

American

WHITEWATER

the Journal of the American Whitewater Affiliation



MAR/APR 1975

Vol. XX, No. 2



Dan Isbister, K1-Jr going toward the hole at Gate 22, 1974 National Slalom Kayak Championships, Buena Vista, CO. Photo by Tom Peterson.

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Editorial Chairman and Editor: Iris Sindelar. P.O. Box 321, Concord, NH 03301
 Southeast Regional Editor: Margaret O. Tucker. 2618 Defoors Ferry Rd., N.W., Atlanta, GA 30318
 Midwest Regional Editor: Gary E. Myers, 28 W 136 Hillview Dr., Route 1, Naperville, IL 60540
 Editorial Committee: Margaret Tucker, Ed Alexander, O. K. Goodwin, Richard Treat, Geo. Larsen, Ray Gabler, Michael Mutek, Gary E. Myers.
 Business Manager: Richard Treat, 1506 Rosemary, Columbia MO 65201
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Advertising Dept.; Jon Arnold, 1738 Mayburn, Dearborn, Mi 48218; Rist Bonnefond, 10 Pond St., Wakefield, RI 02879; Scott Price, 401 Riverside Dr., Covington, KY 41011.
 AWA Trips Committee **Chairman:** David Cooney, 21 Haggerty Rd., Potsdam, NY 13676
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Racing Editor: Ray Gabler, 151 Jensen Circle, West Springfield MA 01089
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Send **Race** Schedules and results to the Racing Editor, Ray Gabler.
 Send membership **subscription** payments, **changes of address**, non-receipt of copies to **American Whitewater**, P.O. Box 321, Concord, NH 03301.
 Send requests for advertising **information** to your nearest AWA Advertising Representative.
 Send advertising copy and proofs to the Editor, Iris Sindelar.
 Send **Payments for Advertising** and Club **Affiliation** dues to the Business Manager, Richard Treat.

American Whitewater is mailed to all members of the American Whitewater **Affiliation**, an affiliation of boating clubs and individuals interested in whitewater paddle sport. Membership is open to interested individuals at \$5.00 per year and to clubs at \$10.00 per year. Club membership includes listing in the **Journal**.
 Publication is planned at 6 times yearly. Single copies, \$1.00 each. Surplus back copies are available at reduced prices. Write Geo. Larsen, P.O. Box 1584, San Bruno, CA 94066.
 The Staff and committee members listed above are unpaid Whitewater enthusiasts who volunteer their time and efforts to bring **affiliate/member** subscribers this journal. Your contribution of articles, letters, race results and schedules, photos and drawings are essential for their continued efforts and the timely publication of the American Whitewater Journal.
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Letters from Readers

Dear Editor:

By the time this gets to you, four friends and I will be deep in the jungles of Central Venezuela. We're using inflatable canoes (Sea Eagle 340's) to reach Angel Falls — a return trip! The boats are great for long range air travel and do fairly well in the woods. We walk past anything worse than Class III.

We'll drop you a line when we return.

Very truly yours,
Robert R. Ross
Miami, FL

To the Editor:

The evolution of the whitewater slalom kayak has arrived at a point where the designers should stop and take a hard look at what they are doing. **If they don't take responsible action immediately**, I believe we can expect the following events to take place.

1. There will be serious injuries; not in the races, where competitors paddle individually against the clock, but on a river cruise where there is little control over the traffic jams that occur in the attractive surfing situations or in difficult water where one boat is caught in a hole as another comes booming in. Even worse is the race **practice session** where, without any traffic control, there is a bunching-up of **many** such boats.

2. The sport in general will get a bad **name** (can't you imagine what a reporter could do with such an accident? — Headline: "CANOEIST EVISCERATED BY KAYAK")

3. The USCG (or Ralph Nader) will get into the act. Perhaps one result will be the "warning plate" mounted on every new boat which will read:

"Use of this vessel is not inherently

dangerous, but — to a greater degree than the water — exposure to **other**, custom-built, racing craft can be injurious to your body."

4. Sooner or later violence will erupt. For self-protection, other boaters will sharpen the ends of their paddles to spear the threatening kayaks.

5. A paddler whose boat was holed and scuttled will be justified in searching out the offensive boat and taking a saw to the ends.

6. The ACA or the ICF (or both) will eventually take action (after several boaters are maimed) to put more stringent controls on the dimensions of the boats.

7. Retrogression of design will result. Designers will have invited **outside** control.

8. Whitewater canoes, headed in the same direction, will also enter the controversy.

In all seriousness, **the needle-nosed boats are hazardous to other boats and to other boaters**. Eventually controls will reduce this hazard; in the meantime here are several recommendations to all concerned.

If you own such a boat, **pad the tips**. Use tape to build up a ball to about 1½-2 inches in diameter. (This will also help protect the ends from gradually wearing away. **If you** paddle such a boat, do so knowing that it is potentially a lethal weapon. **Use** good boating etiquette. Avoid tail-gating. Avoid crowded areas. Warn others as you approach.

If you are not a competitor, **don't buy** such a competitive boat. There are definite advantages to other designs for cruising.

If you are a cruising trip leader, discourage paddlers from bringing the

"needle-noses." Know where the nearest medical help is located.

If you're on the same river with any of these boats, *avoid them* – *and protect yourself!*

O. K. Goodwin
Safety Chairman
A. W. A.

Dear Editor:


Two outstanding inflatable kayaks made for rugged whitewater use can be obtained through Helmut Peters, 510 Santa Monica Boulevard, Santa Monica, CA 90401.

One is the Hutchinson which is made in France. The other is the Trampler which is made by Metzler in West Germany. Their size and paddling characteristics are very similar to standard fiberglass kayaks; however, they are considerably more stable and almost puncture proof. The quality of the materials and workmanship is reflected in the hefty price tag (about \$250).

For Ms. Conklin and other interested readers, I will be submitting to *American Whitewater* in the next few months an article dealing with this rare breed of whitewater fowl.

Sincerely,
Robert T. Cook
808 Yale St.
Santa Monica, CA
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HYPOTHERMIA FIRST AID

The Explorer Scouts in Post 999, Hopewell, Virginia, decided recently to set up a Cold Water Shock First Aid Kit. We now carry it on all river trips between November and May. It consists of:

Rubber Pack — The old style, surplus, rubber "wet pack" measuring 8" x 8" x 13".

Clothing (a) 1/8" Nyloprene Wet Suit Shirt, 38" chest, covers from shoulders to crotch and has beaver tail. We made this from a \$17 kit from Charlie Walbridge. **(b)** 1/8" Nyloprene Booties, medium. **(c)** 1/8" Nyloprene Mittens, medium. We made boots and mittens per A.W.A. Magazine instructions.

Wrap — Space Blanket, Coleman, Cost \$8.

Fire — Matches in waterproof bottle plus firestarters. (Newspaper rolled into 1" cylinder, soaked in paraffin and cut into 1½" lengths.)

First Aid Kit — Standard, 8" x 6" x 2" about \$5.

Heaving Line — 45 Ft. 1/8" nylon cord with monkey's fist, per O. K. Goodwin sketches. The line is too small for hand comfort, but it has adequate (400 lb.) strength and it rolls into a *compact*, about 2" x 8" hawsecock. We believe in Dr. Cutter's theory (on snakebite kit). If it is too large to carry conveniently, you tend to leave it behind.

Knife — Pocket, to cut off tight, wet jeans, etc.

Tape — A roll of duct tape. A little for the boats and some to patch torn suits. Even useful in first aid. (I once duct taped on a cut-off finger tip when adhesive tape didn't hold. The owner paddled 3 more miles to takeout, went to the hospital and they sewed on the digit end. No nerves, but the finger still works!)

This pack weighs 10 lbs. and is car-

ried in the Sweep or one of the Rear Guard boats.

We are familiar with the radical treatment for Cold Shock that says: strip the victim, sandwich him (or her) between 2 other nude humans and wrap the whole mess in a sleeping bag (or we will use the Space Blanket). However, our Post is Coed and we will avoid this for modesty reasons, except as a last resort.

I have treated 7 cases of cold shock in the last 6 years (all people dressed in cottons or non-wools) by the following procedure.

Cold Water Shock (Hypothermia) First Aid

(1) The Trip Leader and all trip members should be alert to spot the first symptoms of shock. Particularly, watch the people who are wet from the waist down, or have been dunked and who are not in Wet Suits or good fitting, all wool clothes. *Symptoms:* Slow movements, Lack of coordination, Boat under poor control, Far too frequent **hangups** and wipeouts for his degree of skill, Boat falling behind. Tears (something is wrong when a 16-year old cries). The shockee wants to go to shore and rest awhile. He proposes to stop paddling and walk out. He stops talking. He shivers uncontrollably. He stops paddling.

(2) *Treatment.* Get the shockee to shore. Strip off the wet clothes. Dry him (or her), if possible. Wrap or shield with Space Blanket, for modesty and to break the wind.

(3) Dress him in dry clothes. This is where the full Wet Suit Shirt, booties and mittens are used. Put wool cap on head. If you can warm the trunk and the extremities, it usually stops the shock.

(4) If needed, start a fire, wrap shockee in Space Blanket. Set up an aluminum canoe on its side 8 to 10 ft. from the

fire as a wind break and reflector oven. Sit shockee against the canoe and warm him *slowly*. Massage his hands and feet. (5) Do *not* try to warm the victim rapidly by standing him too near a bonfire. Capillaries may open suddenly and shock his heart with a surge flow of cold blood. The treatment for heart arrest is heart massage, which is beyond my scope.

(6) Try to keep the shockee moving, so he generates his own body heat, until his coordination and clear speech have returned and the shivering has stopped.

(7) Resume the trip when the victim appears to be recovered, but keep a close eye on him. We find it takes 1/2 hour to 1 hour to recover from Cold Shock.

Better yet, avoid Cold Shock by insisting that all Winter Trip Members wear Wet Suits or good fitting woolens. You can buy warm, wool serge pants (U. S. Air Force Surplus) for \$6 from

I. Goldberg, 902 Chestnut Street, Philadelphia, Pa. 19107. That old, scratchy Navy sweater, covered by a paddle shirt or wind breaker does fine on the trunk. Wear a wool watch cap on the head. **Homemade** Nyloprene booties and mittens can be made for \$7.

See you on the river.
R. Steve Thomas, Jr.

