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AWA Journal
Editor-in-Chief
Bart Jackson
7 Holland Lane
Cranbury, NJ 08512
(609) 448-8639

AWA STAFF
Editor: Bart Jackson. 7 Holland Lane. Cranbury, NJ 08512
Racing Editor. Barb McKee. 1167 Millstone River Rd.. Hillsboro, NJ 08876
Regional Editors:
Idaho: Rob Lesser Midwest: Fred Young Alaska: Jack Allen
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COVER: Using the latest in sophisticated photography. Joe Maskasky catches Pete Skinner's euphoric surf in a hole on Canada's majestic Ottawa River. Joe has been at work for several years composing whitewater shots for Kodak's Colorama display in New York's Grand Central Station.

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Vol. XXVIII, No. 2
GRAND PRIX SLALOM

For the past three seasons, several European nations have been running what is lately termed Grand Prix slaloms. Basically the same as the standard ICF slaloms we are now familiar with, Grand Prix style eliminates the need to pass through the gate in any set direction. In other words, you may encounter a gate forwards, backwards, sideways, from upstream or downstream. As long as you scoot self and boat between (or under) the poles, without a touch, you are home free.

The penalties for each type of touch may, or may not, remain the same and of course you still have to take each numbered gate in proper order. Three seasons ago, American competitors got their first taste of Grand Prix races in a series of slaloms sponsored by the Six Flags Corp. at their chain of super-amusement parks across the country. More importantly, many Europeans are now pressuring the International Canoe-Federation (ICF) to change slalom rules and make all the World Championship contests Grand Prix style. When and if that happens American racing will have to follow along with the change.

Many racers do not see this as necessarily a bad change. There were no great upsets at the Six Flag races. Those on top in other races placed accordingly here. Besides, they argue, many people screamed all kinds of horror when sneaking gates was first allowed. But the sport has only improved since then and the "cheating" didn't make us lesser boaters.

On the other hand, others argue that Grand Prix style eliminates too much of the skill that is basic to river paddling, and while a slalom is artificial, it should reflect, as truly as possible, one's river running skills. This would take away from racing any use of the eddy turn or upstream paddling, something inherent in boating. Also, some have hinted that this would graphically widen the gap between open and closed boat races since open boat competitions would probably not take the Grand Prix plunge.

American Whitewater would like to hear the opinion of its readers on this issue. Is Grand Prix racing a change for good or ill? How would it affect American racing? Is it our job to encourage the ICF toward or away from this new style? Let us know how you feel. It's a decision you may have to live with a long time.

---

AWA ANNUAL REPORT

by Marge Cline

Our own President & River Mom

February 11 found many of AWA's Board members in Chicago attending the NSGA show, and hence able to attend a meeting to discuss AWA business. In attendance were Bart Jackson, Marge Cline, Fred Young, Ken Horwitz, Rob Lesser, and several interested members. Many topics were covered including the results of the readership survey, our big push for new members in '83, the financial status of the organization, and the need to hold another Board of Directors election. In regards to the aforementioned items:
The readership survey seemed to be a solid success, and we now have the most complete survey ever done of whitewater paddlers in this country. Sincere thanks to all of you who took the time to fill out the questionnaire and return it to me, as well as a few paddling buddies of mine here in Chicago who, with myself, spent untold hours compiling all the demographics. Bart will present the results to you on page 30 of this issue, and I think you will find the statistics most interesting.

A membership campaign has been inaugurated. This consists of the distribution of cardboard placards to which membership applications have been attached for easy removal. These placards have been distributed to businesses throughout the country, and hopefully are being displayed in an effort to put AWA’s name in front of the paddling public.

The purchase of a software package to make our treasurer’s job a little easier was approved by the Board. Claire should have all the necessary financial bits in hand very shortly, enabling us to have a very complete picture of just where AWA stands each month.

And finally, the need to hold another Board of Director election will be met this Fall. Any member interested in running for one of the open positions, is urged to contact any one of the present Board members and let your feelings be known now. To all those present at the meeting, it seems AWA has made great progress this year, thanks to the very worthwhile efforts of a dedicated few.

To give credit to all this efforts would take many pages, but one paddler in particular deserves all our gratitude—our Editor-in-Chief, Bart Jackson. He continues to oversee the publication of The Journal and make available to all of us some of the latest and most useful whitewater information in the country. In recognition of his untiring service to the whitewater community, Bart has been presented with a complete set of American Whitewater Journals dating from Spring, 1959, a good year.

I believe AWA can look forward to another successful year in ’83 and, with the help of all of you out there, continued growth and a most interesting Journal. Right now, however, the call of the Spring flood beckons, so...

SYOTR,

Marge

AWA NOW OFFERS

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ACA Safety Chairman

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

THE WAYS OF THE C-1

Dear Editor,

Can you please recommend the titles and distributors of some instructional books on C-1 technique. I have recently graduated from open to decked boat, but I am alone in my area. Have you any reading material that will be helpful in overcoming my aloneness?

Thank you,
Tedd Weyman
New Brunswick, Canada

Of course, your best bet is to learn from others. If you ever get a chance to get south into Maine, you might try contacting Northern River Runners, RFD #2, Box 383, Presque Isle, ME 04769 or The Penobscott Paddle and Chowder Society, c/o Bill Stearns, Box 121, Stillwater, ME 04489. But in the meantime try these:

White Water Handbook (2nd Ed.), by John Urban, revised by Walley Williams; available from Appalachian Mt. Club, 5 Joy St., Boston, MA 02108; $4.95. Williams himself is a decked canoeist, and Urban's classic is excellent.

Whitewater Racing, by Eric Evans and John Burton; available from Nantahala Outdoor Center, Box 41, Bryson City, NC 28713. There is very thorough technique section in Chapter Three strictly devoted to the magnificent C-1.

Also, to study good, illustrated descriptions of solo canoe techniques (good for decked and open) try Bill Mason's Path of the Paddle, available from Van Nostrand Reinhold Ltd., Toronto; and Tom Foster's Recreational Whitewater Canoeing, available from Leisure Enterprises, 8 Pleasant St., Millers Falls, MA 01349.

JUDGEMENT

I and most of our club find ourselves agreeing with Art Block's opening comments concerning the tragic death of Chuck Rollins at Idaho, (AWA#5-1982, Editorial). We have spent some time here discussing the responsibilities which we all have in looking out for the other guy. We have all agreed pretty much that we are our brother's keeper and have a responsibility to keep others out of hazardous situations, even if it means aborting the river trip.

Sincerely,
Chuck Hines
Asheville Kayak Club

PERU

Dear Editor,

I would be interested in learning more about the Rio Inambari expedition and how to reach Laslo Berty.

Sincerely,
Jay Nutt
Portland, OR

Laslo Berty and his assistant Jacenta Pazenkovskis are currently running their South American outfitting firm Amazon Headwaters and can be contacted at Rio Bravo S.A., Av. Sol 900, Cusco-Peru. Take a look at his classified ad in this issue's Fluvial News and note that he's expanding his operation and looking for new guides.

As for running the Rio Inambari, your best information would come from the Amazon Headwaters crew.
TO PRY AWRY

Dear Editor,

I was pleased to find myself in good company with Morley Hewins in his recommendation of Robert McNair's Basic River Canoeing. (The Neglected Technique, Jan.-Feb. '83.) It's the best book on the subject I have seen though I do have reservations on a few of McNair's techniques. Indeed, one of these is the eddy turn pry described on page 52 and by Hewins. I disagree with both gentlemen.

It doesn't take a neophyte very long to discover what is meant by "catching a crab" even on a flat water cruise. It will take him somewhat less time in moving water. As most of us know, the problem is that the paddle becomes pinned against the side of the canoe either as a result of the unexpected force and/or direction of the moving water, or by the failure to realize that the canoe is moving sideways in the water.

This usually happens very quickly and can result in an upset unless the paddle is somehow freed immediately, often by releasing the top hand hold.

While any stroke, such as a draw, which brings the paddle blade close to and parallel to the side of the canoe risks being pinned to that side, most of us have learned to either withdraw the paddle or change its direction before contact is actually made with the hull. The problem with any stroke such as the pry which requires that the paddle be introduced parallel and actually in contact with the hull, or nearly so, is that there may be unexpected currents or currents stronger than expected or unrealized sideways motion of the canoe which may cause the paddle to "catch a crab".

To compound the problem, the sudden introduction of the paddle at that tricky location does not give one a chance to get a feel of the current's strength or direction. This type of stroke in moving water is prone to surprises, the surprises may be difficult to recover from and may result in loss of control of varying degree.

In spite of Emma Chladek's impeccable credentials, we have Angus Morrison to remind us that swinging a paddle over the bow of a canoe is not reason for banishment to the Sahara.

Most of us who use the crossdraw also realize we are benefitting from the greater relative strength of the biceps pulling on the lower end of the paddle. The great power of this stroke more than compensates for the extra time it may take to swing the paddle to the off side. The stroke also gives us the opportunity to feel the water's thrust while the blade approaches the hull and lets us decide how close it may be prudent to allow it to come.

