I've even been told there are arguments in some households over who gets to read THE GRADIENT first!

What does the future hold for your paddling and AWA involvement? As for paddling, there are still many places I want to go, so I don't intend to quit. As to working with AWA, I will continue, at least until it's time for another election.

AWA provided me with many resources years ago, and I'd like to at least serve until I feel I'm even.

What do you see as the role for AWA? Right now, our Journal provides a very valuable forum for the membership. Paddlers as a group are quite verbose, and their thoughts and concerns need an outlet. I would like to see more communication with our new editor on all subjects of concern to experienced river runners, among them conservation issues, new equipment ideas, safety techniques, and training tips.

The AWA Safety Code is now used nationwide, and is one of the most valuable resources we provide. Its use should be promoted by any member involved in getting new paddlers on the river. I would also like to see the membership double, a not impossible task, if each of us would recruit only one new member! Dave now has the Journal production well in hand, and this unique and most valuable resource should be made known to anyone who is taking their river running seriously be they decked boater, open boater or rafter.



WHITEWATER

**Marge Cline/John Connet C-2 Mixed Masters, Wausau Course. Photo by Steve Weston.**

One of the things I have enjoyed most since getting involved has been the opportunity to meet many of you out there. Perhaps in the future, and with sufficient notice, a National AWA Paddling Get Together could be planned, so many more of you could meet each other.



**Marge Cline/Dan Dixon C-2 Mixed at Wolf River Slalom. John Wilson Photo.**

# KAYAKING THE GRAND

by  
Randy Welch

The Colorado River in the Grand Canyon holds a special attraction for kayakers. Its big rapids seemingly represent the ultimate challenge to the white-water technician and its length and remoteness promise adventure on a truly grand scale. Well documented are the canyon's multitude of hidden beautiful places. Side canyons, of smooth sculptured stone, containing deep limpid pools beckon all adventurers to enter this mammoth opening of the earth's crust. For the kayaker who hasn't been there or who has only experienced the jovian waves and eddies in a drift boat, there is the persistent question of what it is like to paddle the Grand.

The question has gained more significance now that the National Park Service allows "unsupported kayak trips" (this includes special whitewater canoes, C-1's and C-2's). Kayak groups ranging in size from 1 to 16 have had the opportunity to make trips without drift boat support for a couple of years now. Before, many would-be Grand kayakers had to have rafting friends or be financially able or willing to hire a government approved river guide and supporting drift boat. Of course the new policy expands the question in the would-be kayakers' minds because now they may choose to wonder what it is like to paddle the Grand in kayaks fully loaded with gear. The available answers to questions about kayaking the Grand are often conflicting. Some books describe the run as most difficult giving it a solid Class V from the generally accepted international rating system. Experienced hair boaters, on the other hand, often rate it as easy and a bit of a drag because it contains so much flat-water. To anyone who has looked into the matter more than just superficially, both answers lack credibility.

For the past eight years, I have been diligently paddling the whitewater sections of America's rivers. Nearly four thousand miles of riverbed have passed beneath my scarred and duct-taped hulls. Those miles have been mostly on waters

of intermediate, Class III and IV difficulty, and include three trips on the Colorado River in the Grand Canyon; two of which were self supported. While paddling the Grand, it was my good fortune to experience a well balanced sampling of the flow ranges a kayaker might encounter in a normal water year. For example, I have followed kayakers of various skill levels through such drops as Crystal and Granite rapids at estimated flows of 6,000; 20,000; and 50,000 cubic feet per second. My standing as an intermediate level paddler (I don't do hand rolls or compete in whitewater rodeos) coupled with my experience perhaps makes the following observations on running the Grand of value for the average kayaker.

Six years ago just before my first Grand trip, I was much concerned about the effects of tons of crashing water on small seed-shaped boats so I did several things to prepare myself. I watched films of other Grand Canyon kayaking ventures, all of which appeared to document incredible difficulty. From the films I determined that my technique needed to be tested; therefore, I made several short runs on easily accessible but technically difficult Class IV and V sections of river. Also I made arrangements to have my food and camping gear transported in a big raft guided by the skilled hands of a good natured and understanding boatman.

My efforts were rewarded well as that first trip was made without a hitch and I even made it through the infamous Lava Falls without a spill (the raft didn't fare so well). However, within the first week of that two week expedition, I felt that it had not been necessary to risk the difficulties of smaller technical runs to become prepared for the big rapids.

There are few of the truly ravenous dragons known as souse holes or "hoooles" at any but the lowest river levels and most of the few are out of the mainstream and near the riverbank. As a rule, go directly for the largest waves in all but a half dozen of the drops of the Grand

Canyon and you will find an exhilarating ride that perhaps can be called the river's answer to powder skiing.

The most notable exceptions to the above rule are the rapids: House Rock, Hance, Horn, Crystal, and perhaps Lava Falls. In the first four drops, a sneak often is used to avoid a close encounter of the wettest kind. In each case, the sneak, done to avoid a mega-hole, involves the same technique. The technique involves entering the rapid on a diagonal route that crosses the mainstream and places the kayak on the edge of the mainstream after the first or second wave.

The diagonal technique doesn't work as well at Lava Falls where the waves are steep and breaking so hard as to make cloudy the distinction between waves and holes. At Lava, you either go for it or you don't as there is no route down that deserves to be called a sneak. There any kayaker can count on a thrashing if he/she doesn't portage, but it is probably not the most dangerous drop in the Grand.