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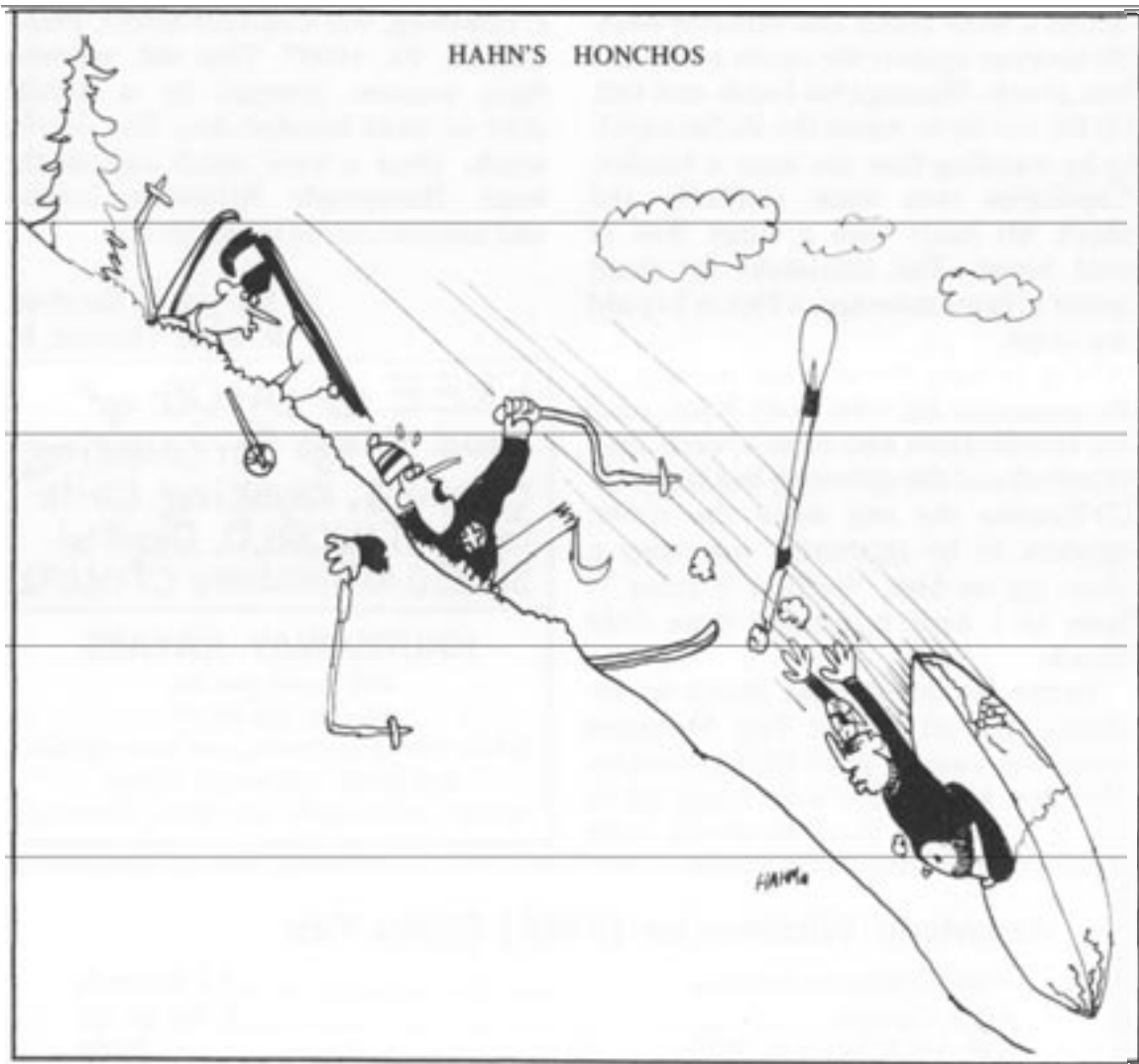
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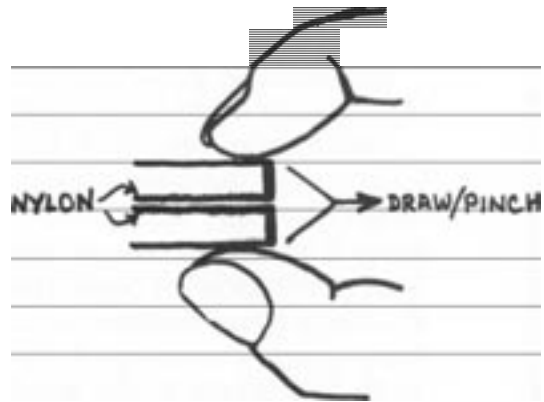


TRY THIS

Gluing Wetsuit Seams

Have you experienced difficulty in precisely joining wetsuit material after the cement is ready for adhesion? Scott Skinner, 1004 Meadows, Canon City, CO solved the problem thus: Carefully place the nylon surfaces together, after the cement has been applied in the usual manner, with the edges in alignment. Using the thumb and forefinger in a **drawing/pinching** action, the material can be joined perfectly.

Waxed paper placed between pieces which are cemented and awaiting joining will prevent premature adhesion.



Readers' contributions are solicited for this column. Send to Try This Editor, Michael W. Mutek, 6881 S. 9th E., Midvale, UT 84047.



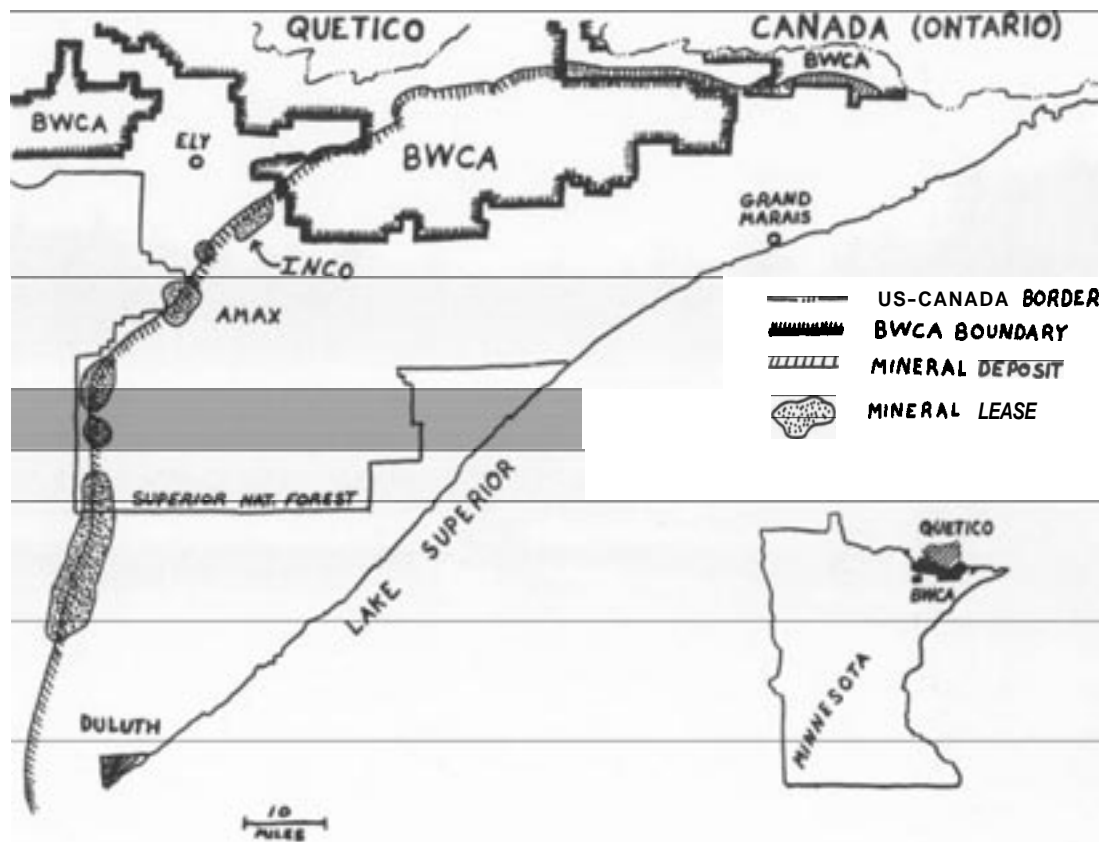
BWCA: A Wilderness in Trouble

by Gary E. Myers

The Boundary Waters Canoe Area was set aside as a roadless wilderness recreation area in 1926. As the largest designated wilderness east of the Rockies, it consists of about a million acres of land and water along the Minnesota-Ontario border, and it contains some 1200 miles of wilderness canoe routes. Each year more than 125,000 persons paddle the routes of Sioux and Chippewa, trapper and voyageur. BWCA travelers literally tread in the footsteps of these legendary figures, since most of the portage trails have been in continuous use for centuries. Wildlife abounds there: few are the visitors who do not have at least one "bear story" to tell, and the BWCA is home to

the last substantial population of timber wolves in the contiguous United States. The air is clean and sweet, the water sparkling pure, the primitive beauty exquisite. Hundreds of portage-linked wilderness lakes beckon the canoeist, and those who answer the call are rewarded with a rugged, soul-cleansing experience. The BWCA is unique.

It is also in deep trouble. The BWCA has the misfortune to be situated squarely on top of a belt of low-grade copper-nickel ore which runs diagonally from a point south of Ely to Kekekabic Lake, then due east to Pigeon River. The Mining Act of 1872 and the Mineral Leasing Act of 1920 were not applicable to northern Minnesota national forest lands, but the pressures of the Korean war caused the passage of the Minnesota National Forest Leasing Act in 1950. This Act does not permit



mining activities within the boundaries of the BWCA, which is protected by several previous and subsequent Acts and Executive Actions, but it does allow mineral development activities on public domain lands outside the BWCA. Between 1951 and 1963, twenty-nine permits to explore for minerals outside the BWCA were issued; all were followed-up with applications for mineral leasing and extraction of ores. Yet, as of 1965, no leasing permits had been granted.

Applications for mineral leases in the national forests are administered by the Department of the Interior through the Bureau of Land Management, subject to the consent of the Department of Agriculture. Based on recommendations by the President's Quetico-Superior Committee and the Secretary of Agriculture's Task Force ("Selke Committee"), the Secretary of the Interior (Stewart Udall) notified BLM in a

1965 memorandum that he and the Secretary of Agriculture (Orville Freeman) had formulated a joint policy for the "disposition of the applications for mineral leases and exploration permits there." In this memo, Udall stated that the joint policy firmly opposed mining activities within the BWCA (except in a "national emergency"), but in other parts of the Superior National Forest, "... this Department is in accord with the stated position of the Department of Agriculture that full mineral development should be encouraged, consistent with the concept of multiple use."

In 1966 the International Nickel Company was issued BLM leases to mine and remove copper-nickel ore from a 4500-acre site adjacent to the boundary of the BWCA, and only a few hundred yards from the Kawishiwi River.

INCO spent the next several years

drilling, test-pitting, and sinking an exploratory shaft. In January of 1974 the company removed a 10,000 ton bulk sample for processing and determination of ore content. It was subsequently determined that the ore was sufficiently rich to warrant full-scale exploitation, and in April INCO began the necessary steps to gain approval. It is well that they spent several years making up their minds, because in the meantime, the National Environmental Policy Act was passed in 1969.

This Act requires the government to prepare an environmental impact statement on all major Federal actions which might significantly affect the quality of the environment. As early in the decision-making process as possible, the Federal agency under whose jurisdiction the action falls must prepare a draft EIS for review by Federal, state, and local environmental agencies, as well as the public. After comments have been received, the statement is prepared in final form, incorporating all comments and objections received on the draft and indicating how significant issues which were raised during the commenting process have been resolved. Both draft and final versions are filed with the Council on Environmental Quality and made available to the public. Final decision on the action, after consideration of all aspects of the EIS, is the responsibility of the "Authorized Officer."