I don't believe the eddy turn pry is obsolete, just that it deserves to be neglected.

Tony Ryan
Lyme Center, NH

DELAWARE DIVERSIONS

Dear Editor,

Earlier this year, I learned of the diversion of 95,000,000 gallons per day from the Delaware River at Point Pleasant, PA. It is now, as I understand, a fait accompli that shows the total lack of teeth and concern in all our environmental protection agencies. With no publicity beforehand, the diversion project was railroaded through without a public referendum or hearing. The citizens of the area had no voice in this decision affecting so drastically the appearance and ecology of the area.

The purpose of this pumping station supposedly is to provide water for Bucks county which claims not to have enough for purposes of maximum development; and to provide water for Limerick (Philadelphia Electric—PECO). The Limerick plant needs this 95 million daily gallons, PECO claims, for backup. By riding on the coat tails of Bucks County, the Limerick nuclear plant was able to
YOU THINK YOU'VE GOT TROUBLES?

Springfield, Illinois' State Journal Register recently reported this plight of an indoor kayaker.

It was too cold outside to work with resin, so this benighted boater carted his 16 foot long kayak into his 17 foot living room and began a little year-end maintenance. Amidst his moils, he found himself stuck half in, half out of his craft. His wife returned home to find her living room filled with a huge orange K-1, two familiar legs flailing from the cockpit, and the beam of a flashlight bouncing distress signals from inside.

"Oh, you're working on your boat, dear. That's nice."

"Don't be cute, Mabel, I'm stuck in this thing. Now help me get..."

He pushed, she pulled, he wiggled, she giggled.

"Should I get some Vaseline?" (Answer deleted). "How 'bout the fire department? Speak up dear. You know I can't hear you when you mumble."

At last they squirmed into the right position and he popped free.

"Mabel, don't ever tell anyone about this."

— Thanks to Chicago Whitewater Association

SURVIVAL PAMPHLETS

Now is the time for all devoted paddlers to unite on the river bank and start freezing their buns. To keep boating's inherent chill from turning to hypothermia, here are two excellent pamphlets worth reading and including in your first aid kit.

The ABC's of Winter Whitewater: covers clothing, conditioning, ability, hypothermia, good, and general preparation. It's part of the Greater Baltimore Canoe Club’s Safety and Education series and is available c/o MDCC, 222 Pheasant Trail, Hagerstown, MD 21740.

Four Defenses Against Hypothermia: more general camping oriented, but still has very helpful advice. Available from Jim Lawless, Motion Picture Consultants, Inc., 1545 NE 130th St., Seattle, WA 98125.

WHITEWATER PHOTOS

If you've got any good white-water photographs you would like to see published, here's three good sources for you:

The Whitewater Racing Program needs wildwater or slalom race photos especially from the South and West. Color or black and white prints preferred, slides and negs accepted. ALL WILL BE RETURNED. Photo credit and free program given if photos are used. Send shots to Barb McKee, Editor, 1167 Millstone River Rd., Hillsboro, NJ 08876.

The American Canoe Association is seeking good-quality white and flat water photos for its media file. Decked and open, racing or cruising shots needed. Label on back with identification, explanation, location, and photographer. Color and b&w prints preferred. Photos may appear in national magazines to promote ACA-approved events. PHOTOS CANNOT BE RETURNED. Send to Joyce Decot, ACA Office, Box 248, Lorton, VA 22079.

American Whitewater will now be using color in many of its upcoming issues. So if you have any color or b&w prints (slides accepted) that would nicely grace our cover, send them to AWA, 7 Holland Lane, Cranbury, NJ 08512. PHOTOS WILL BE RETURNED.
JUNGLE TOTTING TIP

The next time you happen to be portaging along the upper Amazon and want to sling your boat upside down onto your shoulders — don't. Recently, anthropologists Jose Pacifico de Almedia and Amelio Rosario tried this and died. The scientists were searching northwestern Brazil's lavari valley in the upper Amazon near the Colombian border in hopes of finding the isolated Curubu Tribe. While they were protaging their canoe on their shoulders, over their heads, a dozen tribe members found them, made a surprise attack and killed them. A trading post worker commented that the "tactical error" of covering their vision with the canoe permitted the attack, and for that reason, the Indians always drag their boats behind when portaging.

WATT'S LATEST

Several national conservation groups have challenged Interior Secretary James Watt's current plan to drop 75,000 acres of Oregon from further Wilderness protection. His claim is that since several sections of this 75,000 acres, including the Hells and Deschutes Canyons areas, are below 5000 acres in size, they are no longer worthy of federal considerations. Watt deems worthless the remaining segments because the government does not own the subsurface mineral estate. (i.e. if someone runs a mine 2000 feet below a wooded tract, you might as well sell that tract to a housing developer. Make sense?) If this plan goes through, the 75,000 acres owned by the federal Bureau of Land Management would be sold off, bringing profits to the government and the axe to these woodlands and waterways. Fortunately, several groups have challenged the Secretary in court and Congressional hearings are expected in order to review this latest land sell-off.

Also in Oregon, bills have recently been introduced to the state legislature that would protect the thus-far undesigated portions of the Klamath, Owyee, and the North and Middle forks of the Willamette River. Another bill would require the study of the lower Grande Ronde. At the same time Oregon's legislature is pushing Congress to designate portions of the Illinois, Owyee, and Klamath for National Wild and Scenic protection.

In addition, 10 NEW WESTERN WATER PROJECTS have been proposed by our Secretary Against the Interior.

WINTER OF DEVOTION

How have the U.S. Whitewater Team hopefuls spent their winters? Pursuing excellence with sweat and sacrifice. Slalom C-1 champs Jon Lugbill, Dave Hearn, Bob Robinson, and Kent Ford took off time to journey from Washington, D.C. to the warmer climes of California and set up a training camp, where Team Coach Bill Endicott joined them for awhile. Chris, Mike, and Marty McCormick also gave up a semester of school to attend the camp.

World C-2 gold medalists Steve and Mike Garvis rise at 4:30 every morning and hit the Model Basin for their 5:30 training stint.

Yuri Kusuda, now working with Cathy Hearn at a Nautilus fitness center, has taken a semester off college to train. And Bill McKinney chose to stay, live, and train with Coach Endicott while the McKinney family went off to Europe on a two-year Navy assignment.

Surely, the days of train a little bit and make the Team are long gone, and the competition to make it to the 1983 Worlds is going to be the toughest yet.

—Thanks to Abbie Endicott
American Rivers Month

Last year, 20 state governors issued proclamations making June, American Rivers Month. Groups in over 30 states held conferences, jamborees, races, rides, and special events all focusing on America’s river resources. This year again, June will be celebrated as American Rivers Month (hopefully so named by Presidential decree). Already, Pennsylvania’s Governor Thornburgh has proclaimed June Pennsylvania Rivers Month to recognize the scenic, recreational, and economic value of the state’s rivers. A special observance is being made in Harrisburg on June 18th.

This is the chance for clubs to promote their favorite streams and gain some public and political awareness of our sport’s value. Why not set up a panel of state and local politicians and officials to speak to a broad group of river users. Perhaps a riverside festival involving fishermen, swimmers, kegs of beer and music; or fishing derby, novice canoe clinic, Red Cross safety clinic, or a special river trip with politicians and press. But however you plan to celebrate our month, now is the time to start getting organized.

SOUTH AMERICA BOUND? If you are interested in an expedition to Brazil or Peru to explore and paddle some of the Amazon tributaries — or if you have had any experience in that area, please contact:
Anne Benjamin
366 E. Cassilly St.
Springfield, OH 45503
(513) 323-8878

WANTED: Professionally experienced boatmen/women who would like to work for, and optionally invest in, a Peruvian river outfit. Contact:
RIO BRAVO S.A.
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Cusco - Peru.

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AWA BOOK REVIEWS

SOME POSSIBLE ADDITIONS TO YOUR BOATING BOOKSHELF

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

THE BEST OF THE RIVER SAFETY TASK FORCE NEWSLETTER
Edited by Charlie Walbridge

Paperback, 9" x 6", 90 pages, a few b&w photos and illustrations, $3.95.

Published by ACA, available from AWA, Box 1485, Hagerstown, MD 21740; 1983.

This anthology of accident reports gathered by Charlie Walbridge, American Canoe Association Safety Chairman, offers the boater a chance to "turn hindsight into foresight" and take measures that may save his life. In short, it is a volume I feel every boater should read. Since 1976 Walbridge has been publishing an irregular, but fascinating newsletter reporting current boating accidents, statistics, and new boating safety and rescue techniques. As the title implies, this book is a compilation of the newsletter's best articles.

The bulk of the book consists of 16 fatal and 10 near-miss accident reports. Each is thorough, factual, and often chillingly precise. Most contain a summary and description of the incident, told by an on-site observer, the victim or Walbridge; followed by extensive and well-thought-out Analysis and Conclusions sections. The author has selected these accidents very carefully and many of them exemplify very specific problems that must be guarded against, e.g. the Icebreaker Slalom foot trapping fatality.