All things considered, the intermediate flow levels (circ. 20,000 cfs) offer the least difficulty although the difficulty doesn't change a great deal over the range of flows I have experienced. At low flows Hance and Horn become the meanest drops by far and only kayakers with the highest level of skill will want to attempt a run. Lava and Crystal are also somewhat more difficult at low flow levels but for them and the other Grand Canyon drops, the same general route works for any flow with the range described. Low flows are technically the most difficult because the waves although they lose height become steeper, sneak routes become tighter, and more holes and rocks are to be found. High flows of 40,000 to 50,000 cfs offer the most work as the current and wave patterns are quite turbulent and though there is less need for directional control, more brute physical effort is required to avoid flipping.

Running the Colorado River through the Grand Canyon in a kayak is not without difficulty but the difficulties are, for the paddler who has developed intermediate level skills, more psychological than technical. The waves are big, far

bigger and more numerous per drop than for any other frequently run river. The same can be said for eddies and whirlpools. There is no way that I am aware of, that paddlers can prepare themselves for the psychological impact of viewing Grand Canyon rapids from the, oh so low, seat of a kayak (the spiritually superior position of the C-boater only gets you a few inches closer to God). The New River Gorge in West Virginia and Cataract Canyon in Utah each have six mile sections that at very high flow levels approach the Grand Canyon scale. These runs are technically just as difficult and so are good for preparation, but lack the immensity that makes the Grand Canyon so intimidating.

Deep in the Grand and Marble Canyons, it is not what you see from the riverbank that is intimidating. The scale of the whole place is such that, without former experience there, it is not easy to read water. What looks like a two-foot wave from the shore will often turn out to be a wave that reaches two feet over your head! And, remember that to the sitting kayaker, a wave crest two feet over the head has the emotional impact of an eight foot wave. The Grand Canyon kayaker will see, at any water level, numerous waves reaching four to even twelve feet above head height. Needless to say, this can be quite disconcerting, especially in light of the knowledge that the rapids are very long and contain more than just a couple of awesome waves.

After the first few nervous days downstream of the Lee's Ferry put-in, the average kayaker will find that although the rapids differ much in configuration, each consist mostly of waves and is usually without deadly obstacles. Even though the waves often look like ravenous dragons, they are in fact no more difficult to handle than significantly smaller waves. Indeed, after the first few imposing monsters, the main fear generated by the waves is that of the unknown or what in the name of Crystal Hole is on the downstream side. This fear cannot be completely overcome even with the experience of running all the drops at various flow levels.

Continued on p. 29

# ABS ROYALEX CANOE REPAIR

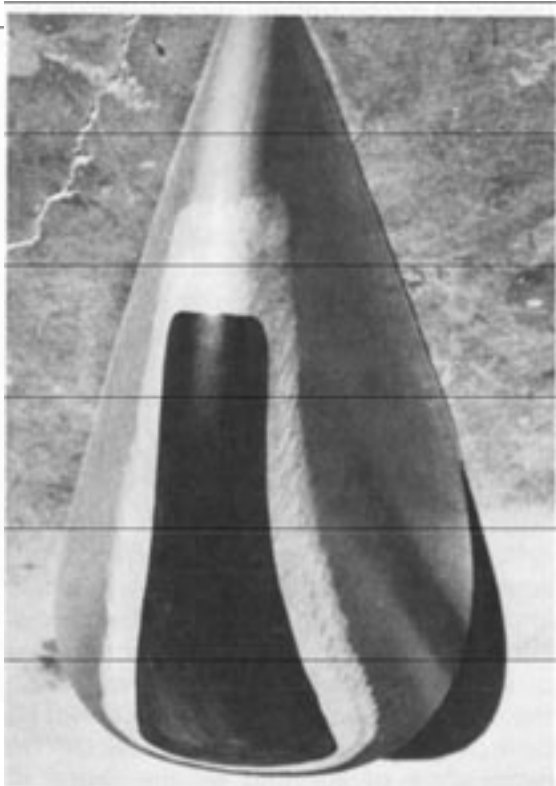


David Brown  
"The Canoe Doctor"

Have you ever tried to fix your own Royalex canoe and discovered that there was no source of repair information? After modifying and repairing some 2,000 aluminum and Royalex canoes, I would like to pass along some useful tips and observations about bow and stern repair on Royalex canoes.

Here are some observations that will help you with your repair of Royalex canoe hulls:

1. Many times a boat is damaged more severely than the boat repairer realizes.
2. Most people don't prepare the damaged area with thorough sanding. It's best to use a power-disc sander with 16-grit or 24-grit grinding disc at slow speed.
3. I advise against the use of MEK-based pipe cements in attempting repair work. Since pipe cements cure through evaporation, large areas may not cure completely, trapping MEK in repair. This may damage the inner foam core in the Royalex.



The new plate applied.

4. If you decide to use a thermoset adhesive system to bond your repair, don't use polyester resin. Use an epoxy resin system—mix accurately, attempt the repair on a dry day, and use heat lamps for at least 12 hours.