In this case, the responsible agency is of course the Forest Service; the Authorized Officer is Forest Supervisor Jim Torrence. The planned EIS will require some two years and more than \$1.5 million to complete. It will be exhaustive in scope, as well it should be: topography, climate, air quality, noise levels, soils, geology, streams, lakes, ponds, wetlands, surface and ground-

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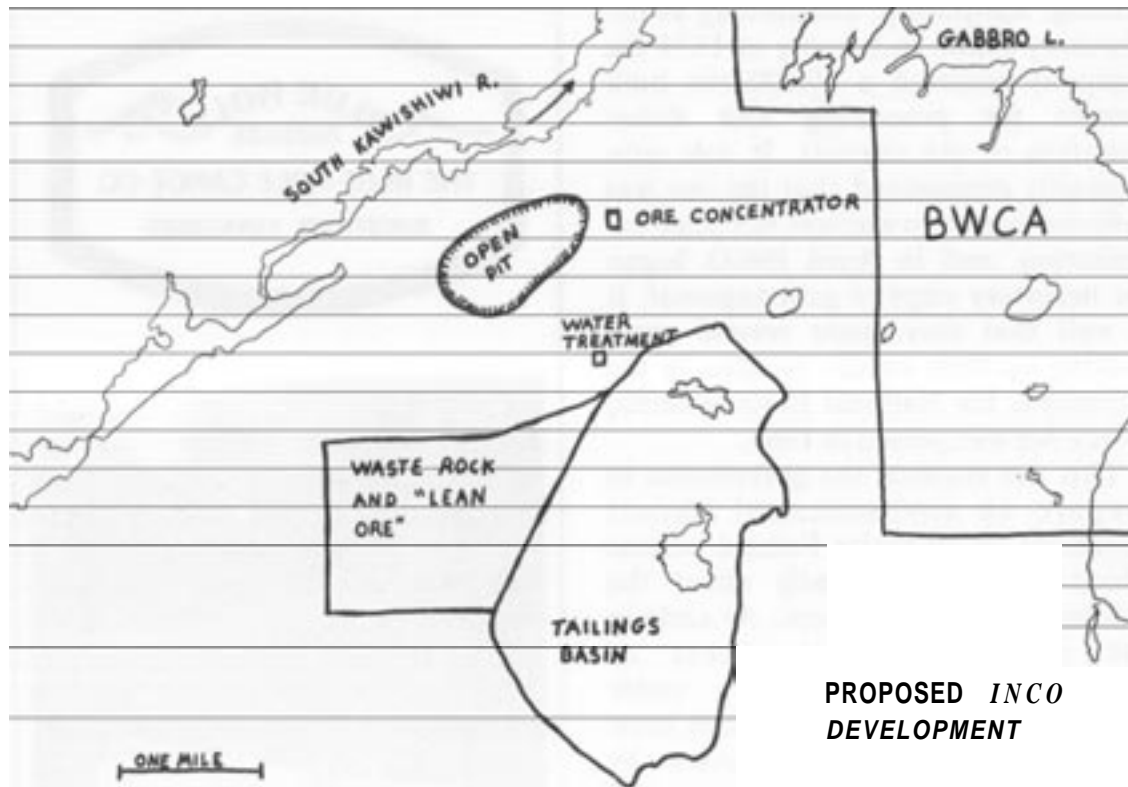


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water, flooding, vegetation, wildlife, fish, archeology, and wilderness ecosystems are some of the elements to be studied. In addition, the mining methods, socio-economic considerations, and national interests will be factored-in. The proposed EIS has been called "one of the most extensive ever."

Extensive (and expensive) it may be, but will it be enough? Two years seems precious little time in which to establish a baseline and gather data to predict the effects of large-scale mining on a wilderness ecosystem which took millenia to evolve. Let's take a closer look at the proposed activities.

When the lease was granted in 1966, INCO's proposal was for deep shaft mining; the present proposal is for an open pit mine--6600 feet long, 3300 feet wide, and 1000 feet deep! It appears that the proposal also included location of an ore refining plant (smelter) at the mine site: in a July, 1974

letter to an environmental group, Minnesota Governor Wendell R. Anderson mentions "... the recent news of the possibility of a refining facility, such as a smelter... is of great concern to me." Later in the same letter he says, "... even the suggestion of a smelter in proximity to the BWCA. or in the National Forest, is unacceptable to me. My position on this issue is unequivocal. My administration will not allow the construction of a smelter near Ely or within the boundaries of the Superior National Forest. I have so informed INCO." This information must be greeted with cautious relief—it is true that a smelter would be the ultimate disaster for the BWCA... but one wonders if INCO wasn't counting on a great deal of relief. After all, an open pit mine is a lot more acceptable without a smelter than with one, and the "news" of a planned smelter may have been leaked to make their actual plans seem more palatable by com-

parison. On the other hand, maybe the smelter **was** seriously planned . . . and Governor Anderson won't be around forever.

Another mining company, **AMAX**, is now trying to get the necessary permits to sink a **1700-foot** deep test shaft at a location a few miles from the INCO site, on State land. This site, near Babbit, is farther from the BWCA, but—importantly—still in the watershed of BWCA lakes and rivers. Moreover, this activity by **Amax** indicates that the INCO proposal may be just the tip of the iceberg.

Just how might the INCO mine affect the BWCA? Keep in mind that BWCA air and water are among the cleanest in the world; that, at something like a thousand square miles—fragmented besides—it isn't all that large an area; that it is the only wilderness canoe area of its kind in the US; and that it borders famous Quetico Provincial Park (which will likely be affected to some degree), and together they form a wilderness canoe country which is unique in the world.

First, water pollution. It is important to realize that the entire area in which the copper-nickel mines are planned is in the watershed which feeds BWCA lakes and streams. The INCO mine site is within a few hundred yards of the Kawishiwi River, which flows directly into the BWCA and the Boundary lakes chain. Copper mine waste (tailings) is chemically so constituted that rainwater and groundwater will "leach" acids from it; this acidic runoff and groundwater then travels down the watershed, to the lakes and streams. Other chemicals, including heavy metals, may also be leached out and delivered to the environment via the watershed. Copper itself is highly toxic to fish, aquatic insects, and aquatic plants at very low levels of concentration, and reproduc-

tion of fish may be prevented at levels as low as **30** parts per *billion*. Groundwater seepage through fractured bedrock at the mine pit, acidified by leaching, may find its way into the watershed runoff. Rainfall exceeds evaporation in this area, so the pit may have to be pumped—how will this contaminated water be disposed of? If process water is needed, where will INCO get it? The Kawishiwi is a low-volume stream; would new or higher dams on it, or on Birch and Gabbro-Eagle Lakes, be required, or would diversion of other streams in the area be necessary? How would this affect the water flow and levels in the extensive forested swamps and wetlands in the nearby BWCA? Where would the process water go after use? Natural disaster is a consideration: if **flooding** should cause failure of the **containment** dikes at the tailings ponds, the concentrated acids and **suspended** solids might be released to the watershed in one large dose, causing immediate and perhaps irreversible damage. And what will happen when the mine is eventually abandoned? Tailings ponds and other facilities will still exist, complete with their destructive potential, like not-so-tiny time pills. The site of the mine is uphill from the Kawishiwi, meaning that seepage and spillover from the rain-filled abandoned pit will be gravity-assisted right into the river.

Air pollution, even without a smelter, seems-likely to be a serious problem. Open pit mining raises large quantities of dust, which is unsightly at best and may be chemically damaging to the ecosystem. Exhaust fumes from heavy equipment and transport vehicles will of necessity be discharged directly into the air—air which is now untainted.

Don't rule out a smelter in even the relatively near future: most copper-nickel mining regions have one, and

once the mines are there it might be possible to convince the right people that a nearby smelter is an "economic necessity." This would of course vault air pollution to the number one problem. Copper-nickel ores are sulfides, which smelters roast to get the metal . . . and produce copious quantities of sulfur dioxide in the process. SO_2 is lethal to conifers, and INCO's Sudbury (Ontario) smelter has killed trees and other vegetation for many miles around it. Even in concentrations below the tree-killing level, long-term effects may be serious. And SO_2 STINKS!—it has an acrid and disagreeable odor at very low concentrations. SO_2 fallout and rain-washout could acidify lakes and streams many miles away from the smelter (lake trout and other fish populations are now being killed at distances of up to 40 miles from smelters). INCO claims that the damage caused by its Sudbury plant was due to an outmoded process, and that modern smelters produce far less of the noxious emissions; that may be so, but can the BWCA stand *any* SO_2 pollution? Even the new and tougher EPA-proposed smelter regulations still allow 0.65% SO_2 in the exhaust gas (and this is a lot), 0.05 grams per cubic meter of solids (again, a lot), and visible emissions of smoke of up to 20% opacity (higher for short periods). Smelters require enormous amounts of power, so a mine-site power plant (coal-fired?) might follow a smelter. Hydrometallurgical processing would result in far lower emissions to the atmosphere, but it is a new process and its environmental effects are largely unknown—and anyway, that would just put the burden back on the water.

An important part of any wilderness experience is the total absence of man-made noise. Present plans **include—**are

you ready for this?—a railroad to haul out the ore! The rumble of diesel engines can be heard for miles in the wilderness; under some conditions, the distance may be phenomenal—once, on a trip in Quetico, I and all other members of my party distinctly heard the sound of a train several times in one day. . . and the nearest railroad was almost 20 miles away! Even without a railroad, the belch and growl of heavy mining equipment and trucks will be an ever-present intrusion. Blasting, of course, can be heard—and felt—over large distances. Quite aside from the obvious effects on BWCA visitors, what effects will this noise have on wildlife?

If INCO's proposal is approved, it will be a precedent-setting action. There are presently at least five other mining companies interested in this area, and you can bet that they will try to jump on the bandwagon. The BWCA and much of the surrounding area are bona fide wilderness. Extensive mineral development will industrialize the region—can a relatively small and somewhat fragmented wilderness survive in such close proximity to heavy industry? More people will mean more roads, schools, vehicles, dwellings, businesses, and sanitary facilities. The pace of life, the levels of activity, the din and clamor, the hustle and bustle of modern society will increase in the area.

And when the region is mined out, will a pitted, disfigured moonscape be left behind to ooze its toxic excrement into the ecosystem for centuries? The mining companies assert that the land can be "reclaimed" . . . but where are they going to get cubic *miles* of fill for all those pits? Past and present reclamation efforts elsewhere have been less than wholly successful, despite what mining and heavy equipment companies would like us to believe, and several studies have shown that it is all

but impossible to return such land to its original state. More importantly, the largest mineral deposits are located *within* the BWCA; when the present external veins are exhausted, it seems likely that more serious consideration will be given to opening up the wilderness (if any is left)—already there have been such cases in the courts. The same agencies which now steadfastly avow protection for the BWCA may have to modify their positions when faced with an entire fully-developed region whose economy is totally dependent on copper-nickel mining, and no more ore left in the ground . . . except in the BWCA, just next door.

The questions raised so far will hopefully be answered by the EIS. But as good as this EIS is supposed to be, there's an all-important aspect in which it will be sorely lacking: many current pollution standards, limits, and concepts are so new that they are unproven. No one knows for sure that they will do the job. It may be too late for the BWCA by the time we find out.

Governor Wendell Anderson, many other State officials, and some area residents favor the proposal. The Ely area has been described as an economically depressed region, and it is assumed that mining would create jobs for the unemployed. This is by no means guaranteed, since an influx of experienced miners might occur. Unemployment may be high, but what are the absolute numbers? The region is, after all, sparsely populated. The INCO mine might take up the slack, but the inevitable further development would require a population increase. And the whole economic argument may go down the drain if the planned expansion of the State's burgeoning taconite industry—bad enough in itself, but removed from the BWCA area—comes to fruition.

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See Article on Page 56

Send Tax deductible contributions to:

River Rights Action Committee

c/o ACA National Office

4260 East Evans,

Denver, CO 80222.

In an August, 1974 editorial a Duluth TV station supported copper-nickel mining—and *smelting*—on economic grounds. Somewhat petulantly, they referred to "...folks from the Twin Cities area who want our northeastern Minnesota vacationland to stay uninhabited." I think WDIO-TV needs to understand that this is a national issue, and that "folks from the Twin Cities" probably make up a small percentage of BWCA visitors. And what's wrong with the area staying uninhabited? Has anyone ever heard of an inhabited wilderness? Wilderness areas need undeveloped buffer zones around them. If we are to have wilderness areas, then some people are going to have to wake up to the fact that wilderness and economic development are mutually exclusive concepts.