While the stories are straightforward and factual, anyone who paddles cannot avoid a certain grizzly empathy with all the victims. And, indeed, some reports do read like a paddlers' version of Halloween II: "The Gualey River was now breaking over my back and head, pinning me to the thwart. My boat collapsed partially (with a) vise-like grip across my thigh...The cold water was beating me. It was a matter of time. I was mentally and emotionally prepared to die, but determined not to give up."

But beyond getting immersed in the terrifying details of each accident report, I suggest looking to the last 20 pages and reading the description of successful safety education programs that are working in various clubs and organizations across the country.

In his forward, Walbridge makes the point that education, not legislation, is our prime weapon against river fatalities. I agree totally. No law will keep me from paddling, but what I've learned from this book will make me a better rescuer and less-likely victim.

—Reviewed by Bart Jackson

COLORADO WHITEWATER
A Guide to the Difficult Rivers and Streams of the Rocky Mountain State Region
by Jim Stohlquist

156 pages, 9"x6", color and b&w photos, illustrations, $13.95.

Available from Colorado Kayak Supply, Box 291, Buena Vista, CO 81211; 1982.

Attention hair boaters! Here is a guidebook for you and for all of your boating buddies. (For the uninitiated, "hair" is not a filamentous outgrowth of the epidermis as defined by Webster. Rather, it is the king of boaters who needs more than the usual exuberance derived from whitewater boating.) In other words, he/she is a nut who goes over waterfalls, does endos, boats on Class III-V whitewater, and generally lives on the edge. James Stohlquist's Colorado
Whitewater is a book for you as well as for any smart boater who is planning a trip to Colorado's many top-notch runs. Not just for the hair boaters, but for all serious whitewater boaters, this well researched guide to intermediate and expert river runs is just what the doctor ordered. Colorado is losing its prime whitewater runs left and right. Here a dam, there a dam, everywhere a damn dam! As author Jim Stohlquist writes, "Publication in a guidebook creates a legal presumption that a waterway is in fact navigable for recreational use. It is hoped that this guidebook will help us fight the battle we presently appear to be losing."

The book covers runs in the Arkansas River Basin, the Colorado River Basin, the Green River Basin, the Rio Grande River Basin, and the Platte River Basin. For once in a guidebook, there is not much bull. There is just straight hard facts based upon the author's own experience. Each river run is described by the vitals: Class ratings, Volume, Gradients, Scenery, Time, Miles, Optimum flow, Overview of the run's character, Takeouts, Put-ins, and an accurate description of what intermediate and expert boaters may expect to find.

(Wait a sec—did that reviewer write intermediate and expert?) You bet your last brace I did. For beginning and less-than-intermediate boaters to try these runs would be a very poor gamble. The author is an expert Colorado kayaker and these runs clearly reflect it.

The 50 plus color photos and numerous b&w photos indicate what the river runner is about to encounter. The hydrographs will give out of state boaters an idea of when these runs will be at peak flow. Even better, it will give intermediate boaters an idea of when these runs will be at desirable flows.

Throw in the usual preface material on safety, Colorado landowner rights, and some good appendices on boating organizations, permit application info, supplemental reading, and a glossary, and there you have it.

After using and abusing this book for several days I recommend it to anyone that is ready for the many fine river runs available on the "Colorful Colorado".

- Reviewed by T.J. Hittle
Kansas Canoe Association
President
(Yes Dorothy, there are whitewater boaters in Kansas.)

FRESH PRESS LIST

Just published books, films, and maps to be reviewed in upcoming issues of AWA.


This classic which combines boating how-to and an expedition report is now available in paperback.


A beautiful display and description of the Show-me State's rivers and other natural wonders.

**141 Whitewater River Trips for Kayakers, Canoeists, and Rafters in British Columbia and Washington.** By Betty Pratt-Johnson. Should hit the stands by this fall. If interested in getting a copy write AWA Editor, 7 Holland Lane, Cranbury, NJ 08512.

**The Lore & Legend of the East Fork.** By Shane Murphy. Paperback, 5½" x 8½", 74 pages, b&w photos and detailed maps, $5.95. $1 postage. Available from Carson River Conservation Fund, Box 1221, Zephyr Cove, NV 89448.

Mile by mile, year by year, the energies of man and water are shown to blend in this historical floating guide of the East Carson River.


A magnificent German volume with photos portraying all aspects of paddling.
SURVIVING
Making it to Safety AFTER You have Reached the Riverbank

by Nye Simmons

Nye Simmons, experienced kayaker and rescue victim from Mobile, Alabama, has studied under survival instructor Bob Whitmore at Colorado's Wilderness Institute and designed a survival course especially tailored to the whitewater experience which he teaches at the Nantahala Outdoor Center. Nye asks for reader input on this vital topic.

Risk is part of whitewater. We may minimize it, but we can never eliminate it. Most of us wouldn't want to. That risk adds a certain undeniable element to our sport. But once dumped and swimming, you have left the realm of sport and face the dire job of rescue and survival.

Often, rescue may be nothing more than getting to shore. But if unable to proceed due to injury or lost equipment, the danger becomes greater than most of us realize. A surprising number of even our most popular runs are in remote wilderness areas. "Remote" is a relative term. If you are alone with a broken leg, remoteness may be a matter of a few hundred yards.

The stranded paddler, unable to continue by river, facing more than a short walk out, still stands an excellent chance of survival if she is aware of the dangers and has a basic plan to overcome them. Hypothermia (the inability of the body to maintain normal temperature) is the most significant obstacle to survival. The eight point plan listed below provides a basic how-to guide for fending off hypothermia until you reach safety. The knowledge can save your life.

I. Prevention
Much has been written in this and other journals about proper clothing and diet for the whitewater experience. Choices are seasonal, regional, and individual and have been amply explained elsewhere. However, there are some other preventative elements too oft overlooked.

Trip Strength. The individual boater must be matched to the river. Experts lose their edge, inexperienced but skilled intermediates bite off more than they can chew, and the longer, colder, remoter trips demand challenge beyond technical boating skill. Group size and strength must also be calculated, especially on small volume, high-gradient creeks.

Letting someone know where you're going and when you'll return is most overlooked and important. Les Bechdel's idea of leaving a note on the windshield for Forest Service officials is good, though it may invite break-ins.

II. The First Few Minutes
Excitement and panic are the most frequent reactions to a stressful situation. Unless immediate threat to life is present, the first thing to do is sit down. Count slowly to 50. This allows for the initial wave of panic to pass and provides structure for further action. Failure to gain control at this critical time sets the stage for injuries sustained running about, becoming lost or further disoriented, ineffective use of limited supplies and assures a wasteful expenditure of valuable energy.

After counting, assess the situation: inventory skills and equipment. If the situation cannot be remedied to allow further paddling; if lost boat, paddle, or serious injury have occurred, then preparations for the impending survival experience must begin. Most boating scenarios in the lower 48 states rarely exceed three days and will probably not last beyond overnight.

III. Mental Attitude
It has been said that survival is 90%
Energy spent foraging is rarely returned, calorie for calorie.

mental attitude and only 10% knowledge/skills. The will to survive cannot be taught, but is absolutely essential. A negative attitude becomes a self-fulfilling prophecy. With the basic information and the proper outlook, your grandmother could survive.

While no article can impart that spark of self determination, possessing that 10% knowledge and skill can significantly change a person’s outlook and set the framework for a positive attitude.

The lone victim generally faces greater mental difficulty. Fears and phobias tend to run rampant when alone. But the group also faces the problem of establishing leadership and coordinating efforts.

IV. Food

Food is mentioned here primarily to de-emphasize its importance. The body has caloric stores adequate to maintain physical activity for two-three weeks (obviously with weakness setting in), with immobility and starvation coming somewhere in the 4th to 5th week. Consumption of available supplies is fine if adequate water is available and may be psychologically reassuring.

Energy spent foraging is rarely, if ever, returned, calorie for calorie. Skilled survival artists report an average return of one animal for every 12-20 traps set. This assumes one has the time, supplies, and skill to do this properly. Injuries sustained in this activity, as well as illness contracted from trapped animals (tularemia, wound infection) or from ingesting toxic plants may make a moderately difficult situation desperate. Without food, psychologically, the first 48 hours are the worst, the appetite being suppressed after that time.

V. Shelter

Shelter is heated by two sources: external heat and body heat. It should be as small as possible. The space blanket, waterproof and with remarkable tensile strength, makes an indispensible liner.

The shiny silver reflects 80% of the heat presented to it, the dull orange side 60%. (They do disintegrate if too near a flame). The most readily available shelter is often a boat turned on its side with a space blanket as a roof. Ground insulation to prevent conductive heat loss is essential.

Use as little energy as possible to construct a shelter. It should be just large enough for the occupants and out of the wind. Variations on the lean-to theme are usually easiest. Use what nature gives you.

Heat loss occurs in four basic ways. Each must be considered and countermanded. Immersion is unavoidable for the dumped boater, but once ashore, you can dry your hair. Conduction (heat loss through contact with cold objects such as the bare ground) can be countered with leaves, evergreen boughs, foam walls, paddles, or logs. Space blankets are totally useless here. Convection (wind blowing the warm air away from your body) and Radiant heat loss are the main reasons we wear clothes. Windproof garments fight the former, but against the latter, clothing that retains its insulation properties when wet is essential. Such common paddling clothing as neoprene, wool, nylon or polypropylene pile satisfy this requirement. Cotton when wet is worse than no clothing at all.