5. Many of the commercially available Kevlar-felt skid-plate kits use different resin systems. The new two-part urethane adhesive (as used by Old Town Canoes) is much more flexible than other resin systems. NOTE: I think you can make an excellent skid plate by using Kevlar and nylon fabric (not felt). By layering these materials you can make a much more durable skid plate (remember, use epoxy resin—not polyester resin).

6. I personally feel Kevlar-felt skid-plate kits, even when installed correctly, are marginally effective for canoes put to hard use. These kits only retard abrasion and do nothing for structurally damaged bows or sterns.

7. Home-made skid plates of PVC and PVC-coated fabric are excellent retarders of abrasion wear. They adhere well with (Vynabond) adhesive. By using a hair dryer or a kitchen oven, PVC can be heated, then stretched over the bow or stern. Before bonding, make sure you prep the bow/stern with lacquer thinner or MEK, and lightly sand.

8. Here are some bow/stern conditions that Kevlar-felt skid-plate kits and PVC skid-plate kits will not repair.

A. Extreme softness—caused by long-term impact or water leakage into middle layers of the hull.

Brittleness—caused by ultra-violet rays for the sun on exposed ABS. NOTE: For winter storage, paint the bow and stern to protect them from sunlight.

C. Cracks in ABS—(cracks on outside of the hull) caused by extreme wear or impact. This occurs more often in below-freezing weather. When outer layer of ABS cracks, there is an extreme loss of modulus strength. If this not repaired correctly, inner layers of ABS will break, bringing real disaster. NOTE: Many boaters' outer hull repairs fail because

the canoe also needed but did not get repairs on the inside layers of ABS. (These cracks are often hidden under an intact vinyl layer on the floor of the canoe).

After much experimentation and making things more complicated than they really were (Murphy's Law), I came to the conclusion that to make the best repair possible, you must repair canoes with like materials, ex., aluminum with aluminum, fiberglass with fiberglass, and ABS with ABS Royalex.

After several years of research, I think I have found a sure-fire repair for the bow and stern of Royalex canoes. This repair may be somewhat beyond the average person's technical ability.

My repair process for Royalex has been to rip the vinyl outer layer off the damaged area with grinder using a 16-grit disc at slow speed (1200 r.p.m. maximum). Next, I heat a piece of ABS plastic (about  $\frac{1}{8}$ " thick) to 300°. At this time, it can be stretched over the bow or stern. When the plastic cools, I have a strong, flexible plastic skid plate. I bond the skid plate with an acrylic adhesive specifically designed for ABS plastics. (It's toxic, \$120 per gallon, and has a shelf life of one month, but it works). By using other materials and techniques, I can finish the skid-plate repair so any repair to the canoe hull can barely be detected. I have repaired over-the-hill rental canoes with this process and they're still in rental fleet and going strong three years after the initial repair. NOTE: This repair process also works on torn Royalex hulls.

This repair technique might be complicated, but a diligent canoeist might modify this process to repair the more severe types of bow and stern damage that normally are encountered in white water.

One last thought. By reversing the seating in your canoe (trading bow for stern), you can extend the life of your canoe, since the bottom of the stern wears out faster than the bow. Contact David Brown (703) 281-4380. Repair shop located near Tysons Corner, Virginia (just west of Wash. D.C.)



Patching the hole before plate.

## Kayaking the Grand continued

As far as running the rapids is concerned, it doesn't make much difference whether the kayak is loaded or not. A kayaker with a full load does not have to alter the normal routes. Naturally, carrying gear will and should make most kayakers paddle more conservatively. The extra weight may make it easier to break through recycling froth and mammoth eddy lines, but it certainly makes it harder to catch and ride a wave. Using a larger or touring kayak is not always necessary. During the warm season in a group of three or more, a medium to high volume recreational slalom boat provides enough storage space (come packing time you'll always want more). Conversely, such characteristics of a slalom boat are not necessary either. Anyway such characteristics are not to be had in a loaded boat. Being unsupported makes the trip



more of a grunt but that really is no problem if the purpose of the trip is primarily to explore the canyon and not to hone paddling skills.

A kayaker planning to run the Grand should have at least intermediate level skills. That is, have average swimming abilities, a reliable river roll on one side, a bracing ability on both sides, and one or two seasons of active paddling experience on at least Class III rivers. A desire and ability to expand those skills into a new dimension of paddling should also be listed as a prerequisite.

Overall the run rates a Class IV designation. However, it is much more forgiving than smaller runs of the same classification. It is sort of a magnified Class III river containing about a half dozen magnified Class IV drops. It is big and out of the normal range for classification purposes.

In the typical Grand Canyon drop, the kayaker simply rides the center of the mainstream. There are two ways that this is usually done. The first method, known well to anyone who has paddled whitewater more than once and even used by advanced paddlers on high flows, is aptly called windmilling. It calls for keeping the boat aligned with the current and imitating a windmill to provide maximum momentum. Usually because of the distance between the wave crests, there is plenty of time to get the necessary number of strokes in. The second method is sometimes referred to as the western style. It calls for keeping the boat perpendicular to the current and using a strong downstream side brace to stay upright. Practitioners of this more laid back method use the view from the wave tops to determine if it is desirable to avoid obstacles. Avoidance is accomplished by quickly moving left or right across the current.

