

American

WHITEWATER

the Journal of the American Whitewater Affiliation



SPRING, 1972

Vol. XVII, No. 1

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WHITEWATER

Sponsored by The American Whitewater Affiliation

SPRING 1972

Vol. XVII, No. 1



The American Whitewater Affiliation

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Contents

ARTICLES:

- On Whitewater Growth **Gerald Meral** 6
Mouse-Hole on the St. Regis **Robert H. Smith, M.D.** 8
Life Jackets? **Carl Trost** 11
"Optimum Lifejacket"—
Resume of article by **Les Jones** 25
South Fork of the Salmon River **J. Calvin Giddings** 28
Training for the Olympics behind the Iron
Curtain **Josef Sedivec** 32

DEPARTMENTS:

- | | | | |
|------------------------|----|------------------------|----|
| Letters | 4 | Training Manual | 36 |
| Guidebook | 5 | 1972 Race Schedule ... | 38 |
| Canoeing Instruction . | 7 | 1971 Race Results IV . | 39 |
| Films Available | 27 | President's Soapbox .. | 40 |
| Anecdotes | 27 | From the Editor | 41 |
| Olympic Report | 35 | Affiliates | 42 |

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How to Write to American Whitewater

Deadlines for all material, including advertising, are the 15th of January, April, July and October for the Spring, Summer, Fall and Winter issues respectively.

Send Race Schedules and results to the Editor. Iris Sindelar.

Send membership/subscription payments, changes of address, non-receipt of copies to the Circulation Manager, Geo. Larsen.

Send Advertising copy, proofs and requests for information to the Advertising Manager. Henri Eble.

Send Payments for Advertising and Club Affiliation dues to the Business Manager, Charles Smith.

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 \$3.50 per year and to clubs at \$8.00 per year. Club membership includes listing in the Journal.

Publication is planned at 4 times yearly. Single copies, \$1.00 each. Surplus back copies are available at reduced prices. Write the Circulation Manager for details.

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.

COVER: This is real whitewater! Roger Turnes canoes a rapid in the upper stretch of the South Fork of the Salmon, Idaho. See story on p. 28. Photo by J. Calvin Giddings.

Letters from Readers

Dec. 5, 1971

Dear Mrs. Sindelar

We, here at River Defense, are engaged in a long and arduous battle with the Bureau of Reclamation and the Army Corps of Engineers over the preservation of our great Western rivers, including the Rio Grande, Gila, and Pecos Rios. Reclamation and the Engineers are using all the means at their disposal to strip our rivers of their natural vegetation (including the use of herbicides banned in Vietnam), channelize and cement their meandering beds, and dam their free-flowing stretches.

The damages extend not only to the streams and riparian wildlife but to those who dwell along the rivers, as well. Two ranchers, whose cattle have been killed and children sickened by negligent spraying of herbicides by helicopters under contract to the Bureau of Reclamation, have attracted national news coverage.

If American Whitewater is interested, we could prepare an article discussing the acts and plans of the Bureau of Reclamation and the Army Corps of Engineers in the Southwest and our efforts in opposition to their river wrecklamation.

Sincerely

David Foreman

River Defense

P.O. Box 496

Corrales, N. M. 87048

Jerry Meral, a professional conservationist, will now be coordinating AWA's activities in this area. Please send all related material to him c/o the

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2728 Durant Ave.,
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WOLF T and A

109 E. Superior Ft. Wayne, Ind. 46802

Oct. 28, 1971

Dear Mrs. Sindelar,

Regarding "On Staying Small" in the Fall, 1971 issue . . . We keep a tally of canoes, kayaks, foldboats, etc. when we go on summer vacations. In 1968—54 canoes, 2 foldboats, 8 kayaks. In 1969—79 canoes, 7 foldboats, 8 kayaks. In 1971—141 canoes, 29 assorted foldboats and kayaks. These three vacations were all taken near the Canadian border north of Calif.

Mrs. H. W. Barker

10409 Amigo Ave.

Northridge, CA 91324

Jan. 18, 1972

Jim and Iris,

Thanks for your letter. . . I just read a couple of books about Eskimos by Farley Mowat (**People of the Deer** and **The Desperate People**) describing how the inland Eskimos used to spear caribou in the rivers while paddling kayaks. But they never learned how to swim, and he didn't mention whether they knew how to roll their kayaks or not.

But this was the land of lakes and rivers, so they ran rapids with their boats just as we recreational paddlers do. The only articles I have read before about Eskimos were concerned with those who hunted and fished in the ocean with their boats. Mowat claims that the Eskimos probably came to the New World as a land-living people, and later some of them paddled their kayaks to the coast and developed the ocean fishing culture. So this would make the kayak a boat designed originally for use on rivers for upstream and downstream travel, speed, and sharp maneuvering among a throng of swimming caribou.

It would be interesting to see an article about this in **American Whitewater**, and maybe you know someone who could write it. Anyway, apparently the inland Eskimos no longer live in the barrens but have taken jobs at a mining camp on the Hudson Bay.

A further note about the kayak used

by the inland Eskimos. It was apparently primarily designed for hunting caribou at river crossings. During the summer the Eskimos didn't travel very far, and never took their families or moved their camps by kayak. It was a one-man hunting boat. I would imagine that such a boat would be fairly stable as well as fast and maneuverable. The hunter braced with one end of the narrow-bladed paddle on one side while twisting his spear into a caribou with the other hand. I would hate to try that with my slalom kayak.

Dean Norman
3336 W. 99th St.
Cleveland, Ohio 44102

FILM INFORMATION WANTED

A listing of movies and slides available to AWA members is being compiled and will possibly appear in the Journal sometime during the coming year. Please send information on films, including fee, if any, and how to obtain them, to Allan P. Harr, 50 Clover Drive, Delmont, PA 15626.

CLASSIFIED ADVERTISING

Canoeing Whitewater River Guide by Randy Carter. \$4.75 ppd. Waterproof packs \$5.00 fob. Boats and Accessories. Appalachian Outfitters, P.O. Box 248, Oakton, VA 22124; 703-281-4324

Classified Ad Rates, Am. Whitewater Journal, 20¢ per word; send ad and check to Ad Mgr., H. Eble, 19 Oakvale Ave., Berkeley, Cal. 94705.

GUIDEBOOK

A Canoe Trip Manual for British Columbia—Compiled and edited by members of Canoe B. C., the Provincial Amateur Canoeing organization in British Columbia. The Trip Manual covers some 70 or 80 river and lake trips of all levels of difficulty which have been taken by club members. Most descriptions include trip length in miles, travel time, danger/difficulty classification (International I to VI scale), campgrounds, distance to nearest community, and title of map covering the area if available.

Also contained are descriptions of the lake or river sections, directions on how to get there by car, and warnings of danger areas. Sketch maps of a few of the more complex rapids are also included. The preface contains definition of the International system of river danger/difficulty classification and also the club's version of the AWA Safety Code, as revised to also include recommendations for lake paddlers.

The editors say it is still incomplete (there's a lot of water in B. C.) but a new edition will be out in April, and at \$1.50 it is a bargain. Available from Canoe B. C., 4022 W. 27th Avenue, Vancouver, B. C.

WHITewater BOOKS

Whitewater Sport by Peter Whitney, \$5.50 plus 25¢ postage; **Fundamentals of Kayaking** by Jay Evans, \$3.00; **The Exploration of the Colorado River**, Major Powell's diaries, \$4.75 plus 25¢ postage. Send order and check to AWA Guidebooks Committee, Ed Alexander, 6 Winslow Ave., East Brunswick, N. J. 08816



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CATALOG

ON WHITEWATER GROWTH

by Gerald Meral, Environmental Defense Fund
2728 Durant Ave., Berkeley, CA 94704

In Fall 1971 AWA, Bob Burrell wrote that AWA and its members should think quality, but think small. I would like to argue that we should think quality, but think big. I do not write from the point of view of Bob McNair (increasing the organization) or Jay Evans (improving the caliber of competition), but from the point of view of the lonely paddler and beleaguered conservationist.

First, there is the proper question "Can we grow and still maintain or improve our quality, or must we remain small and elitist to preserve it?" I think we can grow with quality if we make careful use of our existing organizations. The function of the club is to train new boaters, organize trips, and to preserve the rivers we boat on. If the first task is taken seriously, the quality of boating is sure to improve. Why make it difficult for a new member to join? Is that how we got started boating? Even the twice-a-year class II boater can have a sincere appreciation for the river, and will respect it and his fellow boaters if his training is adequate. Besides, for the expert boater there will always be an escape: class V will not soon become overly popular!