Heat losses through respiration are worsened by vigorous physical activity and of course by cold weather. Preheating your air by breathing through a scarf, sleeve, handkerchief or cloth is amazingly helpful. Strenuous physical activity should be avoided until the benefits can be foreseen or energy replenished.

VI. Fire and Water

Since getting external heat often makes the difference between life and death, the ability to start a fire is essential. Strike-anywhere, windproof/water-
The Whitewater Survival Kit

proof matches, waterproof are your first line starters. But back-up systems are a must. A magnesium fire starter makes an excellent spark source, when used in conjunction with pre-mixed tinder.

Fire Starters:

a) Sawdust and paint thinner. Pack a 35 mm film can with sawdust and saturate with paint thinner. Seal with electrical tape and evaporation. A tablespoon should be ample.

b) Gunpowder/Cutex. A little Cutex nail polish remover converts 4831 gunpowder (a slow burning rifle powder) into an even slow burning mass. Just saturate a fistful of powder with the oily Cutex, squeeze fit 35 mm film can. To use, place the fine steel wool (00000 if you can find it, 0000 otherwise) which catches the spark and burns long enough to ignite the fire starter.

Carry a minimum of three cans. Starter will burn from 30 seconds to two minutes, hotly kindling. Burn time decreases with age. 4831 powder is available from most outlets that cater to reloading buffs and at about $7.00 for a one pound can — ample for many fire starters.

Regardless of construction, a reflector fire should be the ultimate goal. A rock, stack of logs, old sheet metal, portion of a broken boat, can each reflect and actually throw heat in the needed direction and help keep the fire out of the shelter itself. Heat that would be wasted to the outside is redirected into the shelter.

However you do it, it is important to get that fire started and keep it going. Some simple tips will help.

---

DO

- Take adequate time to gather fuel.
- Start with match stick size twigs (lots), and add pencil size or smaller. Increase size of fuel as fire catches.
- Ensure adequate ventilation.
- Gather thrice as much wood as you think you'll need to avoid running low in the middle of the night.

DON'T

- Be in too big a hurry — a little preparation time pays big dividends.
- Don't start without adequate fuel on hand. Nothing is worse than leaving a marginal fire to get more wood.
- Don't smother the fire by adding too
It's small, light, totable, even cheap, and it can save your life:

The Whitewater Survival Kit

This kit, designed by Nye Simmons for the boater, will cover most contingencies. The whole thing crams into a bundle just a little larger than your fist. That much aid in that little size makes it a paddlers' necessity.

But before you rush out and assemble it, a couple of tips:

It won't work if you don't have it. In December, 1982, I stood on shore looking at my boat pinned and unreachable. I had minor injuries and it snowed that night. My survival kit lay pinned with my boat. Two suggestions: always have more than one kit per trip, and perhaps you can rig some sort of envelope underneath the backside of the sprayskirt to keep the kit with you.

Practice and occasionally check every item. On the riverbank, with night and rain coming is not the time to be reading the fire starter directions for the first time.

You may not like this kit, but at least have something. If you must buy a commercial kit, test it thoroughly before relying on it. Many have old, surplus "Crackerjacks box" items.

Shelter Items:

Space Blanket — at least one. Wind and waterproof, serves as reflective heat liner. Useless for wrapping up in.

Cable Saw — choose three strand model. Use with a green stick to make a bow saw.

Nylon Cord — 25 feet of eighth inch. Secures space blanket and shelter.

Fire Items:

Magnesium Fire Starter — This spark starter is a one by two inch rectangle of magnesium and successor to Kaufman's old metal match. For $5.95 plus tax it can be purchased from Doan Machinery & Equipment Co., Box 21334, South Euclid, OH 44121.

Fire Tinder — 4831 gunpowder/Cutex; Sawdust/paint thinner; 00000 or 0000 gauge steel wool in baggie.

Wind/Waterproof Matches — keep in 35mm can; include striking panel from box.

Butane Lighter — Unreliable, but takes little space.

Water

Metal Cup — for boiling water

Purification Tabs

General

Knife — sturdy enough to cut through boat deck and free pinned victim.

Signal Mirror — Glass, laminated construction, works even if cracked. Find at military surplus stores.

Mallory Flashlight — Also extra bulb; reverse batteries to prevent accidental discharge. Use around camp — not for night travel.

Bug Repellant — Choose brand with at least 25% active isomers.

Personal Medical Items — Those with asthma, diabetes, seizures should check with their doctor to see how a high-stress emergency will effect medication needs.

Container — Choose a small waterproof pouch or ditty bag or coated nylon as available in most outdoor stores. Remember, not all of the items in this kit are waterproof.

To find these items may take some searching. If it's not available locally, try the Wilderness Institute for Supplies and Equipment, c/o J. Burns, 870 Urban St., Golden, CO 80401; (303) 238-0970.
much wood (especially wet wood) too quickly. Let it catch first and add gradually.

- Build a fire larger than you need. "White man build big fire — keep cold; Indian build small fire — keep warm".

Though water quantity is rarely a concern for the boater, water quality can be. If possible purify water before consumption. Iodine (potable aqua), hala-zone, or boiling 6-10 minutes should be employed. Water borne disease usually does not come as an acute illness but I have witnessed one unidentified outbreak with overnight symptoms of vomiting, 103°F fever, chills, blurred vision, some vertigo — all obviously a serious survival impediment.

A metal cup is a great aid in boiling water. Alternate measures include putting water in a hollow rock or log and dropping fire heated rocks in until boiling occurs. (These same heated rocks can be brought from the fire into a shelter for heat.) The main hazard here is that the water in stream bed rocks, when heated, will cause the rock to explode. So seek stones for this purpose above high water mark and as dry as possible.

VII. Getting Found

Once the paddler has mastered the foregoing skills, the biggest question becomes what to do — get yourself out or stay put and get found. Factors such as your knowledge of the area and terrain, distance to safety, amount of daylight left, injuries in group, how accurately your route has been described to local officials, is there a search and rescue operation familiar with the area, must all be considered. Boaters, usually traveling in groups of three or more, often have the option of having the injured bivouac while one member goes off for help.

Rarely does the stranded victim, as mentioned, wait more than three days for rescue. While waiting, he can help himself be noticed. Noise sounded at regular intervals helps. Most boaters won’t have firearms, but they should have a whistle. Make sure to tape the mouthpiece to protect lips against the cold bare metal. Continued shouting soon leads to hoarseness even for the most loud-mouthed of us, rather bang a paddle against a boat rhythmically.

Visible signals include signal fires, mirrors, and flares. One signal fire is easily mistaken from the air for a campfire and ignored. Instead, use the internationally recognized distress signal: three fires in a triangle. Set them at least 30 feet apart so their smoke does not merge into a single plume.

Blue smoke (made by adding green boughs to the fire) may be more visible. In winter or early spring, black smoke from burning pitch pine or rubber products may be more easily seen.

Signal mirrors are the most effective ground to air signalling device on a sunny day. Glass is many times more effective than metal and can be aimed more effectively. Even if beyond the horizon, aircraft may yet see a beam swept to and fro. Rescue pilots report being blinded by over eager signal persons on rescue missions. Windshield-type glass, laminated construction enhances durability, works well even if broken.

Flares should be compact, work well, and burn out before reaching the ground. Test prior to use. Beware fire danger to self and others. Check dependability date on package.

VIII. Getting Out

I have mixed emotions concerning this topic. All recommendations are relative since no two situations are exactly alike. But, here are some general hints. Most boating experiences leading to survival situations involve injury, loss of equipment, nightfall or a combination of the above.

Simple nightfall poses the fewest problems. Bivouac overnight and proceed at first opportunity. Extra food will pay large dividends in terms of comfort. I strongly discourage night travel except to circumvent certain loss of life or limb. The potential for injury or getting lost is such that most search and rescue groups do not operate at night. Obviously there

Continued on page 36
Access to Gear

THE WHOLE RIVER CATALOG, published three times a year in American Whitewater, is an AWA service designed to link up our readers with the best and most convenient sources of boating supply, instruction, and general whitewater paraphernalia. Prices for a full year's participation in the catalog range from only $40 to $90, depending on type of listing. If you know a supplier who would like to appear in the Whole River Catalog, just send the firm's name and address to AWA, Whole River Catalog, Box 1483, Hagerstown, MD 21740 and they will receive further details.

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Eliot Dubois, one of boating's elder statesmen and AWA's Founding Fathers, has run Idaho's Salmon river twice: first in 1942 and again in 1982. In this two-part article, he describes both runs and lets you decide if the boating experience has progressed.

Gus Peebles was an old prospector, salt-sea sailorman, and Yukon riverboat captain who had settled down to spend his closing years in a cabin at the confluence of Idaho's Main and Middle Fork Salmon Rivers. I knocked on Gus's door, and when he opened it I said, "Mr. Peebles, I've just come down the Middle Fork in a kayak." The first thing he said was, "The Hell you say!" Then he said, "You look hungry; come on in and I'll fix you a plate of spuds and beans. You know, you've been through a canyon that every prospector in the West would give his eye teeth to get into."