To avoid getting psyched out and to enjoy the rapids to the fullest, the Grand kayaker needs to be in good physical shape. Nearly every drop offers outstanding surfing and the possibilities of all other forms of kayak play in safe deep water. Many of the play spots are serviced by eddies that provide quick upstream transportation. If you have the energy to break the top of the eddy line, you can

repeatedly ride the same wave over and over again. Since it is in a wilderness setting it is not necessary to wait your turn long and the only thing to slow you down is your endurance.

Each drop is worth scouting though it isn't necessary to do so. Scouting will allow the kayaker to pick the best play spots and remove that fear of the unknown that can cause many a good surfing wave to be missed.

At the flows I have experienced, the Grand has been challenging but does not, in my opinion, present the hazards and difficulties generally associated with expert class water. True, the expert will get the most out of the endless play opportunity presented by the glassy slopes and frothy tops of the waves but even a kayaker with only one or two seasons of experience can, if supported by others of more experience, obtain the highest levels of whitewater enjoyment. Because the river is large and there is plenty of room for maneuvers even loading the typical recreational kayak down with food and lightweight camping gear does not complicate anything other than setting up and breaking camp each day. The rapids come frequently enough however, it should be noted that most of the trip is on long beautiful stretches of flatwater.

An intermediate kayaker using proper gear can have fun on the whitewater of the Grand Canyon because there are few highly hazardous obstacles (hiking the side canyons can, however, be very hazardous) and except at the highest flows, there is below each drop a friendly pool awaiting the hapless swimmer. Of course, a large group can better accommodate kayakers of lesser skill levels and very small groups should have individuals with more than average experience.

The Grand Canyon contains the grandest whitewater trip in America and perhaps in the world. There are many runs more difficult but none with a more overwhelming combination of sublime beauty and natural power. Kayaking the Grand can be for all kayakers with the basic skills the purest of fun and a rewarding experience that will endure for a lifetime.

# Equipment Improvement —

## At Last! . . . . . A Comfortable, Effective Backstrap

by Robert Patraw

Wet exit, bail out, sucked out, "dislodged" from the boat. . . However you say it, it is at best embarrassing and at worst downright dangerous. Anyone who has paddled for a while has probably run into situations where they went for an unwanted swim. Holes are notorious for popping spray skirts and extracting paddlers from their boats against their will. This past fall I discovered a foolproof method for an unwanted exit. All it takes is a ten to twelve foot drop off of a ledge landing upside down in a hole to loosen one's grip on the boat.

Foot bracing, knee bracing and hip bracing all are helpful but are not enough for the more dynamic rivers. The best bracing system that I have tried includes not only the first three items but also a backstrap. This is hardly a new idea. A number of paddlers have been using back straps for years. It is possible to buy back straps with velcro attachments which can be installed in many of the boats available today. These straps all have an ingenious "safety" feature to prevent the unwary paddler from becoming trapped in his/her boat. They release at just the point where they are most needed. The end result is usually another chance to improve one's white-water swimming skills.

Various other solutions to the problem have been suggested. Anything from a seat belt with a quick and hopefully reliable release to a liberal application of neoprene cement to one's posterior just prior to entering the boat. Thankfully, none of these kind of suggestions have been tried.

It appears that the best solution is to be found in some kind of back bracing or strap. Following that line of thought and some helpful suggestions from Peter Skinner I began to research possible materials which could be used in a backstrap. I felt that the end product should enhance one's control of the boat in rough water, provide added comfort and support on long trips, and significantly reduce the odds of an unwanted swim.

I found what I consider to be an ideal material by going to a local industrial lathe and belting supplier. The range of belting materials is quite extensive. The material which seemed most likely to fit my needs is known as Polymate FRXFR 120 Globe Belting. It is four inches wide and made of nitro-impregnated polyester with a tensile strength of four hundred pounds. After considerable testing in pools and on the river I am happy to say that this material does an excellent job. It is not adversely affected by chlorinated water and it retains its semi-flexible characteristics which prevents it from slipping down one's back while paddling. Yet, it allows the paddler to lay down on the back deck of the boat when rolling.

### INSTALLATION

For most individuals, a thirty-two inch length of belt will be more than enough. In addition to the belt you will need six of each of the following:

1/4" x 1" machine screws and 1/4" 20 nuts.

1/4" fender washers installed near the bolt head.

1/4" flat washers installed next to the nut.

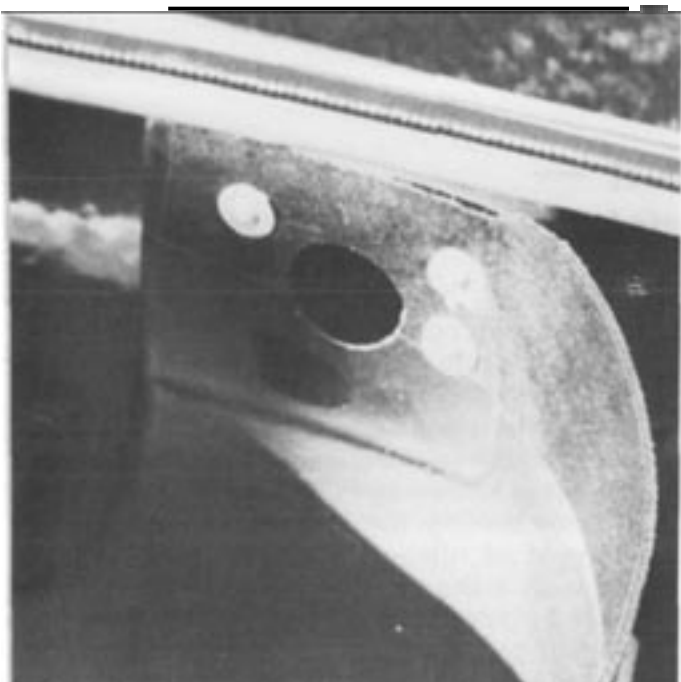
1/4" brass or aluminum grommets (optional).