Is there presently an overcrowding problem? On the Youghiogheny and a few other Eastern streams, and on the Stanislaus and Colorado in the West there is a problem, but any experienced boater (especially in the West) will tell of dozens of high quality streams that go without a single boat on them for weeks at a time even during peak boating season. Let's worry about overcrowding when the best streams in our area have a single club trip on them every two weeks.

Commercial rafting may present a more serious problem on some streams that flow all year long. Here the answer seems to be to regulate commercial use through government controls or industry-wide agreements. Both are working on the Stanislaus and Colo-

rado. In my opinion, if there is a real crush for river space or campsites, private parties in self-propelled craft should be given preference over commercial parties.

Are we really faced with the danger of "clodminded" boaters? First, boating uses no internal combustion engine (ICE) except in getting to the river and in some commercial rafting. Most "clods," as Bob pointed out, rely on the ICE for their outdoor entertainment. Also, boating is less comfortable than skiing: I know of darned few (too few) "Boating Bunnies." While boating has its social aspects, only dedicated spouses or future spouses "lounge" around take-out waiting for a trip to end. A boater has to participate to be accepted, and that works for quality control. I think the "clodminded" boater is a straw man, one which we should not fear as we try to increase our numbers.

Finally, and most important, there is conservation. I'd like to illustrate the need for more river aficionados with the following example. Two major rivers are being dammed in California: the North and Middle Forks of the American, and the Stanislaus. The American has almost 40 miles of good runs from class I to IV, including some of the most beautiful river canyon in the country. The Stanislaus is only 14 miles long, less scenic, class III, and is badly scarred by two mines. Yet it is the more likely to be saved through the efforts of river lovers. Why? Because the American is run only a few times a year by "quality" boaters, while the Stanislaus is run by a great many kayakers and by nine commercial raft companies. Already 14,000 names have been gathered to save it, and we hope to gather 100,000 more. I don't know if we will win, but we've got a chance, mainly due to the efforts of people who have come to know and love the river. The more scenic American, like Glen Canyon, is "the place nobody knows."

In addition to more boaters who will come together to save their favorite runs, we desperately need a greater number of dedicated conservationists who will give a great deal of time and energy to preserving rivers. It is around these people that the fight to save a river congeals. Once it does, many others join in, but in most cases someone has to get things started and keep them moving. These "human catalysts" are rare, but everytime we expose a new boater to the beauties and joys of boating we have another chance to make a convert, who will work to save rivers. If thousands ran the New (in West Virginia) every year, how much easier would it be to stop the proposed Blue Ridge Dam? What is the likelihood that the "overcrowded" Youghiogheny could now be dammed? Boaters can save their rivers, but only if their numbers are large, and their organization is better than the Corps' or Bureau of Reclamation's. And we will be better organized because a boater who knows and loves his river will fight to the end for it. If our numbers are large enough, the battle can be won. To paraphrase Bob, "What is wrong with AWA having the LARGEST damned whitewater club in the world as long as it is composed of the finest damned people in the world? Think quality, AND THINK BIG."

Red Ridge College of River Canoeing

Buck Ridge Ski Club and the Red Cross of Delaware Valley will again sponsor the Red Ridge College of River Canoeing on the weekend of April 28, 29, 30, 1972. This is an intensive course to teach people to teach river canoeing. The aim is to spread improvements in technique and safety by teaching a few members of many clubs who in turn can teach others in their own groups. All participants must have had Red Cross basic canoeing or its equivalent. The school will be run on the Nescopeck Creek near Hazleton, Pennsylvania. Different sections of the stream will provide a range of whitewater for all levels of experience.

Most instruction will be in open canoes, but a limited number of places will be available for slalom canoes and kayaks.

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A MOUSE-HOLE ON THE ST. REGIS

by Robert M. Smith, M.D.
18 Dover St., Massena, NY 13662

Illustrations by Vern Mauk

"The Rouge is great. But come and try the St. Regis when it gets up again in the fall. You won't be disappointed!" That's what we told our friends in the Montreal Voyageurs when we paddled with them and their guests from the French National Team on the Rouge at Huberdeau early this fall.

Sure enough, a three-day rain on the Adirondack north slope in mid-October brought the St. Regis to spring levels by our sophisticated gauges (a boulder here, a ruined bridge pier there). A phone call to Montreal, and shortly Henri and Michel rolled in, their beetle top-heavy with kayaks, representing the River Exploration Group of their club. With the local talent—Bill in his C-1, and Vern, Tom and myself in K-1's—we made a formidable (-looking) flotilla to challenge the St. Regis.

And the St. Regis was worth the challenge. From the breached dam at the Conservation Department Demonstration Area below St. Regis Falls, N. Y., it drops 375 feet in 6.0 miles to Nicholville—the upper 3.0 miles 75 feet per mile, the lower 3.0 miles 50 feet per mile, ending with two big drops in the spectacular Nicholville Gorge. All wild river. The "Silver Staircase" in the upper half drops 50 feet in a half mile through giant boulders. And the water was roaring through the breached dam like it was spring. Somewhat intimidating!

The preparations for the start are made with unusual care and quiet. Finally, all ready. Bill to lead, I to sweep. Bill enters the big current below the hole in the dam, is accelerated toward the first obstructions, and bingo! he's broadside on the very first boulder and capsized! Although he's experienced on the St. Regis—and the Hudson, Androscoggin, Allagash, you name it—he's underestimated the current velocity and he's wet already.



The kayaks start off one by one. I'm last, and as I concentrate on the first steep tortuous highly obstructed half mile, I pass Vern sitting in an eddy on my right and Tom in another on my left. Both are wet. Both have capsized and rolled. Three of the locals **geken-tert** in the first 30 seconds! The Montreal boys are sporting in some eddies downstream.

We get organized again at the top of the Silver Staircase. Bill leads off. Last again, I pass Tom's boat, upside down, Tom hanging onto the stern. I look frantically for an eddy to roost in but it's all too fast, like in ski nightmares when I'm on the Hahnenkamm Downhill and out of control. I finally pull a screeching eddy turn beside Bill at the bottom of the Silver Staircase. A great sweeper I am! Thank God, Tom was on the right end of his boat and Vern was able to stop to help him.

But now—horrible sight, like an ice axe bouncing unaccompanied down an ice face—Tom's paddle floats by. I detail Henri, who's looking bored, to fetch it. I've got the only spare paddle, so I start bushwacking with it up through the alder and tamarack jungle beside the Silver Staircase. Two hundred yards of this and I'm pooped, but here come Vern and Tom. Good old Vern had a spare paddle stowed inside his kayak.

We catch Henri and stop for a rest and to put a Band-Aid of duct tape on Tom's boat. Michel is a little concerned because he left his stern flotation in Montreal; but the way he paddles, he shouldn't need it today.

We rehearse the two big drops in the Nicholville Gorge. We can't scout them very well because of the high vertical walls of the gorge. But the gorge isn't



as hard as the Rouge Canyon in summer, and Henri and Michel were educated on the Rouge.

The first big drop in the gorge is through a ruined dam. It's only a 5-foot drop in a chute 30 feet long but it requires a left turn half way down and it's very turbulent and ends in a big stopper. I go first to "show the way" and because I've been fired as Tail-end Charley. Henri follows but he doesn't lean far enough for the turn in the chute, and the wave loads the right side of his deck and he's over and out. I must help him push his boat to shore because the biggest stuff is right below—the second big drop, down long slabs into a cauldron with big rollers. I'm crossways in the current accelerating down the slabs. "Henri, I've got to leave you n-n-n-n-now." Henri has grabbed a tree with one hand and still has the stern loop with the other. Good man! I musn't hit that mighty stopper

crossways. Time for one turning stroke—the bow's in, not straight but OK—wow, like a stone wall—dig deep and pull—I'm through.

Now it's Michel's turn. From below, I see him paddle carefully toward the chute in the ruined dam. The current pushes him toward the chute—and my God! he disappears. Ten, fifteen seconds—I move over to where I can see the whole chute—no paddler, no boat. Now Bill comes down. He's seen the whole thing from above. To the right of the chute, where the old mill was, there's a mill race. We knew it was there, but with the dam broken, no water goes down the mill race except when the water is very high. The entry to the mill race is only 30 inches wide, but it looked better to Michel than the chute, so he took it. Bill says he disappeared through that gap like a mouse down a mouse hole.