That was forty years ago. Today the obstacles are bureaucratic rather than physical, but there are still people who would give their eye teeth to see the canyons of the Middle Fork.

The Middle Fork is a very special river. Because of improved equipment, advances in whitewater technique, and the safety that comes from reduced isolation, the river is no longer rated as one of the most difficult or dangerous. It has no Class V, and only seven Class IV rapids in its hundred mile length. Except at high water, it's not a big-wave river. Still, the Middle Fork is an important part of the American whitewater repertoire. It has a lot of whitewater, with an unusual variety: rock gardens, abrupt drops over ledges, corners where the river ploughs into undercut cliffs, drops among large boulders, wide stretches where it's hard to find a channel, and places where the current pours through narrow constrictions. In short, it's a great learning river.

More than that, it is spectacularly beautiful. The water is so clear that you can look deep down into the pools and see twenty-inch trout far below. The canyon starts with a vee-valley alternately of slide rock, spruce and lodgepole pine. Then come the slopes covered by ponderosas, broken by heaps of talus. Beyond, the slopes grow steeper, the walls close in, and finally you are in the awesome Impassible Canyon.

But, the river has other attractions, besides rapids and scenery: spacious campsites, some close to hot springs where you can relieve tired muscles, old placer mines, remains of frontier cabins, even petroglyphs left by the original inhabitants of the canyon. There is still wildlife in the canyon, and if you are lucky you might see mule deer, big horn sheep, or even an otter or an eagle. All these features combine to make running the Middle Fork a special experience, a cleansing of the soul, an episode in which the date and the hour and the condition of the world become unimportant. You are able to shake off everything but your inner self, your companions, the sky, the canyon, and the river.

My first run down the Middle Fork was in 1942 as a 20 year-old Yale student eager for a final civilian adventure before an uncertain future in World War II. Five years of canoeing New England rivers and less than one of kayaking had scarcely prepared me.

I heard about the Middle Fork from my friend, the late Alexander "Zee" Grant. Although better known for his 1941 run through the Grand Canyon, a kayak first, Zee was also the leader of the first kayak trip down the Middle Fork. In August 1940, at a very low level he and
Stu dragged himself ashore, but his boat was chewed up into small bits.

two companions from Bear Valley had run to the confluence with the Main Salmon. Hoping to duplicate Zee's trip, I recruited two companions: Ed Fried- man, who had seen relatively little white-water and, W.S. "Stu" Gardiner of Salt Lake City, an experienced fold boater.

Our equipment consisted of the standard double foldboats of the period. We ran them single, a way of providing a spare seat in case someone lost a boat in a box canyon. The boats measured 17½ feet long by three feet wide. The keel line was absolutely straight, no rocker. Total displacement, boat, duffle, and kayaker was close to three hundred pounds, not the best rig for tight turns, though with some advantage in punching through reversals. Our spraydecks were grossly inadequate; our paddles too long, too narrow, and too weak. A modern kayaker wouldn't use them for anything but building a fire. Lifejackets, yes, but no helmets.

Our technique matched our equipment. We were self-taught. Paddle brace and eddy turn were rudimentary at best. As for rolling up after an upset, that was for Eskimos off the coast of Greenland.

A wartime college vacation schedule made June the only possible month for the trip, a bad choice in any year, but in 1942 there was a deep snow accumulation in the mountains coupled with a warm, early rainy spell. When Ed, Stu and I reached Marsh Creek at the headwaters of the Middle Fork on June 13, we found her running two feet over its banks. The sensible step would have been to take on look at the creek and give up, but there is a mechanism that works on people who have invested time, money, and the emotion of preparing for a trip. That mechanism shoves aside the sensible decision and you elect to "give it a try". The next day, after some scouting, we put in on Marsh Creek.

We did well enough to begin with, but it was like riding a sluiceway. Four miles from our start, Stu wrapped his boat around a rock, and Ed flipped. Stu dragged himself ashore, but his boat was chewed up and distributed in small bits in every eddy in the remaining two miles of Marsh Creek. We called it quits and backpacked out of the canyon.

Stu headed back to Salt Lake, but Ed and I stayed on at a ranch near the headwaters. One evening Ed and I returned from a day's fishing to learn that professional boatman, Woodie Hindman of Eugene, Oregon had stopped at the ranch on his way to Bear Valley. Hindman and his party were planning to run the Middle Fork in McKenzie boats, a form of dory still seen on the Middle Fork. When I heard this news, I saw a chance of salvaging my adventure. I would launch in Marsh Creek, catch up with Hindman, and continue down the river.

Ed told me I was nuts, the rancher agreed but in the end they helped me get equipment and supplies together. So the next day, June 22, I again set out on Marsh Creek. The water was about a foot lower, though still high. Two days brought me to Dagger Falls where, in a bit of sand, I found boot prints and marks made by the bottom of a boat. I knew that Hindman was ahead of me and that it was unlikely that I could catch up to him. I was tempted to give up and walk out, but I was beginning to handle the water with more competence, so I kept on.

The water was at about the 5,000 CFS stage. I know that because I had with me an old movie camera. At Crandall Ranch

*Today's standard put-in is just below Dagger Falls at Boundary Creek. But in 1942 the road had not yet been pushed through to there, so all previous expeditions had put-in 10 miles upstream where the road came to the Salmon's headwaters at the Bear Valley and Marsh Creek confluence. But snow had blocked the road for us so our only access was down six miles of probably never-before-run Marsh Creek.
(now Flying B), I met a Forest Service Ranger and asked him to film me going through haystack Rapid. Recently, I made still shots from that film and sent them to two experts on the Middle Fork. They were in general agreement on this estimate.

The high water certainly added to the hazard, but in many cases it was an advantage as I was able to find sneak routes through otherwise formidable rapids. Still, there were places where I had to go with the main current and handle the strong hydraulics as best I could. Even then I benefited from careful selection of a route. My practice at every place where the river dropped out of sight or where there was any other indication of danger ahead was to land, scout ahead on foot, or at least climb high enough to pick the best route. A few times I got into trouble by being swept past a projected landing place. My one upset came because I grew too overconfident and elected to run an obviously dangerous rapid without scouting. I carried river survey maps, which were some help in telling me where I was, but for the most part, I had to rely on my own abilities. I ran everything except for one pitch on Marsh Creek and Dagger Falls. Eight days, 120 miles, and 3700 feet in altitude from my start on Marsh Creek, I reached the confluence with the Main Salmon and shared a plate of beans and spuds with Gus Peebles.

![Photo of the Middle Fork]

My second trip down the Middle Fork came forty years later, in 1982. My wife Barbara and I have been out of whitewater boating for some years, but when our son Del suggested a Middle Fork trip, we accepted eagerly. Del had kayaked the river in 1978, but this was to be a raft trip with a group of his river-running friends from New Mexico.

From the start, I could see that this was going to be a very different experience. There was a formal application to be filled out. A computer in Challis, Idaho that gave us only a twenty percent chance of acceptance. Fortunately, we got our starting date, though it was our third choice, August 19, with the potential of a low-water run.

Barbara and I drove to Idaho a few days early, first for some fishing, and then to visit Forest Service Headquarters in Challis. I wanted to find out about the rationale and the process of the management of the Middle Fork. I was cordially received by Mac Thompson, Middle Fork District Ranger, and by Ted Anderson, River Manager. Perhaps not every boater would have such ready access; sometimes it helps to be a grey-haired survivor of an earlier era. Mac explained river management policy. He outlined the present professional versus private split of river usage, which is roughly as follows: Private parties have 55% of the starts, but are only 30% of people using the river because private parties are smaller. The regulations allow 30 people on a commercial trip but only 15 on a private trip. The actual average size of parties is 22 for professional parties and less than 10 for private parties. We discussed the frustration of private boaters, both from limited access to the river and from the cumbersome and impersonal process they must go through to seek access. Mac explained the new system to be tried in 1983, in which private boaters apply by telephone and receive starting dates on a first come first served basis. I came away with the feeling that Mac Thompson and Ted Anderson are competent and conscientious people, but that they are stuck with a problem for which there is no completely satisfactory solution.

End of Part I.

Conclusion in Next Issue —
In this second of three articles the authors detail an annual training program for both the serious racer and the casual cruiser. Getting your mental outlook, physical condition and technical skill all to peak at razor edge for that oh-so-important race or cruise, takes a full year of planning and devotion. The authors have charted these peaks and offer this schedule to help paddlers reach their goals and get it all together. Here's how it works.

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

Interval Training — one of those oft bandied, seldom understood terms has created a real revolution in weightlifting, track, and swimming training, but has been a long time in coming to whitewater.

This cyclic approach of alternating exercise and rest within a workout greatly improves the quality of training. Because periodic recovery is allowed, one can exercise at a much higher intensity with less cumulative fatigue than in the straight, continuous, unbroken workout. Thus the cyclic intervals reap large quantities of high quality work for the trainer.