A small amount of epoxy cement and a roll of masking tape.

If you refer to figure 1 you will see a finished belt cut for use on a Perception Dancer. The angled cut at each end conforms to the upper edge of the hip brace. The holes were cut to allow the use of the hip pads which are available for Perception boats. Each boat will require a certain amount of custom alterations to the strap.



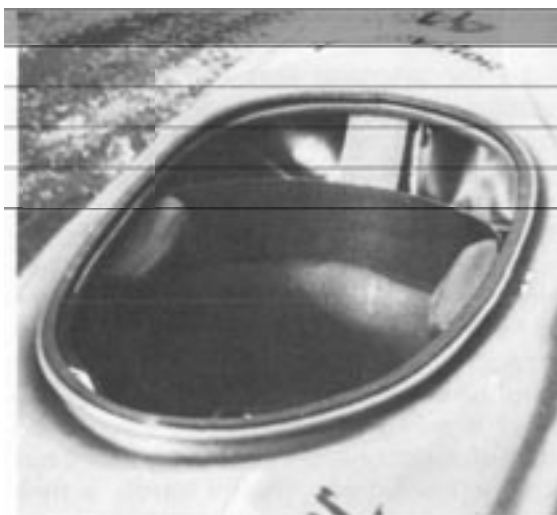
Figure 1



**Figure 2**

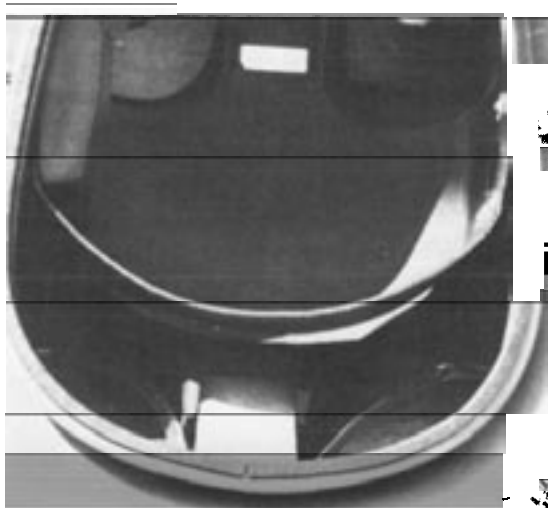
Figure 2 shows the placement of the hardware. The large washers distribute the stress on the strap which reduces the chance of tearing the material. Two of the bolts are mounted towards the stern edge of the hip brace to keep the strap stationary.

The strap should be mounted slightly forward of the back lip of the seat. (Figure 3) I would also advise setting the angle of the strap perpendicular to the seat. This has proved to be the most comfortable and the most effective position for boat control. Figure 4 shows the completed installation.



**Figure 4**

If anyone in the paddling community wants to give this type of back strap a try, I do recommend that you try a wet exit in a pool in order to see what changes in your exiting procedures are required before you need them. I have found it as easy to exit the boat as before but now it is much more likely to be my choice. I think that any of you who do try this strap will find a new level of control over the boat and enjoyment in your paddling.



**Figure 3**

**1985 HYDRA KAYAKS**  
Shipped anywhere in U S  
**\$ BEST PRICES \$**  
Watersports Outfitters  
P.O. Box 818  
Redmond, OR 97756  
(503) 447-6293

# THE PROBLEM OF PINNING: A DESIGN SOLUTION

By: Rick Curtis and Tom Kreutz

As the popularity of whitewater kayaking has increased, so has the number of river accidents. A problem of increasing concern to all paddlers is the situation of whitewater pinning/entrapment. Most paddlers have felt that momentary sense of disaster when their boat begins to broach onto a rock only to have it wash over immediately. However, there are an increasing number of situations where the boat is not simply washed off, but is pinned, trapping the paddler. The following is a description of a recent forward pinning accident excerpted from The Best of the River Safety Task Force Newsletter.

"...I perfunctorily scout and proceed to make my run. Just as I am about to brace off the pillow the bow abruptly pitches, securely pinning the boat midway down the drop. Instantly water begins piling up over my back and shoulders. Realizing the potential seriousness of the situation, I begin to struggle back against the current to try to free my legs from the boat...I am trapped. The water piling into my back is lifting me up and levering my legs upward against the cockpit rim in an incredibly excruciating manner. I am afraid my legs will break before the boat does. Submerged in the cold water, fighting against the current, and trying to pull my legs free is exhausting my strength rapidly. Making no progress I am scared and start trying just to hang on...By now, after nearly ten minutes, I feel as if I am about to pass out from exhaustion and the terrible forcing of my legs against the cockpit rim...Realizing that it is a now or never situation... (we)...begin pulling (on the rescue rope) as hard as we can. With maximum effort my legs begin to move. After much grunting and groaning and tremendous pain, I eventually pull one leg

free. The other, caught at the ankle, comes out with a final pull...If the circumstances had been any different, if I were out of reach, if the rope had been in my boat or we hadn't carried one, my chances of survival would have been poor. Without assistance, unconsciousness, broken legs and drowning would have been likely possibilities. I was lucky. My rescuers saved my life. It was a terrible feeling to be trapped, unable to save myself."