Some mouse hole! The mill race for-

unately is not obstructed but it's very fast and there's a 3-foot waterfall half way down. Michel doesn't expect this and he upsets and misses his roll. He's out of the boat but the boat is right side up and it half fills with water. (Remember, he left his stern flotation in Montreal.) He can't hold the boat. What's worse than a kayak full of water? One half full. It wants to float vertically. We all pursue it, a dance to a dirge of grating, crumpling and tearing noises. When we get it to shore a half mile farther down, it is destroyed.

Michel comes down and carries the pieces into Nicholville. Tom broke his paddle on a frantic brace in the gorge, so he uses Michel's paddle. We are somewhat subdued for the last half mile. There's nine miles of excellent St. Regis below Nicholville but we've had it for today. The Canadians are already planning to come back in the spring.

Your rivers may be great. But come and try the St. Regis when it gets up again in the spring. You won't be disappointed!

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LIFE JACKETS?

by Carl Trost, 257 Pacheco St., San Francisco, CA 94416

Have you ever wondered about the buoyancy of your life jacket as you were swept down "The Gorge" with your head never quite breaking the surface? (Every kayak club has a run named "The Gorge" that apparently is intended to frighten recreational boaters away from the sport. Any beginner that makes his first run successfully is immediately given special attention in the training program as a promising future expert or racer. The special attention puts the "promising" in the self-fulfilling prophesy category, even if our hero's only initial attribute was unadulterated luck). Probably your only thoughts were of getting air, but if you reflected on the event later, you were thankful for your life jacket rather than giving it the critical evaluation that it warrants.

Have you ever wondered what "Coast Guard Approved" stamped on a surplus store \$3.95 bargain meant? Approved in what way? For what purpose? Is river use different? What is the proposed new law on life jackets?

THE NEW LAWS

Until now the Coast Guard has required only that one approved life saving device (for recreational boating this includes buoyant cushions) for each person be **carried** on board **motor** boats on waters under federal jurisdiction.¹ However, federal laws are generally reflected in state and local laws, and may be modified to include all small craft or even the wearing of Coast Guard approved life jackets, as some of our reservoir paddlers already know. As a practical matter, the enforcement of the law doesn't reach into remote river canyons except when local officials become concerned about river rights or tragedies involving ill-prepared adventurers, or when a trip ends at a reservoir.

The "Federal Boat Safety Act of 1971" (Public Law 92-75) calls for improved safety regulations and greater

Copyright 1972 by Carl Trost

cooperation and uniformity between federal and state governments.² This sweeping directive covers virtually **anything that will float**. While the Coast Guard's prime interest is maritime matters, whether it may like it or not, it now has considerably wider responsibilities. Consequently, one of the first steps is a proposed regulation by the Coast Guard that would extend its requirements on the carrying of approved life saving devices to craft propelled by "oars, paddles, poles, or sails."³ It is believed that this **interim** measure, considered urgent, could be in effect by April, 1972.*

Federal jurisdiction, incidentally, covers any series of waterways that can be navigated between two states, or from a state to a foreign country. The character of a stream's navigability is not changed by the existence of falls, shallows, rapids, dams, or bridges.⁴

Aside from the rivers that historically or obviously are navigable, you may have to wait for your day in court for a decision on your favorite stream. Previous decisions on some streams are on record.⁵ For example, the Colorado is navigable up to and including Lake Meade. The portion in Marble and Grand Canyons is not listed, although this does not necessarily mean anything. It is definitely listed as navigable and under federal jurisdiction again at Lake Powell (boats can travel between Utah and Arizona).

PURPOSE AND DESIGN PHILOSOPHY

When a life jacket must be legally defined, what more logical and prudent

*Becomes effective April 17, with an exception that a person using a canoe or kayak that is enclosed by a deck or spray skirt need not comply if wearing a vest with 13 lbs. of buoyancy made of 150 separate, 12-mil vinyl air sacs, 8½ lbs. buoyancy, 120 air sacs for a person weighing 90 lbs. or less). This recognizes the Flotherchoc "Super" and "Shorty" models but not the less sturdy copies. (*Federal Register*, Feb. 16, 1972.)

choice could a legislative body make than to specify those with Coast Guard approval? Ironically, the criteria applied to jackets for normal use by the public are not necessarily the same as what we need in canoeing and the whitewater sport.

The traditional life jacket, hopefully, will never be used, but must withstand sun, salt water, mildew, inattention, boat fuels, and solvents for a number of years. If the critical moment does arrive, the jacket must be serviceable and could very likely have to keep the wearer afloat for a very long time. By contrast, the kayaking jacket is put to the test sometimes as often as every weekend, is needed only for a few brief minutes, and even then a jacket failure would rarely make the situation critical. Also, the Coast Guard looks for a non-personalized device that can be donned with ease both in and out of water by inexperienced people under emergency conditions. Our antithesis is the carefully selected, personal jacket that is donned prior to going on the water.

A more basic difference is that we are using what amounts to a **swimming aid** and the term "Life Jacket" is a dangerous misnomer. All that a jacket does is add a bit more volume to a person's natural volume. Under lake and harbor conditions, this could well make the difference between floating and drowning. In rivers, the added buoyancy merely extends the swimmer's realm into more turbulent water. No device guarantees immunity to high water, cold water, snags, bridge pilings, falls, and dams. To the people with small rafts that have drowned predictably each year in which a late spring runoff met with a three-day week end, donning a life jacket seemed to be the sensible thing to do. For trained river runners, the only sensible thing would have been to have foregone running the river. The only life-saving device we have is experience and good judgment.

There are some design factors in common, but with a decided difference in degree or interpretation. The ability to swim while wearing a life jacket requires a more critical analysis in swift river currents. "Mobility" for such

functions as rowing a lifeboat is not the same as the mobility required to turn one's torso and head in a desperate search for the runnable slot in a rapid while executing an upstream ferry across the brink of a drop, or tucking against one's deck and reaching for the surface while hanging upside down in preparation for an Eskimo roll. What can be endured in the way of limited mobility and comfort under rare emergency conditions is quite different from what will be tolerated in a jacket that must be worn for eight hours of hard paddling.

COAST GUARD TYPES⁶

This is not to imply that some Coast Guard jackets are not reasonably acceptable to some of our members. As a guide to what you are buying or may already own, Exhibit 1 gives the proper C. G. nomenclature, and specification and model numbers of current approved types, and their materials and test buoyancies. Some of these are shown in the 16 photographs in Exhibit 2, and the letter designations are consistent throughout the four exhibits and the text. The approval (specification) number and model number are stamped on each device (beware of jackets marked "Coast Guard Approved Type." without these numbers). Some older jackets not on the list are acceptable provided they are free of tears and in serviceable condition.

Current kapok-filled models (A, B) have the kapok sealed in vinyl bags, an improvement which is not essential to the buoyancy of kapok (some pre-vinyl models may carry the same specification number). Unicellular polyethylene foam is a modern material that is used in some cloth types. Unicellular polyvinylchloride ("Ensolite," "Koro-seal," and "Aquafoam" are trade names) may be used either as an insert in a cloth jacket or vest (C), or may form the preserver itself when given a vinyl-dip finish coat (D).

Specifications detail everything imaginable, including dimensions, cloth, mildew treatment, thread, stitching, color, buckles, snaps, webbing, the location and volume of buoyant inserts, the right to make in-plant inspections of

| EXHIBIT 1 | | | APPROVED LIFESAVING DEVICES AND MINIMUM TEST BUOYANCIES | |
|-----------|-----------------|------------------------------------|--|--|
| Photo | Approval Number | Description | | |
| A | 160.002 | Kapok | Life Preservers | |
| | 160.005 | Fibrous Glass | | |
| | 160.055 | Unicellular PVC Foam | | |
| D** | | Type I A Standard; vinyl dipcoated | Buoyant Vests | |
| C** | | Type III, Standard; cloth covered | | |
| | | Type II, Non Standard | | |
| B | 160.047 | Kapok | Small Child (under 50 lbs.) | |
| | | Fibrous Glass | | |

| | | | | | | | | |
|--|---------|---|--------------------------------|---|-------------------------------|----|-------------------------|--------|
| C* | 160.052 | Unicellular PVC Foam Type I, Standard; cloth covered | CFS | 7 | CPM | 11 | AP | 15 1/2 |
| C | | Type II, Non Standard; cloth covered | | 7 | | 11 | | 15 1/2 |
| D | | or vinyl dip coated | | 7 | | 11 | | 15 1/2 |
| C* | 160.060 | Unicellular Polyethylene Foam Type I, Standard; cloth covered Type II, Non Standard | CYS | 7 | CYM | 11 | AY | 15 1/2 |
| | | | | 7 | | 11 | | 15 1/2 |
| Special Purpose Water Safety Buoyant Devices | | | | | | | | |
| | 160.064 | | Small Child (under 50 lbs.) | 7 | Med. Child (50 to 90 lbs.) | 11 | Adult (over 90 lbs.) | 15 1/2 |
| | | | | | | | | |
| | 160.053 | Unicellular PVC Foam | Work Vests | | | | | 17 1/2 |

Note: Separate model numbers are assigned to each manufacturer's Type II device.