The idea of interval training is scarcely new. Cycles of exercising and resting on alternate days have long been used within a weekly schedule. But in the late '60s, Russian sport scientist Matveyev determined that training cycles could be extended beyond the weekly intervals and lead to much improved performance. Matveyev extrapolated these interval applications to yearly and even four-year cycles for would-be Olympians. Such annual period plans are particularly attractive to canoeists, who, because of inadequate water or other reasons, go through a predictable cessation of activity at sometime during the year. Application of the following principles should prove especially productive for the competitor, but are also appropriate in modified form for everyone interested in whitewater or recreational paddling.

**The Annual Interval Schedule** should include a preliminary phase during which general fitness development is emphasized, then a pre-season preparatory phase with primary attention to specialized fitness work, followed by an in-season phase when technical aspects dominate, and finally a transition phase of controlled detraining. The in-season period might be subdivided into two or three peak periods for critical competitions, or there could be gradual progress toward a single climatic event.

Atop page 29 is a general year-long training schedule for the three basic types of whitewater boater. It is designed to mesh your seasonal training with our inherently seasonal sport. Refer to this table, but remember, it is only a model. Individual adjustments, of course, will be necessary. It is important to note that the model covers the entire
INTERVAL TRAINING EMPHASIS

Within each of the four phases illustrated in the table, there are three distinctly different aspects of training: 1) general conditioning, 2) training specifically related to paddling, and 3) techniques or skill development. While all of these are integral to each part of the annual cycle, emphases from phase to phase will be critical to the success of the system.

During the preliminary period (Phase I), the concentration is on general conditioning, especially on local muscular and cardiovascular endurance at the outset. There must also be resistant work with weight training to build strength, but with a fairly gradual increase in intensity. Keep in mind that this is a relatively long part of the annual cycle. One third of a year for the serious racer. And while it is somewhat shorter for those who are less interested in competition, it is in no way less important. Rather, it means only that a lower level of base fitness is necessary for the recreational paddler.

Now, about one third of the way through the preliminary period, paddling technique work is introduced. Its volume builds progressively throughout this stage, but only to about 40% of the time you will spend on it at the in-season peak. (This is significantly more than the Matveyev model calls for, but appears to be necessary in order to keep integral fitness gains with improved technique.

Of course in whitewater training cycles, the goal is to have the general fitness, specialized fitness and skill all peak at that pre-planned time: the big race. But to combine these three peaks demands a relative quantity of words differing for each individual. For example, the quantity of technique work should peak just about the time the paddler hits the competitive season. But this peak may mean one hour a day for one boater and four hours a day for another. All the parts of every curve are relative to your own aspirations and the number of hours a day you have to devote to them.

Prelim to Prep. — Moving from the preliminary to the preparatory phase, the paddler now assumes that the desired general fitness necessary for success has been achieved and that maintenance is called for. This doesn't mean that you are now necessarily a
ANNUAL TRAINING PHASES
(the number of months recommended for each phase of the training year*)

<table>
<thead>
<tr>
<th></th>
<th>I. Preliminary</th>
<th>II. Preparatory</th>
<th>III. In-Season</th>
<th>IV. Transition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious Competitor:</td>
<td>4 months</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Less Intense Competitor:</td>
<td>3</td>
<td>1½</td>
<td>5</td>
<td>2½</td>
</tr>
<tr>
<td>Recreational Boater:</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>

*Scheduling of each cycle must be adjusted to the boater's peak performance time.

Greek god or that you won't get any fitter until next year. It does mean that you should now reduce both the volume and intensity of work done for basic fitness alone. To take up the slack, special conditioning procedures should be increased in intensity. The volume of time spent on these special conditioning exercises should also increase for the first half of this phase, then sharply cut back.

These reductions may be difficult for some to accept, but unless cutbacks are made, there will be residual, cumulative effects of fatigue that will creep in and limit maximum performance. These adjustments also allow an ever-increasing attention to development of skills and strategies.

It should be noted that the degree of cutback in volume differs between whitewater and flatwater paddlers. The flatwater paddler must ensure that no loss of muscular or cardiovascular endurance occurs and must not reduce the total load as much. The whitewater paddler will cut back more in volume, but somewhat less in intensity, since strength and power are more important for them.

Hitting the River. Once the spring thaw starts coming and your juices start flowing, technique work should be increased even more rapidly in volume, keeping the quality high at all times. General and specific fitness by now should be well developed and stabilized and the generalized tapering off in conditioning that began in the preparatory phase is continued.

A sudden blitz in conditioning will be necessary only if more than one major peak period is required. In such cases, immediately after that first important event, temporarily reduce the technique work and replace it, with a short term increase in both volume and intensity of general and special conditioning. Then about two weeks prior to the second peaking gradually reverse the trend and hit harder on technique.

The peaks we refer to here are for most critical competitive events. Ordinary competitions will require only a slight tapering-off of all training for one to three days prior to the competition for improved performance, the length of the taper being dependent on the importance of racing well, the state of fitness, and the individual's need for rest and recuperation. Such tapering-off is critical. No matter how tough you think you are, a razor-edge peak level simply cannot be continuously maintained. And for the paddler who tries to do so, poor later season performances are as guaranteed as rain. Reducing the amount of conditioning work to build to a peak may appear paradoxical, but it is, in fact, well founded. In top level competition, more races are lost through overtraining, than undertraining.

When the water drops or the racing season ends, a transition period is

Continued on page 35

Vol. XXVIII, No. 2
This past fall, in the September-October 1982 issue, American Whitewater polled its readership on their boating and boating-related activities. The results were indeed surprising and gave us a picture of the AWA paddler that shattered many of our own preconceived notions.

First, we at AWA would like to extend our grateful appreciation to the 335 readers who participated in this survey by filling out the long, detailed form and returning it. You have our thanks for taking the time and it will help us give you more of what you want in AWA. Also well deserving of accolades are Marge Cline and Burt Uhr who designed the form, then tabulated all the individual returns and worked out all the percentages that you will read here.

Of those responding to the survey, virtually all labeled themselves as current paddlers, (less than one percent called themselves inactive), but that was about the only common point they could claim. Geographically, the returns were remarkably evenly spread throughout the country, much more even, in fact, than our Journal's circulation. Thus all sectors of the paddling United States were amply and fairly represented with the Southeast being slightly above average.

Of course, no survey can ever be considered truly representative. And it would be foolish to infer from these results any absolute trend or "facts" about the paddling world as a whole. We merely relate to you the opinions and actions of 335 of your fellow boaters for your own interest.

**DEMOGRAPHICS**

The basic figures of our sample group, in regards to age, sex, location, and marital status seemed to jibe with our general view of the boating population. 88% of those surveyed were male, 12% female, seemingly a bit low on the distaff side. As expected, boaters are younger than the general population, with 39% between 21 and 35 years old, 29% between 36 and 45, 24% over 45, and only 1% under 20. Not quite the single person's sport it is pictured. 52% of our boaters were married, 32% were single, 4% were "otherwise" attached and 12% were unable to figure out what state they were in. (Very few respondents answered every single question on the form. These "no answers" make up the remaining percentage short of a 100 total on many of the responses. Whether from farm shack or small city apartment, folks still get out to the rivers. Our respondents lived:

- City: 27%
- Suburb: 30%
- Small town: 18%
- Rural area: 14%

One of the greatest surprises of the entire survey was in the income area. We had clung to the romantic visage of our readers being rag-clad boating bums who can scarcely scrounge the cash for their next roll of duct tape. Whether a view of the past or never-was, we found our respondents were considerably more well heeled:

**ANNUAL INCOME**

- Under $15,000: 14%
- $15-25,000: 25%
- $26-32,000: 11%
- $33-40,000: 12%
- Over $40,000: 28%
- No answer: 10%

Many of the responses were unclear as to whether this was their family or individual income, but either way it is far above our expectations. (Usually only
Education was also remarkably higher than the national average. 13% attended college, with another 20% graduating. An additional 14% went on to graduate studies, with 39% more now holding some type of graduate degree. This left all but 5% of those answering participants to some extent in higher education. So not only do we see a picture of paddlers as fairly well-off and educated, but 57% are homeowners. Guess more river rats are middle-class than we'd like to admit.

**BOATING ACTIVITIES**

One of the main purposes of this survey was to determine just how and what readers boat. As to what they paddled, the answers were not surprising considering our readers, but perhaps a bit lopsided compared with what you'd meet on the river. When asked what they *generally* paddled, the reply was:

<table>
<thead>
<tr>
<th>Craft</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kayak</td>
<td>55%</td>
</tr>
<tr>
<td>Open canoe</td>
<td>31%</td>
</tr>
<tr>
<td>C-1</td>
<td>12%</td>
</tr>
<tr>
<td>C-2</td>
<td>4%</td>
</tr>
<tr>
<td>Raft</td>
<td>9%</td>
</tr>
<tr>
<td>Other craft</td>
<td>1%</td>
</tr>
</tbody>
</table>

(The more than 100% total here indicates those who listed more than one type of craft.)