Fortunately, this situation resulted in only minor injuries to the boater. However, there have been a number of other pinning accidents that have ended more tragically. While the conditions in each pinning situation were unique, a common aspect was the inability of the paddler to exit the boat quickly. This difficulty is particularly problematic in kayaks because the paddler's legs extend beneath the deck. It is not likely that pinning situations can be prevented by the paddler. However, the danger of injury can be substantially reduced by providing new kayak designs that allow the paddler to exit his/her boat more quickly in the event of an emergency. One such design, the Safety Deck System, utilizes a manually releasable foredeck section which can be quickly released by the paddler for emergency exit. During normal use the Safety Deck is securely fastened to the boat and does not alter the boat's shape or performance. When released, a significantly larger cockpit opening is created, freeing the paddler's legs and allowing for quick exit. Before examining the Safety Deck System in detail it is important to review current design and construction approaches to the problem of pinning.

Fiberglass kayaks are often thought to be relatively safe because they have been known to break apart in violent pinning situations, freeing the paddler. However, this scenario is extremely rare, and can hardly be relied upon as a reliable method of freeing a trapped paddler. New exotic



Safety Deck System installed.

layups make fiberglass boats more durable than ever and less likely to break apart under stress. Furthermore, many pins that easily trap the paddler do not involve forces that would break up a boat. The 'breakaway cockpit' is an attempt to solve the problem by introducing structural weaknesses around the cockpit in order to induce breakage there during a pin. However, it is not clear that such a design will reliably break in a manner which will aid the paddler's escape. Pinning situations are simply too unpredictable to base a safety system on presumed boat breakage.

The widespread use of rotomolded kayaks has introduced another aspect to the pinning problem. From a safety perspective, their drawback is that they are extremely durable, one-piece units. In a broach situation they **cannot** break apart. In fact, early plastic boats were notorious for oilcanning and wrapping around river obstacles. For this reason manufacturers have developed substantial internal wall systems for all plastic boats. Internal walls have been very effective in increasing the structural rigidity of both plastic and fiberglass boats, and have significantly reduced the incidence of pinning due to boat wrap. However, pinning and boater entrapment continue to occur in boats

with substantial walls, indicating that walls by themselves do not provide a complete situation.

The trend toward lower volume boats also increases the risk of paddler entrapment. Not only are low volume boats more difficult to get out of, but also because of their lower buoyancy, they may be more prone to broaching and pinning. Designs that are appropriate for the race course under controlled safety conditions may be extremely hazardous in a cruising situation. As lower volume boats are used more frequently in cruising, particularly on difficult stretches, the incidence of paddler entrapment is liable to increase.

Given the inability of currently manufactured boats to fully address the problem of boater entrapment, it is necessary to examine possible design modifications that can aid paddler emergency exit. Simply making a larger cockpit may help. However, as cockpit size is increased, overall structural rigidity decreases quickly and knee bracing becomes more difficult. A better solution is to design a kayak with a system for enlarging the cockpit during an emergency that does not alter the boat's structural integrity. In order for such a design to provide reliable emergency exit it **must**:



Safety Deck System taken apart.

- allow the boater to exit the boat more easily in a pinning situation;
- be manually releasable with a small motion and minimal force;
- be releasable from almost any position of the boater in the cockpit;
- function properly under abnormal torques and stresses;
- be an integral part of the boat so that it will always be available for use;
- be designed to prevent accidental release;
- be able to be easily and immediately reattached by the boater after use, returning the boat to its pre-use condition;
- be durable
- not alter boat performance;
- not alter the watertight nature of the deck.

In addition, such a design **should:**

- be regularly usable and testable;
- have an uncomplicated release mechanism;
- should be applicable to a wide variety of boat designs, both in fiberglass and plastic;
- be lightweight.

The Safety Deck System provides such a design. The essence of the system is a removable foredeck section that includes the knee braces and the forward portion of the cockpit rim. This 'deck plate' can be released manually by the paddler in an emergency situation merely by pushing it forward. This section releases the deck plate from the



Safety Deck System doesn't seem to hurt structure of kayak.

boat creating a cockpit opening that extends significantly past the paddlers knees allowing for quick exit. The deck plate can be immediately reattached by the boater. The system includes a locking handle which prevents inadvertent release of the deck plate.

The specific design of the system is as follows. The deck plate rests upon and attaches to a 'lip' which borders the enlarged cockpit opening. The lip is set slightly below the top surface of the deck so that when the deck plate is attached, it is flush with the deck proper. Attached to the underside of the deck plate are a series of 'tabs' which mate with corresponding slots in the lip. The deck plate is attached by laying it on the lip and pulling backwards. The tabs engage the slots and pull the deck plate down onto the lip, securely holding it to the boat. In this position the deck plate is constrained from movement in any direction except forward, which releases the deck plate. To release the deck plate, the paddler disengages the locking handle and pushes the deck plate forward. The forward ends of the tabs guide the deck plate up and out of the slots, completely releasing the deck plate from the boat. The deck plate can be released by pushing with a small force over a distance of one to two inches. A compressible seal attached to the underside of the deck plate makes the system watertight.