* Jacket in photo is identical in appearance.

** Similar except 3 1/4 inches thick [Jackets in photos are 2 inches thick].



work and material, and the inspection and testing of the finished product. Innovative design is encouraged provided the result is equal to the standard type in performance and materials. In fact, specification 160.064 gives no information whatsoever as to dimensions or appearance of the preserver. Air bladders are not approved because of the chance of puncture. Nylon is subject to ultraviolet degradation, and is acceptable as an alternate material only if it is stabilized against UV and can pass accelerated weathering tests. So far, only two nylon fabrics have been allowed.

Buoyancy tests consist of removing the buoyant inserts from the outer covering, making three 2-inch slits in each side of each plastic envelope in the case of kapok or glass-filled types, and submerging the inserts in a weighted wire basket in fresh water for 24 hours (48 hours for the fiber-filled "Life Preservers," A and B). The buoyancy is the difference between the submerged weight of the basket with its soggy inserts and its submerged weight when empty.

"Life Preservers" are approved for use on all vessels, including those carrying cargo or passengers for hire. The design is rigidly spelled out and is intended to "hold the wearer in an upright or slightly backward position with head and face out of the water." Each lot undergoes in-plant inspection of materials, work, and finished product by a Coast Guard inspector. Approximately 1 Life Preserver in 100 undergoes the buoyancy test. If it fails, 10 are tested in the next lot, and if any one fails, the entire lot is rejected. The additional buoyancy and more rigid inspection reflect a jacket intended for ocean-going ships where rescue may be a long time in coming.

The 160.002 Life Preserver can be found in many coastal marine supply stores and mail order catalogs. The 160.005 is identical in appearance, but the glass fiber filling is expensive, making the jacket rare. The 160.055 is cut from a single piece of PVC foam, forming a plastic pillory that is so uncomfortable that paying raft passengers have refused to wear it. It is similar to the Buoyant Vest in photo D except

that it is an inch thicker (the foam blocks within the cloth-covered Vests (C) are scored for flexibility).

On the run through the Grand Canyon, the National Park Service requires passengers on commercial raft trips to wear the approved "Life Preserver" at all times while on the river. The 160.002 "or equivalent" is "recommended" for private parties (permission to run is based on over-all competence rather than exact compliance to requirements).

"Buoyant Vests" are intended for small, recreational craft operating reasonably close to land. Plant inspection is not necessarily performed on each lot. One in 500 vests is tested for buoyancy. The "face up" position is still intended, but will be less assured with the reduced buoyancy. In this category we are apt to find more of the Class II, non-standard designs, but the manufacturer is held to providing 70 to 75% of the buoyant material in the front of the jacket to assure the upward turning moment.

The "Special Purpose Device" category was set up to accommodate people engaged in active water sports where it is desirable to have minimum physical restriction to the wearer. While minimum buoyancies are specified, no design is given, and details as to criteria for any specific use are relegated to non-profit laboratories such as the Yachting Safety Bureau and Underwriters' Laboratory, subject to final say by the Coast Guard. The minimum requirement is that the device not turn the wearer face down. New jackets that can maintain a person upright but will not right a face-down, unconscious person may possibly be labeled "Type II" (this is a new designation used by some manufacturers and not related to the aforementioned classes I and II). The manufacturer is responsible for inspection and quality and may be required to supply records of tests or affidavits of material purchased.

"Special Purpose Devices" also include ring buoys and buoyant cushions, which have been omitted from Exhibit I. Some of you have questioned why the Coast Guard is so meticulous about life jackets yet tolerates buoyant cushions, and why it isn't mandatory to

wear a jacket while operating a small boat. The Coast Guard takes the realistic attitude that people go aboard pleasure craft to relax and sunbathe, and the wearing of jackets cannot be enforced in a practical manner. The superior jackets are likely to be stowed in lockers, and in the event of a sudden disaster, it is more realistic that the lowly cushion will be at hand. (Incidentally, the proper method of wearing the cushion is diagonally across the chest, preferably with one leg and the opposite arm thrust through the loops, if you can manage it. Never wear one across the back.)

Specifically, all of the approved devices mentioned except the Work Vests are approved for use on vessels less than 40 feet in length unless they are carrying passengers for hire. (I am skipping the 40-65-foot category as it is of no interest to kayakers.)

The Work Vest is intended to give workmen necessary freedom of movement in a jacket that is limited in performance and method of donning and adjustment. It is not approved for use by the general public. Its buoyancy is listed here because some of you may come across such a jacket (I found one with both work and special-purpose approval).

ACTUAL BUOYANCIES

This article grew from what was intended to be merely an evening's project to satisfy my curiosity about the relative flotation of our kayaking jackets compared to the more conventional types. That particular evening found me at our regular pool practice with a 45-pound (20 kg) anvil rigged to the diving board with a system of pulleys, plus other assorted weights and spring scales (none costing more than a dollar), and an automobile crammed with all the bulky jackets that I was able to borrow that afternoon. The results of the experiment are included in Exhibit 3. Values are also given in kilograms, more as a convenience to our European readers than because of our impending conversion to the metric system (impending for the last 50 to 100 years).

The scales were checked against each other and later double checked by tak-

ing one of the weights used to the local butcher shop for weighing (a practice that did not inspire a feeling of mutual trust with "Thumbs" Wedemeyer). The buoyancies should be accurate to the nearest pound, if not to the nearest half pound. A quiet tank is to be preferred, but wave motion did not vary the readings by more than $\frac{1}{4}$ pound (0.1 kg) and was averaged out when necessary.

The life jackets listed are only a small fraction of the many makes available. Hopefully, we have included a good representation of both the Coast Guard types and the vests some of you have found reasonably suitable for canoeing or kayaking. Most of the jackets tested were not new. It is important to note that there may be considerable variation in buoyancy depending on the size of the jacket tested, as can be seen from the Stearns and Elvstrom listings.

I.C.F. REQUIREMENTS

According to International Canoe Federation rules, if the organizers of a race decide life jackets are necessary, then each jacket must have a minimum buoyancy of 6 kilograms (13.2 lbs.).⁷ The procedure is to tie each jacket to a weight (presumably 6.6 kg of lead or 6.9 kg of iron, to compensate for the metal's own buoyancy), place the jacket in a tank of fresh water, slosh it around to remove entrapped air, and mark it as passed if it floats.

SPECIFIC JACKETS

This is not intended to be a consumer evaluation. Except for the buoyancy measurements, no consistent series of checks was made on the various jackets. It was not possible to subject even a few of the jackets to a day's use on a river, except as had been done by their somewhat partial owners. None the less, some remarks are in order.

Thirty-three lbs. (15 kg) is the correct minimum design buoyancy for a new **160.002 (A)** prior to slitting and the 48-hour test (none of the other C.G. types has more than a pound or two margin above the test values shown in Exhibit 1 except where the manufacturer exceeds the minimum). Dave Kelsey, one of our club members, traded his kayaking jacket for this be-

hemoth at the sight of the fifteen-foot waves in the Grand Canyon, and reports no particular problem with bulk. In all fairness, it should be explained that Dave is over six feet tall and the life preserver on Dave probably more closely resembled Jacket G on an average person. Also, Dave did not try swimming in the Grand with either his regular jacket or the 160.002.

The father (E) of the behemoth pre-dates the sealing of kapok in vinyl bags and is no longer approved. Dry weight was 2 lbs., 12 ounces (1.3 kg); 9 lbs. (4.1 kg) after immersion.