But regardless of what our readers paddle, the length of their paddling careers surprised us, with a third of those surveyed having been in the sport 10 years or more.

How many of those years were spent actively paddling is up to your interpretation. But apparently, our readers have spent enough time on the water to consider themselves pretty hot stuff: only 3% labeled themselves as Novices, with less than 10 per cent inactive, while 47% called themselves Intermediate, and a whopping 42% stated that they were Expert paddlers. Small wonder that our river classification system is being downgraded.

But with all this expertise, a strong majority (79%) stated that they usually paddle whitewater (Class II-IV) and only 7% usually paddle Hair (Class V-VI). The remaining boaters mostly spend their time on flatwater.

No one ever doubted that our readers' devotion to their sport boardered on the fanatical: more than half (51%) spend more than 20 days a year plowing through whitewater. That's ten or more weekends on the river, not to mention the off-river time devoted to club work, conservation, instruction, and of course fiberglassing and duct taping (that's two weekends right there). The variety of activities was wide, with most respondents involved in two or more types of paddling. The chart on top of page 32 shows how they spend their boating time:

The amount of time spent racing vs cruising by our surveyed boaters kept alive the idea that, for paddlers at least, competition has not been turned over totally to a racing elite. One quarter of the boaters compete at least occasionally and 27% actually help organize a few weekends a year or more. Presumably local club races account for the greatest number of these.

Rafting, though verbally denigrated by many, took up as much of our boaters' time as racing even though only nine
DAYS PER YEAR DEVOTED TO BOATING

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percent Participating</th>
<th>1-10 Days</th>
<th>11-20 Days</th>
<th>20 or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitewater paddling</td>
<td>88%</td>
<td>16%</td>
<td>21%</td>
<td>51%</td>
</tr>
<tr>
<td>Flatwater paddling</td>
<td>72%</td>
<td>41%</td>
<td>12%</td>
<td>19%</td>
</tr>
<tr>
<td>Ocean paddling</td>
<td>21%</td>
<td>16%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Slalom racing</td>
<td>24%</td>
<td>19%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Downriver racing</td>
<td>16%</td>
<td>14%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Helped with race organization</td>
<td>27%</td>
<td>22%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>Instructed others</td>
<td>68%</td>
<td>48%</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Conservation efforts</td>
<td>50%</td>
<td>44%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Building boats</td>
<td>27%</td>
<td>21%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Making other gear</td>
<td>41%</td>
<td>27%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Private Rafting</td>
<td>27%</td>
<td>17%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Commercial Rafting</td>
<td>19%</td>
<td>13%</td>
<td>2%</td>
<td>4%</td>
</tr>
</tbody>
</table>

percent claim it as usual paddling craft. Even those who are primarily hard boaters are not above using the old inflatable for a support craft: 51% stated that they had run with a commercial outfitter at least once in the past five years.

Traveling is inherent in boating and even those with the backyard rivers willingly make the trek to something new. When asked about the miles driven last year in pursuit of the perfect river, our readers responded:

MILES DRIVEN ANNUALLY FOR BOATING

<table>
<thead>
<tr>
<th>Mileage</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 5000</td>
<td>19%</td>
</tr>
<tr>
<td>2000-5000</td>
<td>29%</td>
</tr>
<tr>
<td>500-2000</td>
<td>30%</td>
</tr>
<tr>
<td>Under 500</td>
<td>12%</td>
</tr>
</tbody>
</table>

Doubtless much of that mileage was eaten up in long distance expeditions which nearly one third of our boaters indulge in annually.

Off the river our paddlers’ energies do not appear to wane. The one statistic of this survey that gladdened our hearts more than any other was the 50% who claimed to be currently, actively involved in some conservation effort. Our respondents could also boast a heavy hand in trip and club organization. Only 11% said they never organized trips for paddlers, while 41% set up more than five trips a year. Apparently, these were not all weekenders: 32% led trips longer than five days, 10% took groups out of the country, and 15% led groups to rivers more than 1000 miles away.

Not surprisingly, 55% of our survey belonged to a paddling club and 37% had at sometime served as a club officer. In addition to the American Whitewater Affiliation, 66% also were members of the American Canoe Association, 24% belonged to NORS, and six percent belong to the United States Canoe Association. We also had countless write-ins telling of memberships to ARCC and citizens to save the Gauley, Yampa, and other specific rivers.

RELATED ACTIVITIES

O.K., so paddlers are addicted to all
forms of their sport. No surprise. But beyond that, they seem to commune with outdoors in a myriad of other methods, with a substantial majority participating in at least two other outdoor sports frequently.

**PARTICIPATION IN NON-BOATING OUTDOOR SPORTS**

- Backpacking: 51%
- X-country skiing: 55%
- Downhill skiing: 38%
- Biking: 49%
- Mountaineering: 20%
- Sailing: 26%
- Scuba diving: 9%
- Tent camping: 63%
- RV camping: 8%

Not only are our readers investing a lot of their non-paddling weekends in these other outdoor sports, but they are spending a lot of their own cash to do so. 71% own their own backpack, 48% own cross-country skis, 30% own downhill skis, and 61% own their own bicycles.

**PADDLING GEAR**

It is no shock that our boaters' garages hold something other than autos. But just how boat-full they were was impressive.

As for paddles, there proved to be no clear preference of wood over fiberglass or other materials. 57% of the canoeists owned a wood paddle, while 51% owned blades of glass or other types. Kayakers favored wood slightly with 48% owning wood and 33% owning glass or other material blades.

Besides blade and boat, there seems to be a rather large array of owned accessories that are considered de rigueur. Between 79 and 84% of those surveyed owned a PFD, Helmet, Flotation, Wet suit, Paddling jacket, and Roof racks. 67% owned a Throw bag and 75% owned a Spray skirt.

Finding all this gear is done in many ways, but half still claimed most of their equipment was bought on friends' recommendations. To give our Journal some hope, 24% credited advertising and 36% chose their purchases mainly from articles they had read. 47% bought from catalogs and 6% admitted to buying from impulse alone.

However it was chosen, all this buying did run into money, and while cheaper than many "simplicity sports" our readers proved that boating does indeed cost.

**VALUE OF BOATING GEAR NOW OWNED**

<table>
<thead>
<tr>
<th>Value Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over $2000</td>
<td>42%</td>
</tr>
<tr>
<td>$1001-2000</td>
<td>30%</td>
</tr>
<tr>
<td>$301-1000</td>
<td>14%</td>
</tr>
<tr>
<td>$100-300</td>
<td>1%</td>
</tr>
<tr>
<td>Under $100</td>
<td>3%</td>
</tr>
<tr>
<td>No answer</td>
<td>10%</td>
</tr>
</tbody>
</table>

**AMOUNT SPENT ON GEAR LAST YEAR**

<table>
<thead>
<tr>
<th>Value Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over $500</td>
<td>30%</td>
</tr>
<tr>
<td>$251-500</td>
<td>23%</td>
</tr>
<tr>
<td>$100-250</td>
<td>20%</td>
</tr>
<tr>
<td>Under $100</td>
<td>16%</td>
</tr>
<tr>
<td>No answer</td>
<td>11%</td>
</tr>
</tbody>
</table>

**BOATS: WHO OWNS HOW MANY**

<table>
<thead>
<tr>
<th># of Boats:</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>more</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Owners:</td>
<td>3</td>
<td>32</td>
<td>72</td>
<td>48</td>
<td>47</td>
<td>24</td>
<td>18</td>
<td>10</td>
<td>8</td>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>

(out of 283 respondents)
A large part of the survey was devoted to our readers' opinions about our Journal. While the purpose of this section was primarily to guide your editors, a few interesting preferences were expressed which we pass along to you.

Feature stories were by far and away the favorite portion of the Journal, with two thirds voting it their number one preference. Editorials claimed the second spot, with the Letters from Readers and The Fluvial News following close behind. As to what our readers wanted to read more of, four items stood out. Boaters wanted to see more River running reports, Safety and rescue articles, Equipment and new product reviews, and Expedition news; in that order. Only rafting received a substantial number of votes calling for less coverage. Racing also had many calls for reduced coverage, but not as many as desired the status quo. From this survey, we received several mandates which we will endeavor to satisfy in upcoming issues.

In conclusion, it is safe to assume that our boaters are above average in income, education, and most of all devotion to their sport. Both the time and the variety of ways spent in pursuing the perfect river are great, with many paddlers frequently trying several types of paddling. Certainly, they do not mind parting with their cash to get not only good boating equipment, but proper safety equipment.

Off the river, our readers devote additionally large amounts of time to organizing, serving clubs, and working to save our rivers. In general, those surveyed are not only paddlers, but are active outdoors folk as well. Here again, they don’t mind investing money and time in these other sports, but for most all of them, the investment is second to boating. All in all, this survey painted a portrait of a person who might look like your next door neighbor, but is actively involved in several aspects of the outdoors. These actions feed further his interests, and make him a person alive and willing to spend to get what he wants. And though all our readers are vastly different in many parts of lifestyle, there is a common energy that can be discerned through all the piles of statistics—an energy which if not surprising, shows boaters to be fascinating, strange bunch.