The Safety Deck System has been tested extensively in routine whitewater paddling and in simulated boat wrap situations. In all tests the deck plate has released easily, even under major stresses. The Safety Deck System is currently being offered as a customizing option by a number of fiberglass manufacturers which include: New Wave Kayaks, Ultrasports, and Whittemore Laminates. In addition the system is under consideration for production in rotomolded kayaks by Hydra, Inc.

The Safety Deck System fulfills all the design criteria previously listed and has a number of additional features. The deck plate is released with a forward push only and does not require a lifting



**Safety Deck System provides quick exits.**

force. Therefore, it can be released during situations where large water forces press against the deck. Operation of the Safety Deck is easy so that it can be utilized not only for emergency exit, but also to ease boat entry and exit during everyday use. This allows the Safety Deck to be tested often by the boater to insure that it is functioning properly. The Safety Deck System does not prevent pinning, but provides a reliable means for quick exits in emergency situations, thus increasing the paddler's margin of safety.

Tom Kreutz and Rick Curtis are the designers of the Safety Deck System. Comments or suggestions regarding the system are greatly appreciated and should be addressed to Outdoor Safety Systems, 140 Quaker Road, Princeton, NJ 08540.



# NEW EQUIPMENT

## Perception Introduces Sabre Playboat

Precisely in time for the spring thaw, Perception introduces the Sabre — a radically shaped, Gyraflow™ molded kayak that will do effective pivot turns and other advanced maneuvers. The only one of its kind in the world, Sabre is *the* kayak that advanced paddlers have been anticipating, *the* kayak that will bring the excitement of 3-Dimension Paddling™ onto your local river this spring!

What is 3-Dimensional Paddling?

Says designer Bill Masters, "When you're in your kayak, on top of the water, you're in an 'X, Y' plane — left and right, forward and back. But at the end of a drop, or whenever your boat plunges underneath the water, you're in a 3-Dimensional world, 'X, Y and Z'."

The Sabre allows you to respond to those underlying currents with a symmetrical new Hydrofoil™ design. Hydrofoil makes use of the river currents through which it passes the same way the wing of an aerobatic airplane makes use of air currents to lift and pivot. We call it Aquabatics™.

The Sabre is small, flat and fast. It can do on-point pivot turns or squirts while playing an eddy line. And its rugged Gyraflow molded hull construction lets you play as hard as you want.

### SABRE FEATURES

- very sharp edges for total water responsiveness
  - flat hull and deck keep the volume low. Plenty of room for your legs and feet, but no extra volume for storage
  - long waterline for fast hull speed
  - interior outfitting — featuring minicell foam footbraces and the strongest walls in the kayak industry
- specifications: weight, 33 lbs. (15.4 kg); volume, 50 gallons (189 liters); length, 12'2" (3.7 m); width, 24" (60 cm). Available in yellow, blue, neutral, and special package options.



### Quick Release Thigh Straps

**Open Boaters:** A new thigh strap system has been developed with a unique quick-release safety feature to help avoid possible entrapment during wet exits or pinned-boat situations.

In any situation that paddlers feel thigh straps are interfering with exit from canoe, they can simply pull safety release handle (located between knees) and thigh straps release from anchor pad in floor of canoe clearing way for quicker exiting.

Easily reached safety handle can be pulled at any angle to activate release of thigh straps. Paddlers using lowered seats, solo thwart seats, or canoes with fabric decking will feel much more at ease using this release system.

Notice right and left thigh straps have separate attachment points to anchor pad in floor of canoe. This 6" separation gives paddler better boat control than thigh strap systems using only one anchor point on floor of canoe.

Notice all parts of system stay permanently connected to canoe allowing no possibility of lost parts. Quick release thigh-strap system will be available for most open boats made of Royalex, and fiberglass/Kevlar layups. Future units may be modified to fit deck boats and aluminum canoes.

Price: \$39.50 (plus \$1.50 shipping; Maryland residents add 5% tax) (Allow 2-4 weeks delivery)

Availability: Mid-March 1985. Knee pads available soon for \$15 extra. (Any commercially available knee-pad kits will work.)

Inquiries: Contact David Brown at Great Falls Canoe and Kayak Repair Company, 9328 Old Court House Road, Vienna, VA 22180. (703) 281-4380.

Purchases: Make check to: Quick Release Systems T/A David Brown, 10318 Geranium Ave., Adelphi, Maryland 20783.

## Bullwinkle's Corner: Hot Dogs in the Falls!

As a part of the Open Canoe Nationals' festivities, the NOC sponsored a canoe hot dog contest. Everyone got two 5 minute periods in which they could strut their stuff before the audience and judges Bob Benner, Ray McClain, and world famous William Nealy. In addition, the crowd on the other bank had cards to hold up; one side said AWESOME and the other side said TURKEY depending on what the paddlers were doing. Since it was held in the afternoon, raft dodging was part of the game. Grand prize was an Old Town Otter. With all the goobs entered, I wish I'd entered.