The **racings jacket** (F) loses some of its impressive buoyancy with the collar insert removed and compares in flotation and appearance with the early model AK (photo G). Collars are an annoyance to kayakers, to say the least. Anyone considering such should try a jacket's collarless counterpart. I suspect that in still water, most people will float high enough that a collar will make little difference. For the 20% of us that go face down, the collar does nothing (Exhibit 2, photo F). It did offer great psychological protection in the days before helmets, and perhaps may be of significant value in white-water in righting a person and speeding him to the surface.

The AK (G), incidentally, was discontinued in 1960, but is acceptable to the Coast Guard if it is in good condition. This particular sample was found floating in the American River (whereabouts of owner unknown).

The inflatable "**Mae West**" (H) measured 21 lbs. (9.5 kg) fully inflated, although its owner never fully inflates it because it becomes awkward. The **Hauthaway** (I) eliminates the disconcerting bulge about the face and replaces the strap with a zippered vest.

Kapok or air stuffed into a bag is bulky. Sheets of PVC foam, cut into panels that are tailored into a form-fitting vest, are the basis of the **Stearns** "**San Souci**"® (J). Stearns now has "**Special Purpose**" approval for all their latest men's sizes after increasing the small and medium buoyancies from 14 lbs. (Our earlier specimens ran about an inch thick, and buoyancy was re-

lated to size). Fine adjustment is made with the cord lacing the side slits. A net lining is said to aid ventilation and drying. The lowest panel is free to flare out over a spray cover (also, the vest pictured is several sizes too large for the subject). In addition to the style shown, there are cotton-polyester plaids and a model that adds a body strap. Stearns is to be commended for their abundance of information: in addition to approval, labels indicate the new "Type III" designation, buoyancy, buoyant material, manufacturer's address, and a plea for "safety sense;" tags list buoyancies for all sizes; and they publish an informative booklet on life jackets.⁸ The Stearns catalog also shows an inflatable type that might be of interest.

Old Town is planning to catalog a new PVC life vest this year, with Coast Guard approval and suitable for kayaking. From their advance information, I will make a rash guess that it might be the Stearns.

Elvstrom (K) also uses close-fitting body panels and publishes their buoyancies. The vest panel feels like a soft, spongy foam plastic sealed in a vinyl envelope. In this case the jacket is partially dependent on remaining puncture free, but a puncture would pose no immediate problem other than the accumulation of water. For a vest, this Danish import has very good buoyancies in the ladies' and children's sizes.

Flotherchoc, generally regarded in this country as the classic kayaking vest for comfort, flexibility, and lightness, seals vinyl tubing into sausage-like strings of air cells. There are long, short, and collared models. Only the kayakers' "Shorty" (N) and the "Super Flotation" version of the standard model (P) are advertised as meeting I.C.F. requirements, a fact that may not be known to purchasers of the first of these jackets to be imported. The "Super" models can be identified by the double sets of air tubes inserted in the upper front and rear compartments. We have no information on buoyancy versus size, but some of the larger sizes in the single-tube models may also meet I.C.F. buoyancy, and reportedly

care must be taken with the small-size "Shorty" that almost all cells are intact. If you are concerned about air cells, the standard model (P) was tested after at least five years of abuse, with only 13 defunct air cells out of 306, a loss of only 4%. The good cells seemed slightly soft, perhaps the result of many trips over Sierra passes at 7,000 feet (2100 meters). The combination of these factors and the smaller size tested gave a measured buoyancy of 10½ lbs. (4.8 kg). The importer informs us that they have measured current standard models at 13% lbs. (6.1 kg) and the "Super" model at 17 lbs. (7.5 kg). Their value of 14 lbs. (6.4 kg) for the "Shorty" coincided exactly with our test. AWA director Robert Harri-gan reports his Flotherchoc in perfect condition after nine years.

Peter Storm Limited offers a line of jackets similar to Flotherchoc's.

In the **Gresvig** (similar to N), from a country new to the Scandinavian group (Japan), the I.C.F. buoyancy is achieved with double tubes only in the front, possibly in an attempt to achieve some turning moment. We noted that the jacket lost ½ lb. (0.2kg) buoyancy when it was submerged 2 feet (60 cm). This depth-compression effect is probably common to all the air types. At an altitude of 7,000 feet the jacket could be expected to gain a pound. Also, we noted that the Hauthaway lost ¾ lb. (0.3 kg) when plunged into an unheated pool to 62°F (17°C). The only significance is that a marginal sealed-air-cell vest could unexpectedly fail a pre-race test, depending on the altitude, water temperature, and gentleness with which it was immersed.

Japanese copies, in general, do not appear to be as substantially made as the Flotherchoc,* and the vinyl tubing

My experience certainly supports this observation. My **Gresvig**, after about three years of constant service but no real abuse, has only 45 of the original 123 air cells still intact. This means the flotation is now 27% of the original value and certainly the jacket is no longer serviceable. It is of course possible (hopefully) that Gresvig may have improved the durability of the air cells in their newer jackets. —Jim Sindelar.

is thinner. Their principal attraction is their low price (about half).

Liffey Lify (L) and **Harishok** (M) are pullovers from England with buoyant inserts made from strips of PVC foam, duplicating the lateral, if not vertical, flexibility of the flotherchoc. The peplum can be folded up if it interferes with the spray cover. **High Performance Products** is introducing their own zippered version, possibly in the short style without the peplum.

We have no information on the degree of quality control exercised by any of the manufacturers, and anyone can make a mistake. Harishok, with a noteworthy reputation for competition jackets may be the least deserving of the ill luck which consisted, apparently, of a batch of under-buoyant jackets reaching our club. The jacket used was stamped "15.3 lb., Size L," but by our measurements it came to only 12 lbs. (5.5 kg). Dick Sunderland confirmed this result when his jacket, from the same shipment, was rejected at Merano. Dick reports that other contestants with other brands could be seen frantically stuffing and sewing more material into their jackets. The moral is, **if you must trust it, test it!**

WEIGHT AND SUITABILITY

You can figure on roughly 1½ ounces of weight in a finished jacket for every pound of buoyancy (90 grams per kg), whether the jacket is stuffed with PVC foam or kapok. All jackets were reasonably light, but if the small difference is important to you, here are the relative standings for jackets with 16 to 18 lbs. (about 8 kg) of buoyancy: Hauthaway, 14 ounces (400 grams); Liffey Lify, 22 (600); Elvstrom (ladies') 29 (800); Stearns (extra large), 32 (900). Surprisingly, my old Flotherchoc, at 28 ounces (800 grams), weighed a few ounces more than its PVC counterpart.

A kayaking vest should fit snugly (but not uncomfortably) both for swimming and so that excessive water is not taken in during a roll. Those that boat clothed or dry in open canoes may prefer a more loose and ventilated jacket.

EXHIBIT 3

MEASURED BUOYANCIES

| Photo | Jacket | Buoyancy | | C.G. |
|-------|---|----------------|------------|-------------------|
| | | Pounds | Kg | Appvd |
| A | 160.002, Model 3 Life Preserver | 33½ | 15.2 | ✓ |
| E | Old Life Preserver (kapok not sealed) | 29½ | 13.4 | |
| F | Racing Jacket with collar | 27 | 12.2 | |
| | with collar removed | 18½ | 8.4 | |
| G | 160.047, Model AK (discontinued) | 20½ | 9.3 | ✓ |
| B | 160.047, Model AK-1 | 20 | 9.1 | ✓ |
| H | "Mae West," inflatable | 21 | 9.5 | |
| I | Hauthaway | 17 | 7.7 | |
| J | Stearns | Boys' & Girls' | | Ladies' |
| | Magnum | | | Men's |
| | Super | | | 25 * 11.4 |
| | Ex Large | lbs. * kg | lbs. kg | 18 * 8.2 |
| | Large | 9 * 4.1 | 12½ * 5.7 | 17 * 7.7 |
| | Medium | 8 * 3.6 | 12 * 5.4 | 17 * 7.7 |
| | Small | 7½ * 3.4 | 11¼ * 5.1 | 17 * 7.7 |
| | Petite | | 11 5.0 | 17 * 7.7 |
| | Elvstrom | Size | | Body Weight, lbs. |
| | Extra Large | | | 160+ |
| K | Men's | | | 140-180 |
| | Ladies' — Teen | | | 100-140 |
| | Child | | | 50-100 |
| | Toddler | | | 25- 50 |
| | Baby | | | up to 25 |
| L | Liffey Liffey (shown with peplum folded up) | 17 | 7.7 | |
| M | Harishok (not a typical model)† | 12 | † 5.5 | |
| | Gresvig, size 34-38 (42-44) | 16 | 7.3 | |
| N | Flotherchoc, (TM) "Shorty," 40-44 (46-52) | 14 | 6.4 | |
| | International Canoe Federation min. buoyancy | 13.2 | 6.0 | |
| O | Empress Float Coat® | 12 | 5.4 | |
| P | Flotherchoc, (TM) std. model (old), 34-38 (42-44) | 10½ | † 4.8 | |
| | Water Skiing Belt, 1½" x 5" x 29" | 9 | 4.1 | |
| | Neoprene Jacket, 3/16" with long sleeves | 5½ | 2.5 | |
| | Neoprene Trousers, 3/16" | 4½ | 2.0 | |
| | Neoprene Vest, ¼" with short sleeves | 4 | 1.8 | |
| | K-1 Spray Cover, ⅛" Neoprene | 1¾ | 0.8 | |

*Buoyancy from manufacturer's literature.