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LETTERS from page 7

grab more water. I'm deeply opposed to this nuclear plant in any case, so close to 1.5 million densely populated folk.

Protests are being made against the pumping station for many reasons. Earlier this year, a large group were taken to jail because they linked arms on the banks of the Delaware in an effort to prevent the bulldozers from moving in and beginning the project. Then and

TRAINING from page 29

recommends for recreational and competitive paddlers alike. Little or no paddling, drastically reduced training procedures, and a gradual increase in volume and decrease in intensity of general fitness work characterizes this period. This is a period during which mental and physical relaxation should be preeminent. We do not imply a complete rest, rather trying your hand at other recreational pursuits that are less intense, less competitive, and less regimented will allow you to recharge your batteries without serious loss in fitness. Design a schedule of lower intensity jogging, weight-training, etc. that will be quite tolerable in terms of attitude. But do not eliminate them. There is no good excuse for a sedentary existence between seasons.

The concept of controlled cyclic variation in training is not completely new, but it is seldom systematically applied in our country. The periods of rest and the cycles of differing emphasis on various phases of training are critical to optimizing performance. We have presented concepts here, purposely dealing in generalities. While more detailed examples will appear in the next article of this series, keep in mind that each person must plan his own program based on the model and allow for individual differences in goals, natural abilities, time available to train, and responses to the training stimulus. This realistic approach, coupled with adherence to the basic model, will produce a level of fitness that is compatible with paddling safety and paddling life-style, be it wildwater, flatwater, recreational or highly competitive.

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. . . if you move and don't send us a change of address. Third class mail is NOT forwarded and we can't afford to send it any other way.

Phil Vogel
AWA Circulation Mgr.
Box 1483
Hagerstown, MD 21740

only then did the publicity boys come in— but no governmental agency on any level said "Hey, where was the public hearing". It was just one of those "radical, birdsnest-building environmentalist moves" which the press just loves to gobble up and shake its head over.

But this is a serious issue, and the Delaware at Point Pleasant is very much worth saving. It is full of all kinds of recreational potential. It sees literally thousands of paddlers on most spring weekends, bringing hundreds of thousands of dollars into the local economy. Also, being near New Hope it is an old and prime tourist area. I guess all that will come to an end.

Beyond the recreational loss, there is a real population danger. The Delaware is not overly wide at this spot. The saline level in the river is already gradually rising, even before the diversion. Extracting 95 million gallons would be disastrous for the areas downstream that need fresh water. For the past three summers, citizens of Philadelphia have rallied to the water conservation call: not watering lawns, cutting down use. Now PECO would have us believe that the Delaware has 95 million gallons to spare—no trouble!

We need to write newly elected Congressman Peter Kostmeyer (8th district). He said he would introduce legislation to halt this project if the public showed encouragement. I say, let us give it to him. Write him now. Time is of the essence.

Carol Ward
Philadelphia, PA
Continued from page 18

is little point in the victim’s taking these chances.

To a pedestrian, the river is probably not the best route out. However, if two uninjured boaters can continue to the takeout, this can bring quickest relief. The solo boater in this situation should be extremely conservative. Also, make sure he has the car keys and knows where the nearest town is.

Yet sometimes, a walkout is the only rational choice. It is best attempted by healthy individuals with some knowledge of cross country technique and the local topography. A short walk can be attempted alone, or if following a railroad track. Solo walkouts over difficult terrain should not be attempted. Stash equipment, walk out in adequate numbers to ensure safety and return later to finish the trip.

To travel, take your compass, plot a course, pick a distant object and go to it. Mark the object, then leapfrog forward in this fashion. This will give you reference points and prevent going in circles in dense brush.

Once you get up and away from the river, if lost, proceeding generally downhill will usually lead to a town or road. If leaving a canyon, first carefully scan the rim for a break in the sheerface. This will often be where tributaries enter and afford you an easier route to the top. (Don’t forget, in snake country watch where you put your hands and feet.)

Finally, remember moving victims are harder to find — like trying to find someone in a shopping mall. There are too many cases of rescue parties following the trail of a victim who has traveled himself to exhaustion and death, yet would have been alive if he had only stayed put.

As you can see, much of this advice is predicated on the assumption that you will be reported overdue and looked for if a mishap occurs. Even so, so much of surviving depends on what you do for yourself beforehand. Traveling with a group strong enough to mount its own rescue effort, pre-reading the topos, knowing which side of the canyon to climb out on, having a working survival kit, any of these can make the difference between making it or not.

The risk remains. There is always the unanswered question of at what point does standard paddling garb become insufficient to spend the night in. We only know that the farmer-john wetsuit and pile sweater will probably keep you alive in near freezing temperatures — probably. But with the right planning, right tools, and knowledge of the above techniques the odds tip heavily in your favor. Obviously, the more knowledge, the better, and I welcome any additional suggestions from readers. But above all, I hope you never have to use this information. I have and it ain’t no fun.

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The Inside Touch

Emerging Slalom and Whitewater Leader

by Barb McKee

The Midwest, long an acknowledged bastion of open canoe marathon racing, has more recently developed a large core of competitive, enthusiastic whitewater slalom and wildwater racers. Active clubs including the Hoofers Outing Club of the University of Wisconsin, the Cascaders of Minnesota, the Raw Strength and Courage Kayak Club of Michigan, and the Chicago Whitewater Club, all sponsor a number of ACA sanctioned races.

Midwesterners have become competitive paddlers as well as nationals leaders. Marge Cline (AWA president), Steve Parsons (National Slalom and Wildwater Committee chairman), Sue Aspinwall (U.S. Team Fund Board of Directors) and John Connett (developer of an electronic timing system) have distinguished themselves in national leadership positions. In 1975, Al Button (MN) became the first American to win an individual medal in World Championship competition (3rd, C-1 Wildwater). Midwesterners who have followed in his footsteps include '81 world medalists John Butler (3rd, C-1 Wildwater) and Karen Marte and Brett Sorensen (3rd, C-2M slalom).

This year the Midwest Division of the ACA will play host to the 1983 Junior, Master, and Senior Open National Slalom Championships this August. Nationals will allow this division to showcase two of its most ambitious developmental projects. First is the active effort to encourage more women, masters (40 or over on Jan. 1), and juniors (16 or under on Jan. 1) to participate in whitewater competition. The organizers bill this year's Nationals as a real family affair offering something special for every member by promoting all classes (K-1, C-1, K-1W, C-1W, C-2, C-2M, C-2W; open, junior, master). The week of cruises, clinics and the big-water Menominee Slalom following Nationals is an added incentive to make this Midwestern whitewater extravaganza this year's family vacation.

The second project is the development of five fully dam-controlled, man-made slalom courses ranging from easy Class II to big-water Class IV. The best known and so far most successful is the site of this year's Nationals in Wausau, Wisconsin.

Midwestern Division chairman, Don Sorensen, an active regional and national leader, and top masters competitor has been instrumental in developing this site into a world-calibre slalom course. His future plans for Wausau extend well beyond the scope of national competition. Below, Don describes this unique course that has made Wausau a national racing focus.

Wasau's Whitewater Nationals
What To Expect On August 5-7, 1983

by Don Sorensen

For the second time in three years the whitewater National Championships for kayaks and decked canoes will be held on the east channel of the Wisconsin River in downtown Wausau, Wisconsin.

Wausau is one of the few places in the world where you can find a dam-controlled world-class whitewater course in the heart of a modern city. The riverbed is a combination of sculptured granite bedrock and boulder-garden-type rapids. This natural riverbed has been improved by narrowing the channel to increase the velocity of the water. Also,
the judicious placement of boulders has been used to enhance the natural turbulence of the water. The course made an excellent site for the 1981 Nationals. The improvements planned for this spring will bring the course up to world-class standards. Several times each year the floodgates are opened and this normally dry riverbed roars to life. The water descends a tortuous thirty feet in a short 550 yards.

In 1981, the Nationals were run at approximately 700 cubic feet per second. This spring the course will be tested at levels up to and possibly beyond 1000 cfs in an attempt to find the optimum level for water release. In 1981, at 700 cfs the course rated a solid Class III on the international scale. With the planned improvements and additional water release, we believe the course will rate a heavy Class IV.

The 1983 Slalom Nationals will consist of 30 gates over the course's 550 yard length. Electronic timing will be used and all judging stations will be linked to scoring by telephone so that results will be nearly instantaneous.

The local news media estimated that the 1981 Nationals drew about 10,000 spectators for the three day race. This year Wausau has a new sixty-store mall two blocks from the race course. This mall is having its grand opening the same weekend as the '83 Slalom Nationals. A cooperative advertising program is being planned with hopes of drawing between ten and twenty thousand spectators for this year's three day event.

We are planning on about 200 competitors this year. If the race is covered by national network television, I estimate the number of competitors would run between two hundred-fifty and three hundred.

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The Waves of Wausau, Jim Wilson (above) at the '80 Midwest Champs eases toward the green pole, while two seasons later, promising young K-1 Dave Aspinwall peels out at the same spot. On the back cover, Marge Cline catches author Don Sorensen on the course just as he tips the green.