The last question to consider is: do we really need that copper and nickel? Whether we know it or not, we are all consumers of these metals, so we all have a stake in assuring a continued supply. We import only 18% of our copper, so it doesn't seem that we need to open up any more mines on its account. Nickel is another story, since we import 74% of the amount used; however, the main countries of origin are Canada and Norway, so national security wouldn't seem to be in too much jeopardy at present. On the practical side, the ore in northeast Minnesota isn't going anywhere: it's money in the bank. We could almost certainly reduce our needs for both of these metals by more efficient use (much of our present usage of nickel is for decorative trim on cars) and more determined recycling efforts. It seems to me that national security would be better protected by saving our own natural resources for some distant rainy day.

INCO, AMAX, and the other mining companies are guided, not by concern

for national security or **balance-of-payments**, or beneficent feelings for the unemployed in the Ely area, but by a profit motive and the curious **bigger-is-better** syndrome which seems to infect all American enterprise . . . and already they are into us taxpayers for the millions that have and will be spent to determine whether their activities will destroy a unique national recreation and scientific study area. Do they appreciate the fact that we are footing the bill for them? INCO officials pledged, privately and publicly, their full cooperation with citizens' groups. . . yet an officer of the largest involved citizens' group told me, "At least with AMAX we enjoy a talking relationship--one that is not possible with INCO. They simply will not talk to us."

All is not lost, however. Forest Supervisor Jim Torrence is new on the job, and little is known about him except that he is an avid backpacker and canoeist—which ain't bad for a start. The Minnesota Pollution Control Agency is very concerned over the AMAX proposal, although it seems to be the only State agency which is not wholeheartedly welcoming mining in northeastern Minnesota. The Sierra Club, The Izaak Walton League, The Audubon Society, the Northern Environmental Council, and more than two dozen other organizations have formed the Copper-Nickel Coalition, a powerful group which is fighting this thing all the way. Most BWCA outfitters are opposed to all proposals, as are the Minneapolis newspapers and most Twin Cities residents.

What can we do? As individuals, we can start a barrage of letters to Governor Anderson, Forest Supervisor Torrence, the Minneapolis Tribune, the Minneapolis Star, the Duluth News-Tribune, and even the Secretary of

Agriculture. The EIS is expected to be finished in 1977; let's make sure everyone knows by then that this is an issue of NATIONAL concern. We can watch for publication of the draft EIS—by law, we have at least 60 days to make comments which *must* be considered. After publication of the final statement, we have at least 30 days in which to notify the Council on Environmental Quality if we feel that the disposition of our comments has been inadequate. Money always helps, and INCO has a lot of it; we can do our part to even the score by sending donations to: Copper-Nickel Coalition, c/o Northwoods Audubon Center, Brimson, Minnesota 55602. Make checks payable to "Northwoods Audubon Center, Cu-Ni Fund," and they will be tax-deductible.

The BWCA is facing the biggest battle of its existence, a fight for survival. And groups like ours, people like us, are its only allies. In the words of Harry Roberts, "This is no time to remove our

banners from the outward walls, for the cry is still, 'They Come.' This is no time to murmur apologies for insisting that environmental sanity and a decent regard for all people are fundamental to our goals as a society. Rather it's the time for the pikes to gather at the old place by the river, for the sun has set and the moon is rising, and the tread of the enemy echoes through the perilous night."

This article was prepared with the aid of information supplied by Walt Pomeroy of the Northern Environmental Council, Chuck Griffith and Lewis Clapper of the National Wildlife Federation, Illinois Senators Charles Percy and Adlai Stevenson, the Forest Service, and the US Bureau of Mines.

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LIFEJACKET LEGISLATION

Decked Boat Paddlers . . . Take Notice

The Federal regulation for personal flotation devices on recreational boats (33 CFR Part 175) still contains an exception for paddlers of "a canoe or kayak that is enclosed by a deck or spray skirt."

This exception (33 CFR 175.17) has been extended until Oct. 1, 1975, but the Coast Guard is considering amending the regulation to revoke it as of that date.

Their stand is based on the increasing availability of approved PFD's. Since the exception was granted, several Type III PFD's have been approved. These include specific models produced by the following companies:

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92073 |
| Stearns Mfg. Co. | P.O. Box 1498
St. Cloud, MN
56301 |

There may be others that have been approved since this notice. Harishok Ltd. of England has submitted a Type III PFD for approval. It is expected that other companies will also.

The Coast Guard proposes to amend 5175.17 of Title 33. Code of Federal

Regulations by revising paragraph (1) to read as follows:

"(a) A person using a canoe or kayak, before Oct. 1, 1975, that is enclosed by a deck or spray skirt need not comply with 5175.15 (a) if he *wears* a vest-type life saving device that (1) has no less than 150 separate permanently inflated air sacs made of not less than 12 mil polyvinylchloride film and has not less than 13 pounds of positive buoyancy in fresh water, if worn by a person who weighs more than 90 pounds; or (2) has no less than 120 separate permanently inflated air sacs made of not less than 12 mil polyvinylchloride film and has not less than 8% pounds of positive buoyancy in fresh water, if worn by a person who weighs 90 pounds or less."

* * * * *

Any interested person may submit written data, views or arguments concerning this notice to U.S. Coast Guard (G-CMC/82), room 8234, 400 Seventh St. NW, Washington, DC 20590. All communications received before April 17, 1975 will be considered before action is taken on the proposed revocation. Each person submitting comments should include his name and address, identify this notice (CGD 74-159), and give reasons and supporting data for any recommendations.

This will probably be the last opportunity for paddlers or anyone else to make their views known where it counts. If you have strong feelings pro or con—speak up. The Boating Regulations staff of the USCG, lacking first-hand knowledge of your sport, is dependent upon your input to develop these rules. If you provide it, *maybe* the results will be more acceptable.

O. K. Goodwin
AWA Safety Chairman

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CATALOG

ACA SETS ACTION TO DEFEND PRIVATE PADDLERS

YOUR CONTRIBUTIONS NEEDED

*by Tom Cooper, Past Commodore
American Canoe Association*

At its recent national convention, the American Canoe Association committed itself to defending the rights of private paddlers to canoe American rivers with a minimum of regulation. Great alarm was shown at the incursion of federal and state regulatory groups and their apparent favoring of commercial river running operations over the private boater groups in the allocation of permits.

For example, when establishing quotas for the river trips down the Grand Canyon, the Park Service allocated 92% of the visitor use days to commercial outfitters and 8% to private boaters. They further stipulated that no person in a private party could make the Grand trip two years in a row, but placed no similar restriction on those who make the trip with a commercial outfitter.

Department of the Interior and National Park Service officials have given no hope of increasing the private allotments before 1977 and offer little encouragement that even after that date they would permit the rapidly growing numbers of private boaters who wish to make the Grand run on their own to be given a better crack at a chance to do so. In effect, the commercial operators who do about four and one half million dollars' worth of business on the Grand each year have a virtual stranglehold on that public resource. Private river runners are clearly being discriminated against in the Grand Canyon. For rivers with very little space for private paddlers, the easy and inexpensive way onto the river is to go with a commercial out-

fitter who, in essence, sells river access permits.

With river management plans and river running regulations being drawn up for many rivers under Park Service, Forest Service, and BLM control, as well as for some under state jurisdiction, the private paddlers need to try to make sure that their river running interests are being given due consideration. Despite the fact that the ACA is listed by the Interagency Committee as one of the two national paddling organizations to be contacted for input from the private sector, the Association received no word on river management hearings for the Rogue River in late summer, and it was only by chance that a representative of the AWA on the West Coast got word of one portion of the hearings and presented some AWA comments. Particularly on rivers with tremendous commercial pressure, the private sector must be in a position to influence the river management plan or face being almost driven off the river by restrictive regulations.

These are but a few of the problems which private paddlers are facing as our rivers become managed. The days of regulation-free river running appear to be coming to an end.

At the state level, Utah has imposed life jacket regulations more stringent than federal law. Utah requires the wearing of a USCG approved personal flotation device when on whitewater even though few suitable devices for canoe and kayak whitewater use are generally available. Utah also requires that any canoe or kayak on whitewater also carry a spare paddle. Private paddlers had no input when these

regulations were drawn up. Similar problems exist in states across the nation.

At the time of the Interagency Committee general meeting of river managers in February 1974, only rivers of the Pacific, Northwest, and Rocky Mountain Divisions of the ACA were represented. As of this writing, some river managers in portions of the country covered by the Central and Mid-West Divisions are tied in with the regulatory work which the Interagency Committee is doing. At a special meeting of ACA representatives and the Chairman of the Interagency Committee in June, mention was made of plans for an eastern Interagency Whitewater committee. It is uncertain as of this writing whether or not such a committee is going to be a reality or whether Park Service, Forest Service, and BLM river managers throughout the nation will be tied into the existing committee.

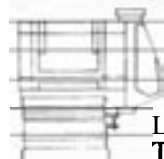
The American Canoe Association hopes, through its newly established River Rights Action Committee, to act firmly at the national level in behalf of private paddlers and to work to keep local clubs and other groups up to date on regulatory matters affecting them. Extensive information files will be created at the ACA National Office in Denver and made available to paddling leaders across the country.

An active cadre of five to eight ACA members will be formed to act on behalf of all boaters. They will be paddlers with the savvy and capacity necessary to negotiate with, bully, beg, and prod the appropriate officials into approving river management policies and regulations which are fair to the private canoeist, kayaker and rafter. Leading the program are Tom Cooper, former ACA Commodore, and Deane Hall, current president of the Colorado

White Water Association, as Co-chairman.

None of this program can become a reality without the financial help of the individual boaters and clubs throughout the country. While the ACA has made a financial commitment to get the river rights Action Committee started, much larger funds, in the neighborhood of \$4,000, will be required to get the effort moving with good momentum.

Send your money, checks, please to the River Rights Action Committee Fund, C/O ACA National Office, 4260 East Evans, Denver, CO 80222. It is tax deductible.



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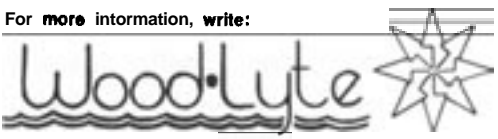
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Syl Beletz on the National Championship Course. Competitive poling attracts much spectator and news media interest, thus bringing the much-needed support to canoeing.

ECONOMIC AND FUEL PROBLEMS? TRY POLING WHITEWATER

by Al Beletz, National Poling Chairman

From a standing position in the stern of his canoe below the rapids, he looked upstream. "You'll never make it!" yelled a young heckler from the shore. He gave a few easy probes on his left, moving his canoe into the slow shallow water near the right bank. From this natural scouting position below, he carefully scrutinized the situation above. The veteran **polesman** was able to view the entire rapids cascading around large boulders, over two, three and four-foot drop-offs, with the main current rushing down and passing quickly to his left.

He was situated below Canada's famous **Campion** Portage on the **Mat-tawa** River, the historic water-link that carried Jolliet, **Marquette**, Mackenzie and Frazier in their travels from East to West. The river there is still wild and beautiful and probably not much different than it was in 1672. But this was 1972 and this historic site has a tourist's overlook and a memorial describing the dangers and the many canoes destroyed here. A crowd gathered at the rail, and a boy with a Chicago accent yelled to his father, "Hey dad, come watch the crazy Canadian!"

He placed his pole down against the gravel in readiness for the instant movement required of the quick-jab stroke. Then he instantly worked-over the gravel with the resounding beat of a pneumatic jack-hammer. His canoe shot upstream just to the right of the main current and to the left of a large boulder! He quickly shifted into the hand-over-switch, flipping the pole from one side to the other after each powerful thrust! His canoe entered at the side of the main current, plowing through and over the waves. He continued this vigorous effort until he neared the four-foot drop-off dead ahead, and then he seemed to tire and slow down. But he immediately angled his canoe into an eddy behind a large boulder to regroup his strength.

Twelve feet in front of our veteran **polesman** stood a four-foot drop-off. Ten feet further to the left the drop-off was only one foot. But here the most powerful force of the main current forced its way through. Eight feet further to the left was a two-foot drop-off: this was the only possible passage.