†See text.

Size Designations: American (European)

The relative suitability of any of the vests as to flexibility, ventilation, fit, interference with spray cover, bulk, or chafing is largely an individual matter as well as beyond the scope of this investigation.

BUOYANT CLOTHING

A large number of manufacturers, including Stearns and Peter Storm, are offering clothing lined with PVC foam that is claimed to combine style, warmth, and buoyancy, particularly for those not ordinarily wearing life jackets.!) Styles range from parkas and pea coats to camouflaged hunting suits and vests. There are a few models with Coast Guard approval, which means buoyancy must be 15½ lbs. (7 kg), and that there will probably be about ¾ inch of foam about the torso, an element that does not enhance their appeal as an article of clothing.

Curious about what could be expected from the comfortable and more conventional coat, we put an Empress Float Coat® (O) to the test. The surprising 12-lb. (5.4 kg) buoyancy came from a ¼-inch foam lining throughout the length, with ⅛-inch in the sleeves. When I jumped into the lake, I found the entire parka bunched up under my arms, a factor which the clerk claims contributes to floating face up. On pulling the parka back down, I was cradled comfortably but rather low in the water within a bubble formed by PVC, wet nylon, and entrapped air, giving considerably more than the measured buoyancy. Swimming was not too difficult, but when I climbed out I carried with me 13 lbs. (6 kg) of water. One company (Peter Storm) offers a model with a crotch strap, and at least one claims quick drainage."

Whether these coats are too warm for active paddling, or offer warmth and freedom on cool days, or are suitable for smooth-water canoe safety is again up to the individual.

FLOATING POSITION

There appears to be an unwarranted confidence on the part of many of us that our jackets, judging simply from their design, will float us face up or hold the head of an unconscious person

safely out of the water. Indeed, this is written in the federal code! I must confess to having spent the first part of my decade of kayaking in jacket F without ever entering the water with it for the sole and specific purpose of determining if it would actually perform as anticipated.

Most of the jackets were returned to their owners at the pool, with only a brief check on how they floated. However, I was able to compare, photograph, and re-check several jackets at my leisure.

Comparing photos A and P in Exhibit 4, it will be seen that there is very little difference in the tread-water position (note water line at shoulders) between the two extremes in buoyant jackets. But there is a decided difference in the feeling of buoyancy imparted by Jacket A! Only a small portion of the buoyancy of the bulky jacket is utilized **in still** water, which would also be true of the bib types, with much of the buoyancy about the neck. Further, the floating position would have been several inches higher except that it was impossible to cinch the soft padding tight enough to keep from slipping down in it.

I suspect that most of our vests rely on the arm holes to hold the jacket down and precious freeboard (mouth above water) is lost. Draw strings at the waist seem to be inadequate for the most part, or perhaps what is comfortable and what is necessary are not compatible. Perhaps a good belt would also prevent water from draining out when rolling. My own jacket forms a tight band with the peplum rolled up—too tight at 6,000 feet (and that's a desert river!).

I find that I am not only among the 20% that will not be brought face up by the AK-1 (Exhibit 2, B), which is used as the standard for comparison in testing the Special Purpose Devices, I can float face down in the acme of life preservers (4, A). The determining factor was whether the legs were slightly forward or to the rear when going limp from the vertical position. From the face-down position I had to roll well

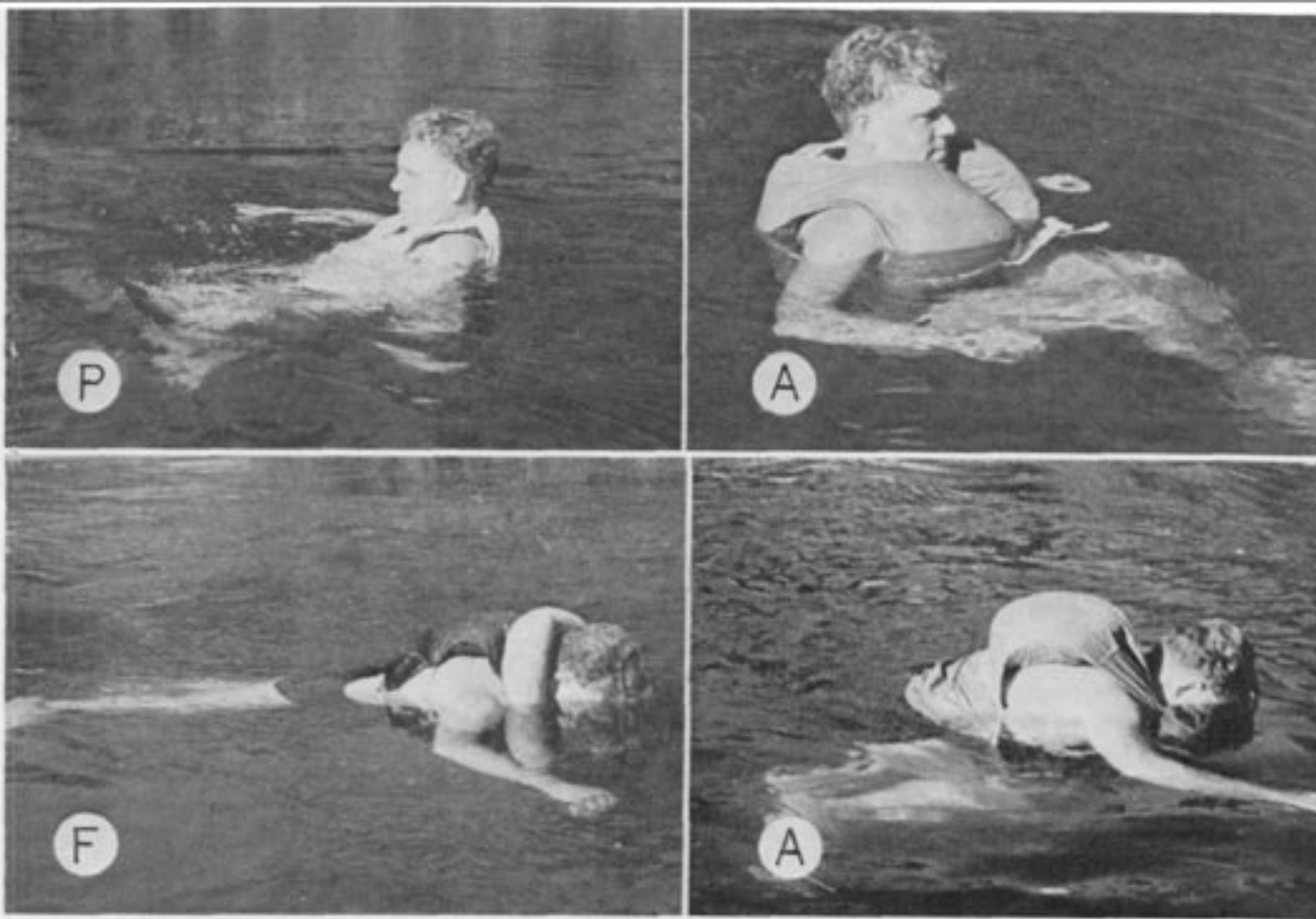


EXHIBIT 4

onto my side before the preserver would turn me face up.

In fact, while the AK-1 had the greatest tendency to float me face up, its flatter front profile gave it the most stable face-down characteristic. On testing a similar model on a different day, the results were quite different. From a toes-out, face-up position, my feet slowly sank and I went face down.