The first of the three outstanding runs was *Noland Whitesell of Atlanta* showing off his new ABS canoe design (looks like a hi-volume Sunburst). All he did was surf the top hole in the falls, do several 360's in it, drop in the bottom hole and surf, then

tuck his paddle between the float bag and the string tying it in and hand surf the hole, then pull out a Rubik's Cube, work it and throw it to the crowd, then lean upstream and attempt to HAND ROLL HIS CANOE!! After two tries, he pulled out his paddle and rolled it conventionally coming up with a rubber fish in his mouth. It's too bad he missed the rolls as we watched him hit a dozen in a row during practice. Incidentally, his boat handles superbly even though they sell for \$900 with the bags and saddle.

Next was Kent Ford, also in a Whitesell boat. He started off bow surfing the wave above the top hole while juggling three tennis balls and then eating an apple. Then he did something I've never seen done; catching the micro-eddy stern first and then back-ferrying into the top hole. Next, he spun out of the hole, dropped into the bottom hole, surfed, turned over, and rolled up. He was going for a higher difficulty factor by not using float bags (he also tore up Noland's boat in the process!)

Last, we had the Blue Hole/NOC team of John Burton and John Kennedy really puttin on the ritz. Burton paddled the boat from the stern seat out of the eddy and under the dangling Kennedy who had zinged himself out to the middle of the river via a cable stretched across the river on a climber's pulley. What a start! He dropped 3 or 4 feet into the boat and they headed for the wave. There they juggled tennis balls and then not only changed clothes on the wave, but then changed ends of the boat. Then Burton tried a head stand while hitting the hold and swam. Recovering from that, they went back for the bottom hole again and surfed it. Then intentionally turning over, Kennedy crawled out of the boat and hugged the exposed hull. Next Burton rolled up the canoe with one of them up and one of them down. What a HOOT! Incidentally, Kent Ford won the event and even though I like the guy a lot, I'm not sure he had the best routine. Oh well, there's always next year.

Max Wellhouse

THE ARKANSAS PADDLER



Perceptions new Sabre Kayak.

New from Patagonia®

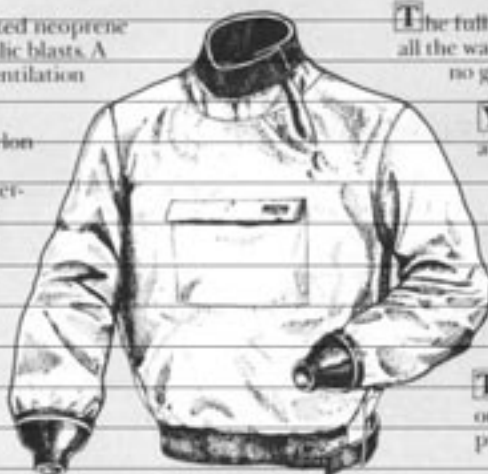
## Super Whitewater Paddling Jacket

**S**mooth, urethane laminated neoprene at the neck seals out hydraulic blasts. A Velcro adjustment allows ventilation in calmer water.

**T**he fabric is 110-denier nylon coated with SealCoat™ coating. It is completely waterproof and won't crack, peel or delaminate.

**T**he roll top pocket will carry items of great personal importance and keep them quite dry.

**E**very seam is top-stitched for extra strength.



**T**he full length gusset at the neck runs all the way to the top of the neoprene - no gap for water to get through.

**Y**-joint™ sleeves: When your arm goes up, the waist stays down.

**A** unique "O" ring system attaches the latex rubber cuffs to the jacket without gluing. You may easily remove, replace or exchange your cuffs for waterproof gloves. Patagonia sells replacement parts.

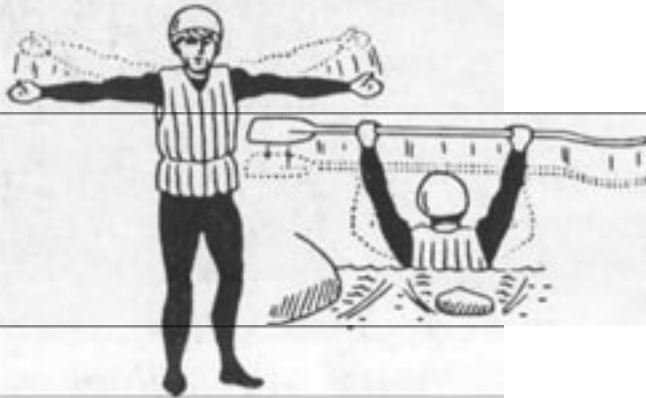
**T**he body is cut short so it won't sag onto your sprayskirt. The wide neoprene waistband makes a tight seal.

**patagonia®**

Send one dollar for our 80 page color catalog of functional clothes and the name of your nearest dealer.

P.O. Box 150, Dept. 772  
Ventura, CA 93002

**A New System of Universal River Signals:**



## **in the NEW AWA SAFETY CODE**

The 1980 revised edition of the AWA Safety Code is now available. This revision includes the new system of universal river signals combined with the excellent text of the past codes and is a MUST for all whitewater boaters.

For your FREE COPY send a stamped, self-addressed envelope to: AWA SAFETY CODE, 146 N. Brockway, Palatine, IL 60067.

Write for price quotes on quantity purchases of 50 to 5,000 codes. Pre-payment is now required before codes will be shipped.



AWA Journal  
146 N. Brockway  
Palatine, IL 60067

**Address Correction and Forwarding  
Requested**

NON—PROFIT  
BULK RATE  
Permit No. 9  
West Sand Lake  
NY 12196