Our **polesman** angled his canoe into the current and gave several powerful handovers until his canoe stood on top of the haystack just below the drop-off. Here his canoe seemed to be suspended in space as he stood motionless in the reverse action of the white foam. The river here was too deep for effective probing; thus from his standing position, he quickly whipped his lightweight aluminum pole into the poleman's kayak stroke. His red and yellow-striped twelve-foot pole offered enough catch as he seemingly fanned the water while holding position and slightly angling his canoe to the left. His canoe continued to move sideways for about eighteen feet until he was just below the two-foot drop-off. Here he held position for a second or two, then

suddenly jammed his pole down with several powerful hand-overs driving his canoe up and over the drop-off and into the slow water above.



The American Tourists still gathered at the rail were in for another show as our **polesman** leisurely turned around and methodically snubbed his way down through this same section. The tourist and his son from Chicago walked down to meet the boy's new hero at the river's edge. "You Canadians really know how to go through rough water!" stated the lad. "How did you learn to pole like that?" "It wasn't too easy," answered the U. S. Poling Champion.

The preceding happening was misunderstood by the spectators from several different perspectives. They all were entertained and seemed to experience a mixture of excitement and suspense. Most of them were sure he was a Canadian until they saw his foreign auto plates. Some expressed awe and admiration, while others agreed that "he must be showing off!" Two novice paddlers from Chicago, although interested, had their erroneous notions but were unwilling to try. But an experienced Canadian whitewater paddler, also among the spectators, was "right on!" He was highly enthusiastic



Susan Kloepper, from Oregon, being interviewed during the celebration that followed her second straight poling championship. Next is Ralph Brown, the first national poling champion in 1965, Evelyn Mooers, second once and third twice, your poling chairman and a local VIP poling fan in background.

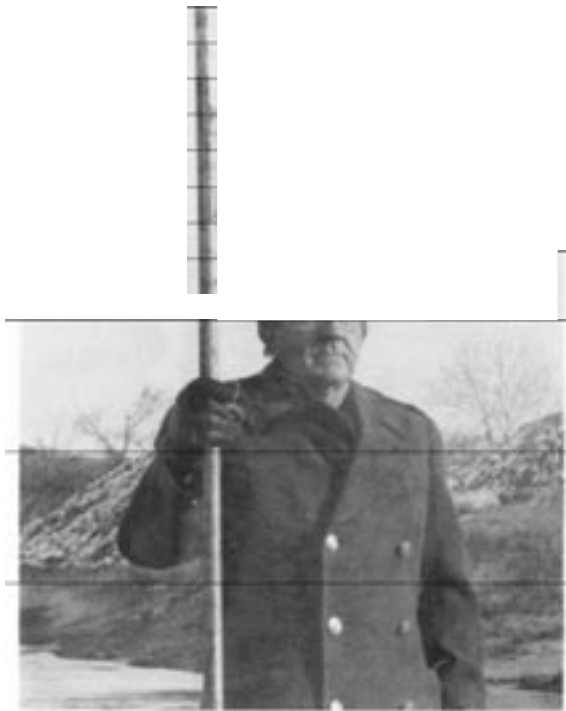
and after twenty minutes of instruction, he was poling in the slow water near the shore. He was already able to read water and knew that proper technique, knowledge and good equipment were the mainstays of safety. He lacked only stability from the standing position and the poling strokes. He practiced poling near the camp that evening and agreed to join us on a two-day trip up the Mattawa. On the trip he used my green and white striped aluminum pole, asked a hundred questions and tried anything that was suggested. He liked the idea of leaving our cars at the campground, poling upstream and then snubbing our way back downstream. The next morning, before leaving our Canadian friend, he insisted on challenging the famous **Campion Portage**. Who were we to argue? Did he make it? Yes, although he did wobble a bit and his style needed a lot of polishing.

Why do people pole? you might ask. It is the fastest way of ascending a stream by human power. It offers a greater degree of independence, presenting the canoeist with the opportunity and joy of exploring the many small streams and adventuring the upper stretches. In certain situations it is the only way to avoid tracking, lining or portage. With the development of the new lightweight aluminum poles, in addition to probing, one can use the pole in the same manner as the kayak stroke since its great length offers ample paddle-type resistance. On the long downstream cruise, poling from the customary standing position presents a welcome respite to a cramped paddling position. To the paddler, it offers a new challenge to whitewater as well as whitewater competition.

The revolution in paddle technique came about after the development of

the fiberglass and aluminum canoes, particularly the fiberglass boats used in whitewater slalom. In addition, poling technique, while having the same advantages of the new canoe materials, has undergone further changes with the development of the lightweight aluminum pole. At the time of the first national poling championship in 1965 only the wood pole was in use. Shortly thereafter my brother Syl started experimenting with the aluminum pole. He tried many different sizes and weights in addition to several types of pole shoes. In the beginning he felt that all the strokes could be improved with a lightweight pole. This he felt was especially true due to the great amount of inertia involved in swinging a long pole. During implementation, a pole weighing three pounds instead of five can make a significant difference, while the same proportional weight difference between two short paddles is far less noticeable. He finally found a pole that offers superior strength, will bend without holding to the curve and is light enough to float and handle with ease. The result was that over-all performance greatly increased. The polesman could not only perform the old strokes more effectively, but many new strokes were developed under the exacting, measurable eye of national competition. Winners Mike Guenther, Ron Klopper, Jack Held and Syl have all used aluminum poles. By August of 1974 over ninety percent of those entering the national poling championship were using the new light aluminum poles. Consequently this opened up poling to a new world with a wider range of activity, whether it be cruising, whitewater or competition.

Poling requires no special-type boats. Standard fiberglass or aluminum canoes are the best. The only addition is a lightweight aluminum pole. While



Da! You can pole the Volga too. Syl Beletz, past poling champ, with one of the aluminum poles he developed and has used for seven years.

they are a little more expensive than a good wood pole (assuming you can find a straight-grained, knot-free, non-splintering, lightweight spruce or ash) they should last a lifetime. To date, we know of no one breaking an aluminum pole. Yet we have seen numerous wooden poles break, leaving long, dangerous, dagger-like splinters, besides the added expense of buying replacements. In order to keep a wooden pole it must be shod with a metal shoe or spike. Periodically it should be checked for splinters, sanded and varnished — thus more time and expense.

Generally speaking, polesmen (polespersons?) avoid the expense involved with drivers and the time-con-

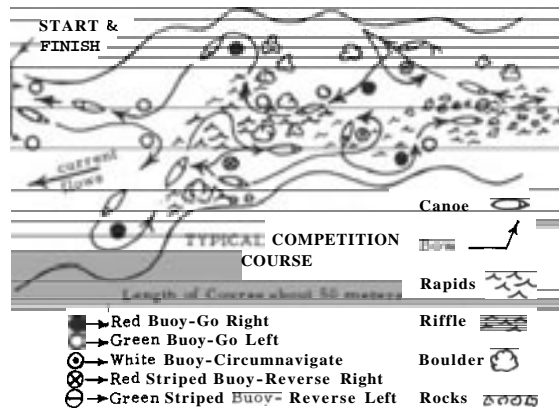


Elaine Abbott, our new 1974 national woman's poling champion, prepares to win a Meramec Canoe race, after capturing the poling crown. (Al, you dirty chauvinist pig, what do you mean by sending in a photo like this? — Ed.)

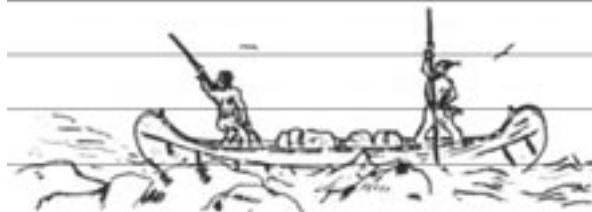
suming car shuttles, since they usually pole upstream and float or snub back to the put-in. Streams with a depth of four to thirty-six inches are perfect for poling, thus monies and fuel can be saved by exploring the small shallow streams closer to home. In many areas of our country, canoeists will drive 200 to 300 miles on a weekend in search of a wilderness-type experience. But they have overlooked and never adventured the creeks, small-shallow-Spring-run-off streams and upper stretches within fifty miles of their home.

A poling competition course can be set up in less than an hour and in conjunction with a slalom. But unlike the slalom, there are no wires or gates to hang, lines to pull and adjust or communications to set up. Events can be run off with few delays while only four officials are needed. Instead of gates, painted plastic detergent bottles are at-

tached to boulders with a strong line and tossed into desired places in the rapids. The course is usually 40-60 meters long with difficulty depending on the experience of the contestants entered. Unlike slalom, only fifty-point penalties are used. Only two buoy-judges (not numerous gate-judges) are needed. When a penalty is spotted, the buoy judge simply holds up his hand until the scorekeeper acknowledges with his arm signal. The contestants must pole around buoys both up- and downstream where they are constantly in view of everyone. This establishes a high degree of control, with the poling chairman, safety chairman and scoreboard all situated at the bottom of the course. From this point rescues can quickly be made by polesmen (polespeople?) who have completed or are awaiting their runs.



Free poling information can be obtained by enclosing a stamped self-addressed four by nine envelope and sending it to Al Beletz, National Poling Chairman, 3636 Oxford Blvd. Maplewood, Mo. 63143.



Two Voyageurs

TO THE YELLOWSTONE – 1930

By Hal Leich, 5606 Vernon Place, Bethesda, Md. 20034

Green in the sunlight your waters were leaping
And white was the crest of each tumbling wave –
River of youth, in the strength of my morning,
What wild exultation your swift current gave!

The sky of Montana arose like an archway
From rimrock to rimrock in sparkling blue.
Down through the canyons of yellow and scarlet
I rowed through your rapids with song and halloo.

River of morning – swift son of the mountains –
Your snow-melted waters must flow to the sea
Mingled with silt and the scourings of cities
Where vast sluggish currents engulf you, once free.

Waters of crystal that surged in the sunlight—
We measured our moment for ecstasy's fee.
How then can we grieve o'er the fates that befall us
As we flow through the lowlands to go to the sea?

(Composed during night watches on the flying bridge of a subchaser during World War II.)

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John Holland at 1974 National Slalom Kayak Championships, Buena Vista, CO. Photo by Tom Peterson.

RACING TIPS

How to Run a Slalom

by George N. Thomas & Carole L. Stemmler

Part 2 of 2

A slalom, to be official, needs to be sanctioned by the American Canoe Association (ACA). The ACA is the only American sponsor of whitewater canoe and kayak events in the U.S. officially recognized by the International Canoe Federation (ICF). Sanction also means the race is amateur, and that an amateur's standing is not in jeopardy. Sanction is obtained from the slalom chairman of the ACA division in which the race is held. Some divisions do not, as of this time, sanction slaloms. When you are first starting a slalom, sanction may not be necessary and you

certainly should not lose sleep over it for the first 2 or 3 years unless your slalom is on class III water or better. Be certain your awards are under \$25.00 in value so that your event is considered amateur. It is important not to jeopardize a future competitor's amateur status.

Officials

The actual operation of a slalom requires many trained people, with the single largest number needed for gate judges. A good source of gate judges are the competitors themselves. Assigning competitors to limited duty is common practice in the U.S. but be careful,

many novice paddlers are very incompetent judges and do not know the rules. For this reason, advance registration will ease the chore of assigning gate judges by using a current national paddler ranking list. If possible, put a novice paddler with an experienced paddler on each gate station. You will need a good supply of runners to collect gate judging sheets and time sheets. These can be competitors, a scout group or a church group. Nine-to-eleven-year-olds make excellent runners.