Tendencies to assume any particular position were far less pronounced with the special purpose jackets and kayaking vests.

These results are contrary to what should be expected and to what Consumer's Union found.¹⁰ The explanation is to be found in the Coast Guard's own literature. The design of a jacket is complicated by the vast individual differences in humans in weight, size, shape, clothing, bone-flesh ratio, center of buoyancy, and center of gravity. Some of these factors change their relationship with movement of the arms, legs, or body position, and some vary with breathing, and contents of the

stomach, bladder and alimentary canal. "The human body in water is a naval architectural problem far more intricate than a ship." The problem of achieving proper floating position is even more difficult with children. "The ideal solution would be for a personal device specifically designed for each particular person."¹¹

Clearly, the selection of a life jacket and the manner in which it will perform is a personal matter requiring a personal evaluation. And perhaps a new evaluation will be required each time one buys a new pair of tennis shoes (assuming that river rats do buy new tennis shoes).

Just how important is the face-up position? One is tempted to speculate that even with the best of jackets it depends upon the swimmer to keep his head up in turbulent whitewater, and that the kayaker who loses consciousness is done for with the first inhalation of water unless his companions can effect a speedy rescue. However, popular belief to the contrary, over.

half of drowning victims continue to inhale water, whether conscious or unconscious, in a process that may take up to 4 to 7 minutes. The fluids drawn into the system during "wet drowning" complicate matters and can cause death by "secondary drowning" after a revived, near victim is hospitalized.^{12,13} Rescue of an unconscious victim would take place in the calmer water at the end of a rapid, and it would seem that any possibility the victim has of coming face up might improve his chances for recovery. However, within my range of experience (the kayak clubs of northern California), there has been no incident in well over a decade to establish the likelihood of such an event.

The debilitating effect of cold water, either in a swift stream or a wide lake, most certainly calls for a jacket that will float the victim face up. But again, for this feature of the jacket to be useful, we must deal with some peculiar circumstances: lack of proper rescue support to begin with, and yet some means of eventual rescue within a reasonable time.

From a cursory recollection of the dozen or more deaths of raft and inner-tube riders on our Sierra streams, the victims were either not wearing life jackets, or were alone in high water, or were trapped against a tree stump. The outcome was inevitable in almost every case. Far more important than a jacket with improved performance would be wet suits in cold water and sound judgment at all times.

THREE DIMENSIONS

So far, we have been discussing, for the most part, jackets designed, tested, and used under one-dimensional conditions (a cork floating on the waves moves primarily up and down). When we embark on a wild river, we are in a world of three dimensions—all of them down! The river has a downward gradient. With each drop the downward momentum of the hapless swimmer combines with the force of the falling water to plunge him deeply. Even in relatively smooth water, the swift center currents can suck downward. When the water does return to the surface, it does so in the form of huge boils and walls of

water folding back into the midstream jet, pushing the swimmer away from the haven of side eddies and back down into the swift water. It may well be that this ever-downward pull contributes to the kayakers' myth that whitewater is less buoyant — too thin to buoy one to the surface, too thick to breathe. (I don't know that the effect has ever been quantitatively measured.) Once, again, we see how the role of a jacket as a lifesaving device is questionable.

HOW MUCH BUOYANCY?

The buoyancy required to float a person cannot be judged from his weight, size, or physique. Tests of 22 individuals by the Mellon Institute showed that the simple lifting force necessary to hold the head above water ranged from two subjects with a surplus of natural buoyancy when inhaling, to 10 to 12 lbs. (about 5 kg) for most of the subjects when exhaling.¹¹ As usual, women are controversial, with the Coast Guard favoring full equality pending some new studies now being made. Several sources claim that children need even more buoyancy than adults.^{8,14} It is clear from the problems of getting children face up that a life jacket in no way lessens the need for constant parental vigilance near water.

This pegs the I.C.F. requirement as a minimum for a universal jacket, and as a value that even the more buoyant individuals would not care to skimp on in whitewater. At the other extreme we have the desires of people like Dave Kelsey and Dick Sunderland, admittedly large-framed men running incredibly big water, for much more buoyancy. For most of us, the vests currently available, particularly those around 18 lbs. (8 kg) are probably approaching the highest practical value that we can wear in comfort. On occasion, Sunderland wears two Harishoks (one large), and I found another person who regularly wears a Harishok over his Flotherchoc.

TOO MUCH BUOYANCY?

The dangers of wearing life jackets seem to have vanished some time during the past decade. Some boaters used to wear hunting knives to cut them-

selves free from entanglements between the jacket and brush. We all doubled the tie straps back through the D rings so that a quick tug would instantly untie the jacket. Has the lower buoyancy of the modern kayaking vest hidden the problem of reversals? The problem was never common, but those who experienced it never forgot it.²⁰

The need for extreme buoyancy is evidenced in our standard procedure of using the grab loops and staying with the kayak. However, when stopped by a reversal, the swimmer generally lets go and is plunged deeply and flushed out by the undercurrent. The kayak can be left behind or reclaimed if it bobs out. The swimmer does not have the option of instantly letting go of his jacket, and an abundantly buoyant jacket could hold him at the curl of the reversal or cause him to rise out of the undercurrent prematurely, to be recycled by the reversal currents above.

Our experts still advise diving down into the under current, or, as a last resort, slipping out of the jacket and diving.¹⁵ But diving in the more buoyant jackets becomes difficult or impossible for most of us. I have never met anyone who even attempted to remove a jacket while being tumbled in a reversal, and with some of the modern kayaking vests this would clearly be impossible!

The Eskimo roll has become an essential skill for experts running continuous wild rapids, extending the range of their activities well beyond what would have been attempted with a buoyant vest but without the ability to roll. For some, the technique has become so flawless that one wonders if the participant has taken into account the consequences of failing a roll, as eventually must happen. (If you can't swim it, don't run it!) Ironically, the vest that must not interfere with the agility necessary to roll may now need much more buoyancy.

Possibly our big-water friends are seeking greater buoyancy more because of the problem than because they have found an adequate solution. Does the more buoyant (and more bulky) jacket actually rise to the surface significantly faster? Or does the amount of buoy-

ancy required to overcome the forces of the river increase at a faster rate than we care to pay?

Some people complain that the standard "Buoyant Vest" with about 18 lbs. (8kg) is already awkward for swimming. To what degree does this buoyancy restrict a roll if the boater is unwittingly attempting to roll opposite to the side on which his jacket may be holding him?

There is undoubtedly a different set of requirements for a high-volume, low-gradient river, such as the Colorado (with many rapids more closely resembling gargantuan Class II's), than for the low-volume, high-gradient river. Why not several life jackets (and a buoyant cushion for the Coast Guard), just as many of us have several kayaks?

For the next person that has a few months to spend on this subject I propose a course of action to resolve some of these issues. Take a number of jackets with assorted buoyancies and an assortment of endomorphic, ectomorphic, and mesomorphic friends, all properly tranquilized with **Spiritus Fermenti**¹⁶ against undue attempts at swimming. Send the various combinations through "The Gorge" while recording their performances on a movie film. A measure of each jacket's effectiveness would be the percentage of movie frames in which the subject appears with his head above water.

THE FUTURE

It is clear from the Federal Boat Safety Act that a more comprehensive program of regulations with increased coordination with local agencies will be forthcoming. Working from the other end, manufacturers are developing jackets and safety apparel that are more conducive to wearing, stressing the point that for the sportsman, a jacket with perhaps less performance but more likely to be worn is a more realistic approach than an item that is carried on board merely to satisfy the law. The American Boat and Yacht Council, an independent group of safety-minded individuals from industry, the Coast Guard, boating law administrators, and interested public, is

approaching this problem with a study of the special requirements of various water activities. At the council's request, Mark Fawcett, on behalf of the American Canoe Association, has participated in the study and has drafted a proposed outline of criteria for life vests for our sport.¹⁷

What will come of all this—whether eventually there will be a common meeting between what is desirable and what people will wear, whether the "special purpose" category will be further delineated, or perhaps kept general but with less stringent specifications, and whether any of this could lead to a requirement that approved jackets would have to be **worn** in the "wetter" sports is strictly speculative.