Timing

Competitors may be assigned to timing and scoring, but you will be much better off if you can have your own crews for these functions. Timing is critical and also something that can easily get fouled up. You need a chief timer to be in charge and an assistant chief to relieve. No one should be expected to work without some relief.

It is practical to have three boats on the course at one time but in most races, this is about the limit. The number of boats will be dictated by the terrain, water and course. We will assume you will use stop watches as these are commonly used and readily available. Leave the sophisticated timing gear for the future. To get started, the watches may be borrowed, but the watches should be checked to see if they all run at the same rate. At the Farmington slalom after 8 full years, we still use watches. Our watches are taken for service to be lubricated and regulated each year just before the race. If and when you buy watches, get good ones in the large format, 2" diameter with sweep hand that goes a full 60 seconds in one revolution to eliminate 1/2-minute reading errors. Each person operates only one watch and may keep an individual time

sheet. Many races use a master time sheet where the watch is read by two people. The chief timer reads and records, then the assistant reads aloud for a double check. Reading mistakes do occur so care is necessary. A time-recording sheet should contain boat number, possibly the boater's name, time in minutes and seconds and then converted to seconds.

A typical timing station would be a chief timer with recording sheet, spare watch and phone. Each of three individual timers will start and stop his/her own watch on a given boat number. A spotter is needed to be sure the contestant's number is read early enough so the timer is on the finish line when the boat arrives. A typical run might go like this: The starter telephones the next boat number to the timing crew and requests a watch. The chief timer records the boat number, resets the watch and hands it to the next available timer (or the timers may reset their own watches after time is confirmed). When ready, the chief timer hands the telephone to the timer who tells the starter "we are ready" for the count-down. The count-down by the starter should be a uniform cadence, 5,4,3,2,1, go. The timer should be operating his thumb in synchronism with the count so that on "go," the watch is started accurately. Some minutes later, when the boat nears the finish, the spotter should call out the number and the timer proceeds to the finish line sighting area. The watch should be stopped at the instant any part of the boat crosses the finish line. The direction of the boat is unimportant, that is, it could touch stern first or sideways as long as the boater is right side up. A timing group should have a practice session before the slalom starts to get the procedure working smoothly and discover possible trouble points.

Scoring

Scoring can be done efficiently by as few as two people who will work at it all day. Additional scorers will make life more pleasant, allowing rest and a chance to leave for a while. Score sheets should be ruled or printed in advance. The entry of names should start no later than when the tables and tarp are ready. Competitors' names and racing numbers could be entered at home when running order and racing numbers are being assigned from mail registration. On the score sheet two lines for each racing number should be allotted, one for the first run and one for the second run. This makes comparison for the better run easy to do and allows the competitor a chance to see and compare his two runs. The method developed at the Esopus slalom, and now used at the Farmington and other slaloms is to use three score sheets clipped together with carbon paper between the sheets. After the first run is entered, the bottom sheet is removed and posted. The procedure is repeated for the second sheet after the second run while the top sheet remains as the official record. This method eliminates the need to recover the sheets once posted.

The scorers should enter on the sheets the paddler's name with initials or given name, racing number in this class, the individual gate penalties, total penalties, running time in seconds and total score—the sum of penalties and running time. Penalties are entered from the gate judging sheets, with one person reading and the second writing. Uninterrupted quiet is obviously needed. If telephone reporting is used, scores are entered directly while the gate judge reports. The same is done for running time in seconds. In either case, the gate judges' sheets and time sheets must be retained until all results are official. Gate judges' sheets should have

the class, heat or run number, judge's name and gate numbers being judged marked at the top. The gate sheet should have the paddler's number and name if known, followed by the penalties or zero as the case may be for each gate being judged. The redundant zeros may be dropped. Each gate must be individually entered.

Racing Bibs

A supply of racing bibs will be needed like those used for ski slalom. A ski club might have a set they are willing to lend (one source is Hans Klepper, 35 Union Sq., N.Y., N.Y.). Many slaloms eventually obtain their own set after they are established. To prevent loss, racing numbers need **someone** to care for them. Many races charge a \$1.00 bib deposit that is refunded when the number is returned. Another suitable method is to have a non-racer collecting numbers at the finish line. When numbers are issued, they should be checked

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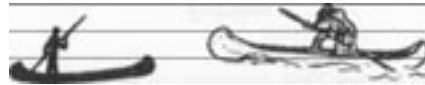
If you have enough number bibs, assign a competitor a different number in each class he or she competes in. This will allow the racing numbers to be issued in order and can also be the running order. By going in a numerical progression (boat one is followed by boat two, and so forth), the times and scores from the gate judges will also be reported in this order. This greatly facilitates scoring. Once set up in this neat order, try to run all boats in order. If a boater doesn't show up in time, he misses his chance for that run. These little refinements make life a lot easier on the race organizers.

Protests

A protest committee is needed to handle those inevitable disputes. When a protest is filed, the competitor is required to submit it in writing and post a \$5.00 protest fee. The fee is returned if the protest is granted; if not, the money should go to the slalom treasury. The competitor is required to supply witnesses to corroborate his story. The protest committee includes the chief gate judge, and two to four other fair-minded people, preferably with good knowledge of slalom and slalom rules. Many protests are over little things: "I didn't touch that gate" or "it was an inside touch, not a 50 second penalty."

Disqualification

A competitor can be disqualified from a heat or from a complete contest. If a competitor leaves his boat once the run has started, he is disqualified for that particular run. If it is a team race, the team is disqualified for the particular run. Competitors who have not reported for their gate judging or other assignments have been disqualified at various slaloms. This method is useful for repeated offenders who try to dodge their share of the work.



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Safety

Safety on the course is a major function and should have its own section head. The possibility of upsets on any part of the course must be taken into account. A few good men with throw ropes at strategic places can save many a competitor from a long swim. A safety boat at the end of the course can be very useful and if the water permits it, a two-man open boat is more useful than a covered boat. Many races require a competitor to sit safety at the finish until two more boats have finished before they take out. There have been a series of articles in *American Whitewater* on safety. These should be read and digested. We will cover some of the main points.

Throw lines should be manned a little downstream of a major danger spot. It is important to give the boater time to roll if he can, and also to be free of his boat before a line is thrown. A line should be aimed just downstream of the swimmer or across his boat making the line easy to grab. It would be a real hazard if the line were thrown just before a roll and the boater rolled up with the line tangled about his arms or neck. As for the size of a throw line, we feel it should be about 3/8 inches in diameter, nylon preferred. If the diameter is too small, the line will cut painfully into the hands and will be **difficult** to get a good grip on with cold, wet hands. If the line is too large, the main difficulty is being able to throw it far enough. This brings us back to diameters of 3/8 to 7/16 inches as the most suitable.

If your slalom is in cold water and/or early spring, hypothermia could be a serious problem if a paddler is in the water for any extended time. It may fall on you to ascertain if the competitors are adequately prepared for very cold

water. If the day and water are both very cold, you may have to keep ill-prepared paddlers off the water. While we would be the last ones who would want to keep anyone off the water, it is sometimes necessary for their good and also for the sport's general safety record and public relations.

Awards

There are many types of awards available. The standard awards used for many events are expensive, and unless you have some financial backing, these are best not considered. Good ribbons are inexpensive and are within the budget of a self-sufficient slalom. We still use ribbons at the Farmington. Medals can be purchased at a moderate cost. Some of the best awards we have seen were hand made. Examples are simple wood plaques shaped like a paddle with the appropriate information on the blade, lovely ceramic ware traditionally given at the Esopus and hand carved wooden canoes given at an open boat wild water race. A little ingenuity can produce very nice awards that cost little in money but do require many hours of someone's time.

Dismantling the Course

When all is over, the last runs taken and time allowed for protests, the course must be removed. A request will usually produce a few volunteers plus your own people so you will have an ample crew. If you wish to save wire and twine, plan ahead and be prepared. It is **difficult** to salvage wire and twine without something to wind them up on. Now is the time to make a list of needed repairs and additional gate equipment while it's easy to inspect and your memory is fresh. Keep in mind the area will need to be thoroughly policed. Try not to leave bits of the gate gear dangling from some of the trees, etc.

Slalom classes are shown in the accompanying tables. Three boats are the minimum that normally constitute a class. In addition to the covered boat classes all the canoe classes can be run in open boats at the slalom organizer's option and paddler interest.

U. S. Slalom Classes – covered boats

K-1	Kayak/male
K-1W	Kayak/female
C-1	Canoe/male
C-2	Canoe/2 men
C-2M	Canoe/1 man, 1 woman
*C-1W	Canoe/female
*C-2W	Canoe/2 women

*pending U. S. rules revisions, these classes will be required with sufficient registration. It will no longer be at the option of the race organizers. The revisions are expected during the Spring '75 season.

1975 WHITEWATER RACING PROGRAM

Contains complete race schedule as well as paddler rankings and information about whitewater racing, races, racers and rivers.

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Optional Slalom Classes – covered boats

Senior	any class	paddler must be 40 or over
Junior	any class	paddler must be 15 or under
Novice	any class	paddler must be class D or unranked

International Canoe Federation – covered boat dimensions

Boat	Minimum Length Overall	Minimum Beam
Kayak	4m	60cm.
C-1	4m	70cm.
C-2	4.59m	80cm.

measurements given in meters and centimeters

This column, a regular feature of American Whitewater, is designed to help the novice racer develop better techniques. Each "TIPS" column will feature a specific slalom or downriver racing skill. Please send questions or situations you'd like discussed to:

Ray Gabler, AWA Racing Editor
 151 Jensen Circle
 W. Springfield, MA 01089

1975 WHITE WATER RACING SCHEDULE

The following schedule is only a partial listing since we do not wish to duplicate the service provided by the 1975 **Whitewater Racing Program** (see ad., p. 69). Hopefully, however, this list will help bridge the gap for those who have not yet ordered a **Program**.

Date; Race; Contact

April—

- 5-6 • Petersburg Wildwater (**WW**), Petersburg, WV: class **II-III**; John Thompson. 23 **Grafton St.**, Chevy Chase. MD 20015. Also Open C Mid-States WW Championship.
- 5-6 • Farmington Slalom (**SL**), New Boston. MA: class **II**; Ethel Kenny. 21 **Hutton Ave., Apt. 7**, W. Orange. NJ 07052.
- 5-6 • Westfield R. (Open C, **WW**), Westfield. MA; **Merritt Andrews**, Chamber of Commerce. Westfield. MA 01085.
- 5-6 • Nescopeck Experimental (**SL, II-III**), Sugarloaf. PA; M. Karl Brandt, P.O. Box 81, Martins Creed, PA 18063.
- 6 • Tenadeho (Anthony Kill) (Open C. WW, I-II), Mechanicville. NY: Mechanicville Rotary Club, c/o Al Hoffman, 6 South Central Ave., **Mechanicville**, NY 12118.
- 6 • South **Platte R.** (**SL, II**), 20th St. Bridge. Denver, CO: Ron Mason, 325 S. Corona. Denver, CO 80209.
- 6 • Contoocook R. (**WW**), W. Henniker, NH; Art Mina, Box 27, Henniker, **NH 03242**.
- 12 • Dogwood Festival. **Chattahoochee (WW, Open C WW, I)**, Atlanta, GA: Explorer Post 49. P.O. Box 49071. Atlanta, GA 30329.
- 12-13 • **Brandywine Slalom (SL, II-III)**, Open C Mid-States Slalom Championship, Wilmington. DE: Lou Metzger. 986 Anders Rd., Lansdale, PA 19446.
- 12-13 • Cedar Race (**SL, WW, II-III**); Werner **Furrer**, 5152 Sound Ave., Everett, WA 98203.
- 12-13 • **Tariffville (SL, WW, III)**, **Tariffville, CT**; Vic Radzevich. 99 Willington Oaks, Storrs, **CT 06268**.
- 19 • Wappinger Creek Water Derby (**WW, Open C WW**), Poughkeepsie. NY: Henry Karn. Arlington Sporting Goods Store. 794 Main St., Poughkeepsie, NY 12603.
- 20 • Esopus Creek (**WW, Open C WW, II-III**), Phoenicia, NY; Bob Courtney, Long Pond Rd., Mahopac, NY 10541.
- 19-20 • Peshigo Wildwater Race (**WW, III-IV**), Athelstane, **WI**; Steve Parsons, 3128 W. Calhoun Blvd., Minneapolis, MN 55416.
- 19-20 • **Mascoma (sl. WW, III)**, Lebanon, NH: **Ledyard Canoe Club**, Robinson Hall. Hanover. NH 03755.
- 19-20 • Kings R. (**SL, WW, Int-Exp**), Calif.; Tom Johnson, P.O. Box 675. Kernville, CA 93238.
- 19-20 • **Loyalsock Slalom (SL, II-III)**, World's End State Park. Forksville. PA: Robt. L. Martin. 363 E. Linn St., Bellefonte. PA 18823.
- 26-27 • Kettle R. (**WW, II-III**), Sandstone. MN: **Steve Parsons**, 3128 W. Calhoun Blvd., Minneapolis. MN 55416.
- 26-27 • Virginia Championship Canoe Races (Open C, I-II); Joe E. Swiger, Box 1291, Front Royal. VA 22630.
- 26-27 • Johnson R. (**SL, WW**), Johnson, VT; Peter Day, Box 132, Johnson State College, Johnson. **VT 05656**.
- 26-27 • Kern R. (**SL, WW, Int-Exp**), Kernville. CA: Tom Johnson. P.O. Box 675. Kernville. CA 93238.
- 27 • Kinderhook Creek (**WW, Open C WW**), **Stephentown NY**: John Tomkins Jr., 83 2nd Ave., N. Troy, NY 12180.

May—

- 3-4 • Swift R. (**SL, WW, III-IV**), North **Conway, NH**: Saco Bound Canoe & Kayak. Fryeburg. **ME 04037**.
- 3-4 • Wolf Slalom (**SL, II**), Langlade. **WI**; Wolf River Canoe Club. George Steed, Wolf River Lodge, Whitelake, **WI 54491**.
- 3-4 • Raw Strength & Courage Annual Race Weekend (**SL, I-II**), Ann Arbor, MI: Kenneth W. Cochran III, 2824 Pittsfield Blvd., Ann Arbor, **MI 48104**.
- 4 • Potomac R. (**WW**), Washington, DC: Potomac River Race, c/o CCA Slalom Div., P.O. Box 4116, Colesville, MD 20904.
- 10-11 • **Stwooganock Classic (SL, WW, III-IV)**, Israel R.: Paul Ronish, Ronish Pharmacy, 101 Main St., Lancaster, NH 03584.
- 10-11 • Rio Grande R. (**SL, II-III**), **Pilar, NM**: Jon Cross. 2819 A Villa, **Los Alamos, NM 87544**.
- 10-11 • U. S. Slalom Team Trials (**SL, III**), **Youghiogheny R., Ohiopyle, PA**; Chuck Tummonds, Sports Equipment Inc., 10465 SR 44, Mantua. **OH 44255**.
- 11 • Farmington R. Long Distance Race (Open C WW): Stan Wass, 361 Holiday Dr., W. **Suffield, CT 06093**.
- 17-18 • Sacandaga Wildwater Canoe Races (**SL, WW, Open C SL & WW**): Carlton **Nellis**, Northville. NY 12134.
- 17-18 • Merced R. (**SL, Nov-Int**), Calif.; Dick Roberts, 101 Taurus Ave., Oakland, CA 94611.
- 17-18 • Housatonic R. (**SL, WW**), **Cornwall Bridge, CT**: Peter Wood, Box 591, **Lakeville, CT 06039**.
- 17-18 • Saco R. (**SL, WW**), North **Conway, NH**: Saco Bound Canoe & Kayak. Fryeburg. **ME 04037**.
- 17-18 • Apple R. Slalom (**SL, I-II**), Somerset, **WI**; Steve Parsons, 3128 Calhoun Blvd., Minneapolis, **MN 55416**.
- 17-18 • Seneca Slalom (**SL, I-II**), Potomac R.. Washington, DC; Andy Smith. c/o CCA Slalom Div., P.O. Box 4116. Colesville. MD 20904.
- 17-18 • U. S. Wildwater Team Trials (**WW, III**), **Youghiogheny R., Ohiopyle, PA**: Susan Chamberlin. 545 E. St. Andrews Dr., **Glenlock, Media, PA 19063**.
- 24-25 • West R. (**SL, WW, III**), Jamaica, VT; Paul Petruski, RFD Turners Falls Rd., **Montague, MA** 01351.

And don't forget the National Poling Championships on the Meramec R., August 16-17 at Times Beach, MO, for senior men, intermediate men, women & junior. Write for info to: Al Beletz, 3636 Oxford Blvd, Maplewood, MO 63143.

CLASSIFIED

CLASSIFIED AD RATES: 30c per word. Send to AWA Editor, Iris Sindelar, 264 East Side Dr., Concord, NH 03301.

WHITEWATER COACHING MANUAL — by Jay Evans, U. S. Olympic Coach. \$5.50 Sanborn Rd., Hanover, N. H. 03755.

CANOEING INSTRUCTORS — (Kayak in Britain, Canadian in France) required for season or short or long periods **Feb.-Sept.** Details and application form from Trevor Westwood, PGL Adventure Centres, 510 Station St, Ross-on-Wye **HR9** 7AH England (0989-4211)

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MERAMEC RIVER GRAVEL for sale, straight from championship poling course! 15 cents apiece, poling book too \$3.95. Available through: A. C. Mackenzie Press, P.O. Box 9301, St. Louis, MO 63117.

NEOPRENE SKIRTS/FLOTATION — Prices postpaid. Skirts: \$23.50. Kayak bags: 5' stern \$8.75; 3' bow \$6.50. River Chaser split bag set, \$20.25. Other types, sizes available. Write for details. **DAUBER CANOE & KAYAK**, Box 59W, Washington X'g, PA 18977.

AWA SAFETY CODES, revised 1974, at cost: 100/\$10, 5065.50. Send self-addressed, stamped envelope for single copy. **AWA BACK ISSUES.** 4 issues of 1973 \$3; 6 issues of 1974 \$4. Geo. Larsen, P.O. Box 1584, San Bruno, CA 94066.

MOLDS FOR SALE — "Walrus" 15 foot open canoe mold, good condition, \$150. Two high volume slalom kayak molds: fair condition, \$100/offer; good condition, \$150/offer. Downriver racing kayak, good condition, \$100/offer. Dale Callaway, Sierra Club, P.O. Box 728, Berkeley, CA 94701. (415)525-3922.

FURTHER INFORMATION ON DISLOCATED SHOULDERS; *or A Hitherto Neglected Fact concerning the Implications for Boating in the Evolution of Customs concerning Female Undergarments and their Removal*, by Bill Maden.

Since a series of shoulder dislocations this spring I've been pondering that subject while keeping an eye on the changing undergarment situation, never realizing such seemingly disparate topics were related until I called Dr. B. L. Berson who heads the sports injury clinic at Mt. Sinai Hospital in Manhattan. Dr. Berson advised me that the secret to preventing shoulder dislocation was to 1) AVOID VULNERABLE POSITIONS and 2) PRACTICE BRA HOOKING AGAINST RESISTANCE. These words sent me into a flight of fantasy and concern for the current generation of K-1W paddlers who have unknowingly been made vulnerable by what seemed like progress. The solution immediately suggested itself in the form of a volunteer committee to rectify the problem. Then the true mind boggler: what to do for men? . . .

PREVENTION

1) *Avoid the overhand pitch position* which is: elbow out, arm rotated back, palm up and bent back. *Instead*, keep elbows in, don't brace behind your head, keep palms moving down and forward.

2) *Develop shoulder muscles*, especially those used in bra hooking. Practice this against resistance: — weights, springs, dumbbells (pun not intended).

Practical application: When dropping into a hole, lean with elbows tight to body.

(Lifted from the *KCCNY Newsletter*. See also "Shoulder Dislocation" by Dr. Walt Blackadar, *American Whitewater*, Winter, 1973.)



John Mathiew and Mark Warren at 1974 Open Canoe Whitewater Championships, Nantahala R., NC. Photo by Edward Columbus Thompson.

MAKING AND HANGING SLALOM GATES

*by Claire Martin and John R. Sweet
Penn State Outing Club
University Park, Pa. 16802*

I. COURSE PREPARATION

- A. Design and map out the course, preferably at the same water level which will be available for the slalom.
- B. Have the trees to be used for stringing wires marked ahead of time on both sides of the river if possible. Check for possible obstructions to getting the gates out to the river (tree limbs and such).
- C. Do any necessary brush cutting so paddlers and spectators can get back and forth along the bank. Especially, remove overhanging brush which could interfere with paddling. Be sure to obtain permission before this step—land owners and park rangers can be very fussy!

II. EQUIPMENT

- A. How to make crossbars:
 1. Wooden bars (1" x 2" nominal) 1.7 meters long; make a few longer for wide gates.
 2. Paint white.
 3. Four screweyes facing parallel to the bar, 15 cm apart, for attaching gate numbers and R's and T's.

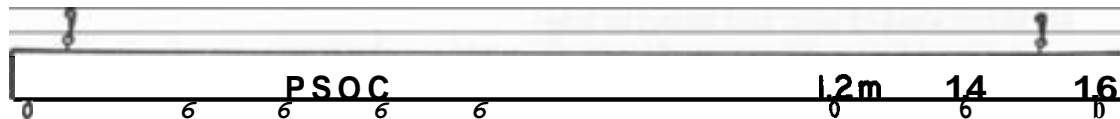


Figure 1. A typical crossbar showing locations of screweyes.

4. Four screweyes facing perpendicular to the bar for hanging poles: one at one end and three at the other end with gate widths in meters clearly marked on the bar above them (1.2, 1.4, 1.6m are most useful), Figure 1.
 5. ICF minimum gate width is 1.2m BETWEEN THE POLES, so eyes must be somewhat farther apart to allow for the diameter of the poles (3.5 cm). $1.2\text{m} + \text{pole diameter} = 1.235\text{m}$ between the eyes, minimum.
 6. Be sure to use screweyes large enough that frayed strings can be put through them by cold fingers.
 7. Swiveled snap hooks should be attached to the top of the bar to hang the gate on the wire (shower curtain rings are not strong enough).
- B. How to make poles:
1. Length—2 meters (ICF specs).*
 2. Diameter—3.5 to 5cm (3.5cm is preferred; this can be obtained as 1-3/8" full round from the molding department of a large lumber yard.).
 3. They MUST be round to minimize the effect of wind.
 4. Coloration:
 - a. Five white and five colored rings of equal width, with the bottom ring white.
 - b. An easy way to do this:
 - 1) Paint the entire pole white.
 - 2) Cut strips of paper of width equal to the desired rings (1/10 pole length = 20cm).
 - 3) Wrap a paper strip over each white ring, lay out a group of poles, and spray the red or green rings.
 5. Put a large screweye on the top for tying the adjustment string.
- C. How to make number boards:
1. Quarter-inch masonite is semi-OK; something else might be better. We'd like to try aluminum highway-sign material, but it's expensive.
 2. ICF rules call for number boards to be 30 x 30cm.
 3. Yellow background with black numbers painted on both sides.
 4. One side painted with a diagonal red line over the number to indicate the direction from which the gate may not be entered.
 5. Wire loops permanently attached to the boards to which hooks may be attached to hang them on crossbars. Shower curtain rings may be used here, although not entirely satisfactorily.
 6. Make numbers 1-30, about 8-10 R's, and one T.

*We would like to acknowledge the article by George Thomas and Carole Stemmler, Racing Tips: How to Run a Slalom, Part 1, *American Whitewater* 20 (1), 22 (1975). We would also call attention to one error therein: the length given for a slalom pole, and the associated statement about the height of the number board above the water, are from the 1%5 version of the ICF Slalom Rules, since twice revised. The correct length is 2.0 m, and there is no requirement as to the height of the crossbar or number. They also suggest painting the equipment white; number boards should be yellow.

D. What kind of wire and string to buy:

1. Use 14% or 17 gauge electric fence wire, which may be obtained from farm supply stores. It generally comes on a Masonite or metal spool, which is convenient for setting the course.
2. Avoid small spools (more expensive) or wire coiled without a spool (highly inconvenient). Common spool sizes:
 - a. 14½ gauge: ¼ mile and ½ mile. Heavier; needed for wide streams.
 - b. 17 gauge: ⅓ mile and 1 mile. Cheaper; good for narrow streams.
3. Use #15 (or larger) nylon seine twine or equivalent. It is available in one pound spools, 1500 feet to the pound, but may have to be special ordered.
 - a. Cotton cord is poor; it shrinks and stretches with moisture changes.
 - b. Binders twine is no good; it slowly pulls apart in use.
 - c. Some types of polypropylene twine are good.
 - d. Generally: synthetic fiber is all right, natural fiber is not.

E. Miscellaneous

1. Ladders for assisting in getting wires high enough.
2. Clippers and knives for cutting wire and string.
3. Brush cutting tools for removing obstructions.
4. Appropriate beverages for the workers.

III. HANGING THE COURSE

A. Putting up wires:

1. If possible, get wires and pull strings up ahead of time.
 - a. More than one gate can go on a wire if you plan ahead.
 - b. A pull string is needed for each gate. This string is first stretched across the river and tied off at both ends. For a narrow stream a continuous loop may be used, which allows all adjustments to be made from one bank, but it takes twice as much string.
2. Be sure to put the wires high enough and tight enough, then raise them another half meter and make them tighter. A ladder may be necessary here.
 - a. Use a strong, live tree.
 - b. If trees are not available you will have to resort to a bipod with a deadman (Figure 2), or use your creativity.
 - c. Also available are bridges, fish-pole gates (*American Whitewater* 14 (2), 16 (1968)).
 - d. Avoid running strings or wires across paths where people will walk and carry boats, or at least put them high enough.

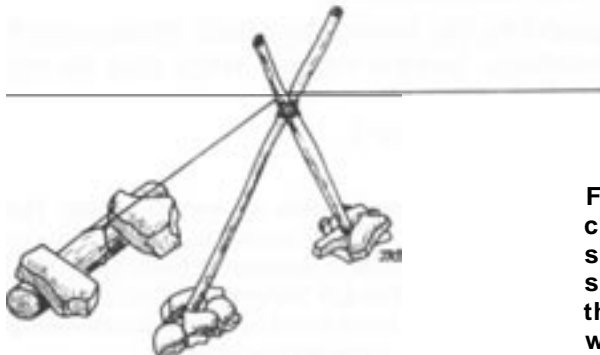


Figure 2. A bipod with a deadman for anchoring slalom wires where trees or other supports are not available. The poles are simply lashed with string or wire where they cross. The "deadman" could just as well be a large rock.

- e. When putting up wires over a dry riverbed (the easiest way if the water is controlled), pay special attention to getting them high enough, and also be sure that the trees will still be on dry land when the water comes up—rather inconvenient to have to wade into waist deep ice water to adjust gates!

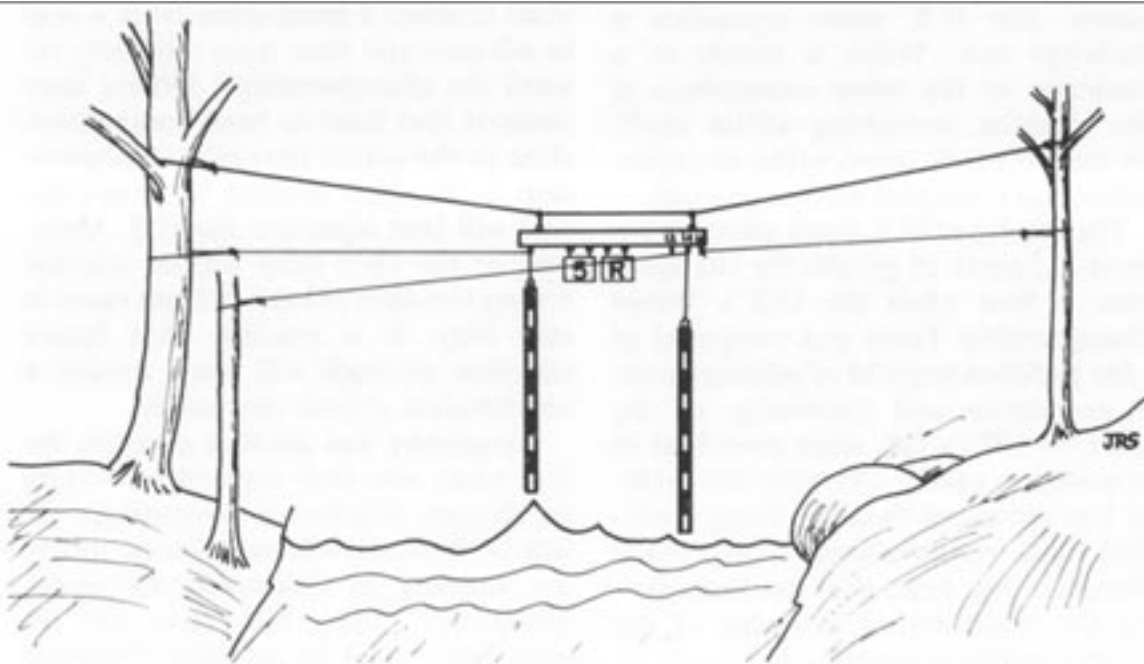


Figure 3. A typical slalom gate setting showing an assembled gate in place over a stream. Note the need for independent pole adjustments.

B. Hanging the gates:

1. An accurate course map is necessary, preferably a copy for each gate setting team, and drawn in pencil or non-fading pen (NOT Flair!).
2. An efficient method is to have teams of four: Three on one side of the river to tie the pull string to the crossbar, tie the adjustment strings to the poles, hang the assembled gate on the wire, and control the two adjustment strings as the gate is pulled out; one person on the opposite side to pull gate out to the proper place with the pull string and to tie the string to anchor the gate in place.
 - a. Two pole-adjustment strings go to one bank, one pull string to the other bank (Figure 3). A pull string to the adjustment bank is not necessary.
 - b. Tie the two adjustment strings, preferably to two different trees, using some type of tautline hitch (three loops are necessary to have the hitch hold properly with nylon or poly twine) with a "quick-release loop." The tautline hitch allows most gate adjustment without untying strings, and the quick release loop allows for untying the knot easily when needed.
 - c. Use an extra crossbar close to the poles when the wire must be too high (as from a bridge) to reduce unwanted pole movements.
 - d. Pay attention to the correct color presentation of the gates to minimize the nuisance involved in readjusting things later!

TEAM SELECTION 1975

When the U.S. team arrives in Skopje, Yugoslavia this June, the Europeans will give them more than a passing glance. The U.S. team represents a challenge now. While it stands as a challenge to the other competitors it also signifies something within itself, for the 1975 U.S. team carries an expectation that it can and will do very well.

The history of U.S. team selection reflects a decade of growth for the sport from a time when the U.S.'s World Championship Team was composed of a few paddlers hopeful of gaining greater experience and knowledge of the sport, to 1975's full team confident in its ability to excel. The selection method has remained flexible, being evaluated and reformulated before each championship year, thus accommodating the evolution of attitudes of the general paddling community.

When Sandy Campbell, 1974 National Slalom Chairman, appointed a Team Selection Committee, their first task was to determine objectives for 1975. One of the most significant problems was resolving the philosophical question of how large a team we should have and what degree of skill each paddler should exhibit. The two basic contentions could be termed "elitism" and "futurism." The first reasons that only paddlers with skills demonstrated to be on a par with world class paddlers should be selected. The second reasons that the sport as a whole benefits by the exposure of many U.S. paddlers to European competition. There are obvious ramifications for team selection inherent in each view. However, the Committee determined that for 1975 the paddling community would favor the full team concept. It was further reasoned that one of our strengths in 1973 had been the team

(three boat) events and that every effort should be made to insure equally strong team showings in 1975.

Over the years some have advocated that a selection method should be devised to select a prospective team a year in advance and then train diligently toward the championships. Others have stressed that head to head competition close to the actual time of a championship is the best method to determine who will best represent the U.S. Members of the 1975 team will be selected during two days of head to head races in mid May. It is possible that future selection methods will work toward a combination of both viewpoints.

Geography was another problem for the team selection committee. While the largest number of competitors reside in the eastern United States, others are training in California, Colorado, Tennessee, Texas, Wisconsin and almost every state in between. Someone would have to travel a long distance. Who would it be? How could things be arranged to accommodate them most reasonably? Should the trials be used as a device to publicise the sport in an area just beginning to grow? Should the slalom race be held in Colorado and the wildwater in West Virginia? Should the river be familiar or unfamiliar to everyone; should it be free flowing or dam controlled? As it turned out most of these decisions had to wait until after the National Slalom Committee approved the proposed selection method, and until we knew more about the proposed sites in Yugoslavia.

The Committee proposed a slalom selection method similar to that used for the Olympic Trials in 1972. There would be two days of racing with two races each day. The best score from each day would be added for a final total. The totals would be placed in rank order, omitting any scores of pad-

dlers not intending to go to the World Championships, and scores greater than 150% of the winner's score. The four paddlers with the top rankings would be selected. A fifth boat would be selected as an alternate, but would not travel with the team. It was felt this method would reward consistency, yet discount the chance of one bad race. The course on both days must be comparable in water level and gate combinations, and both courses should be designed to be of moderate difficulty.

The wildwater selection method was reworked innumerable times. It was felt that emphasis should be placed on going all out for one race, since at the World Championships there are no second chances in Wildwater. In an effort to build this race psychology, the Committee devised a method to select three potential boats in the first race. Additional boat(s) are selected in a second repechage race while the previously selected boats compete as a team. To qualify the first day boats must be within 105% of the winner, and for the repechage within 105% of the team time.

This selection method is very different from any we have used in the past. Since emphasis is on the first race, boaters must become very familiar with the river prior to the time of the race. This becomes especially significant for paddlers who must travel great distances to the race site. For this reason the Committee recommended that the wildwater trials follow the slalom trials on either the same river or one near the slalom site. The river had to be easily accessible and have continuous flow so paddlers could practice at any time.

The 1975 Team Trials will both be held on the Youghiogheny River in western Pennsylvania, with the slalom races May 10-11, and the wildwater May 17-18.

The method for selecting this year's World Championship Team is the culmination of much discussion and evaluation, and the compromising of several philosophical as well as practical points. It seems, however, a venture-some compromise. This June we will send one of our largest and potentially strongest teams to the World Championships in Yugoslavia.

While our expectations for 1975 are very high, we must continue a thoughtful evaluation of our national training programs and race schedule; for this reserent commitment to the full team concept also requires a degree of excellence in the programs through which our future world championship paddlers are now progressing.

Carol Joy Knight
National Slalom and
Wildwater Committee

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1975

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