My own opinion is that the immediate problem may be a threat to our traditional sources of supply. Most of the European manufacturers seem to be busy enough without pursuing the problems of the American market. For Flotherchoc, Peter Storm, and Elvstrom, canoeists and kayakers make up a miniscule portion of their market in this country. This means that the yachting set, those most likely to be interested in an approved equivalent, are presently supporting the importation of those jackets with the poorest chances of being approved (sealed air). Do-it-yourselfers, and our backyard and club operations will not find approval practical, but their lack of approval may not be important for many of us.

I further believe that our sport is unique, not only in its special requirements, but in the degree to which people must learn and participate. A kayaking jacket is not an unfamiliar incidental, but is considered by almost every one of us to be an essential part of our equipment and dress, and its selection is as subject to argument as are the merits of a particular kayak or paddle. In a sport where there are so many variations and combinations in human body size, boat models, swimming ability, boating ability, and river characteristics, when personal experience, knowledge and judgment play so vital a role in the safe participation, the personal opinion of the participant

in his choice may well be as expert and important as the most carefully considered governmental edict. I can only hope that the door will remain open for the widest choice from American, European, or even experimental models of life jackets. * * *

SUPPLIERS

Approved kapok types can be found from a few dollars, up. All of the special vests are in the \$25 to \$35 range except the Gresvig. Buoyant coats run about \$40 — \$60 for approved models.

For some foreign manufacturers, lines of distribution in the U. S. are non-existent, weak, or unofficial, with the suppliers reluctant to reveal their sources or not able to contact the manufacturer themselves. With apologies to official outlets we may have overlooked, here, at least, is an address where you may be able to obtain more information.

Elvstrom, Canor Plarex Inc. (sole U. S. Agent); 36 Bellewood Ave., Dobbs Ferry, N. Y. 10522; 4200 - 23rd Ave. West, Seattle, Washington 98199; 41 Alexander St., Vancouver, B. C.

Empress, 1144 So. San Julian, Los Angeles, CA 90015 (also see reference 9).

Flotherchoc, One Design Specialties, Inc., 123 Tollgate Trail, Longwood, FL 32750.

Gresvig, Ray Cochrane, 187 Matadero Dr., Sunnyvale, CA 94086

Harishok, Warren Petree, Jr., 950 San Marcos Circle, Mountain View, CA 94040

Hauthaway, 640 Boston Post Road, Weston, MA 02193

High Performance Products Inc., Bldg. 56, Hingham Industrial Center, Hingham, MA 02043

Liffey Lify, Northern Wildwater Center, 4 Victoria St., Weatherby, Yorks, England.

Old Town Canoe Company, Old Town ME 04468

Peter Storm Limited (U. S. distributor), 292 South Compo Road, Westport, CN 06880

Stearns Manufacturing Co. Division St. at 30th, St. Cloud, MN 56301.

REFERENCES

1. Title 46, Code of Federal Regulations, subpart 25.25—Life Preservers and Other Lifesaving Equipment

2. Public Law 92-75, "Federal Boat Safety Act of 1971," 92nd Congress, Aug. 10, 1971

3. Federal Register, Vol. 36, No. 217, Nov. 10, 1971, page 21523; Interim Lifesaving Equipment for Boats (proposed 33 CFR 199)

4. Title 33, Code of Federal Regulations, section 2.10-5 (a) — Definitions (of Coast Guard jurisdiction)

5. 33 CFR 2.20—Navigable Waters of the United States; through 2.99—Waters Not Under Coast Guard Jurisdiction

6. 46 CFR 160—Lifesaving Equipment (specifications); see those subparts corresponding to the approval numbers listed in Exhibit 1.

7. John Sweet, *New Slalom Rules for 1971*; American Whitewater, Vol. XVI, No. 1, Spring, 1971; page 15; or, American Canoeist, Vol. 31, No. 1, Winter, 1971, page 20; Rule 9b

8. *About Life Jackets*. Stearns Manufacturing Co., St. Cloud, Minn. 56301, 15 pages, 25 cents

9. *The Flotation Jacket*, Yachting, Vol. 129, No. 4, April 1971, page 60. (A good survey of buoyant clothing, with brands and prices)

10. *Lifesaving Devices For Boats*, Consumer Reports, August, 1969, page 450, publ. by Consumers Union of U. S.

1. *Buoyant Lifesaving Devices*, U. S. Coast Guard (MMT-3) 400 Seventh St. S.W., Washington, D. C. (16 mimeographed pages of questions and answers with excellent information)

12. Stanley Miles, *Drowning*, British Medical Journal, vol. 3, Sept. 7, 1968, page 597

13. Gonzales, et al., Legal Medicine, Pathology, & Toxicology, 1054, page 483

14. J. K. Legemann, *Drowned Wearing Life Preserver*, Reader's Digest, Vol. 87, No. 519, July, 1965, pages 215-220

15. J. Sindelar and W. Harvest, *Souse Holes — The Ins and Outs*. American Whitewater, Vol. XVI, No. 1, Spring, 1971, page 5

16. W. C. Fields, from a lecture on temperance

17. Mark Fawcett, *Flotation Vest for Whitewater Boaters*, American Canoeist, Vol. 31, No. 4, Fall, 1971, page 19

18. John Bombay, *Safety as We See It*, American Whitewater, Vol. IX, No. 1, Summer, 1963, page 27, (life jackets)

"Optimum Lifejacket" Project Underway

ACA Safety Chairman Les Jones writes us that he is working on the design of a lifejacket which will best serve the needs of whitewater boaters AND be eligible for Coast Guard approval as a "buoyant device." However it would also meet (or exceed) the safety/flotation requirements for the other two C. G. categories of approval—the "buoyant vest" and the "life preserver." The development effort is already well under way, and a prototype has been constructed and is being tested and refined.

The basic concept is that sufficient flotation for approval under the minimum C. G. requirements (Buoyant Device) will be provided by a means that has already been used in other approved jackets—kapok sealed in vinyl packets. In Les' design, these packets will be fastened and sealed within the strong, airtight outer covering of the vest. This outer covering (to be made of vinyl-covered nylon or similar fabric) will have air valves into its several chambers, and thus the outer covering WILL BECOME A SERIES OF INFLATABLE CHAMBERS, each of which surrounds its inner sealed vinyl packet of kapok. With only the flotation provided by the kapok packets, the vest will qualify for C. G. approval as a "buoyant device." However when the chambers are inflated in addition, the buoyancy can be increased to as much as 60 lbs. The additional buoyancy will now have the "positive righting mo-

19. Harry Burlingame, *The Air-Breathing Kayakist*, Washington Foldboat Club Newsletter, October 1964; reprinted in *Safety as We See It*, American Whitewater, Vol. XI, No. 2, Autumn, 1965, page 25 (buoyancy measurements of jackets and wet suits)

20. For an account of a reversal which drowned four, victims and would-be rescuers alike, see Peter Whitney's *Safety Notes*, American Whitewater, Vol. XIII, No. 3, Winter 1967-1968, page 36

ment" and sufficient buoyancy to meet the C. G. requirements for the other categories, "buoyant vest" and "life preserver." (At present, however, the C. G. would not approve them as such because of the way this is achieved.)

Other design objectives are: perfect athletic fit, heavy zipper front closure, streamlining (for swimming) and side straps to hold the vest down (recommended but not required). The air chambers will be mouth-inflatable, and the valves will be handy enough that more air might even be added while swimming. There will be a minimum of five such chambers. A further design requirement is that the vest must withstand pull-apart forces of 250 to 300 lbs. (depending on classification) to make certain that the vest will withstand the tremendous turbulence of violent rapids. The total weight of the vest will be between $2\frac{3}{4}$ and $3\frac{3}{4}$ lbs., depending on the materials chosen and the size/classification of the vest.

Les writes that there are already three ACA crews working on this proj-

ect in different parts of the country, and that he would welcome any further help he can get in the way of constructive criticism, volunteer services, manufacturing know-how, etc. Some of his specific needs are: close-weave nylon or fiberglass fabric with vinyl or equivalent coating, and the most durable, reliable, and adaptable sealing techniques available for use in making the quirtight outer covering of the vests. He also needs some suitable air valves, zippers, glues and solvents, and volunteer manufacturing facilities, and would welcome any information on sources for these things.

Present plans are that "all patent rights will simply be copyrighted as the property of ACA and/or AWA so that progress can proceed unhindered by ownership and red tape." Les hopes for test models this year, and production models next year.

For complete details, see article in Vol. 32, No. 2 of **American Canoeist**, Journal of the American Canoe Association.

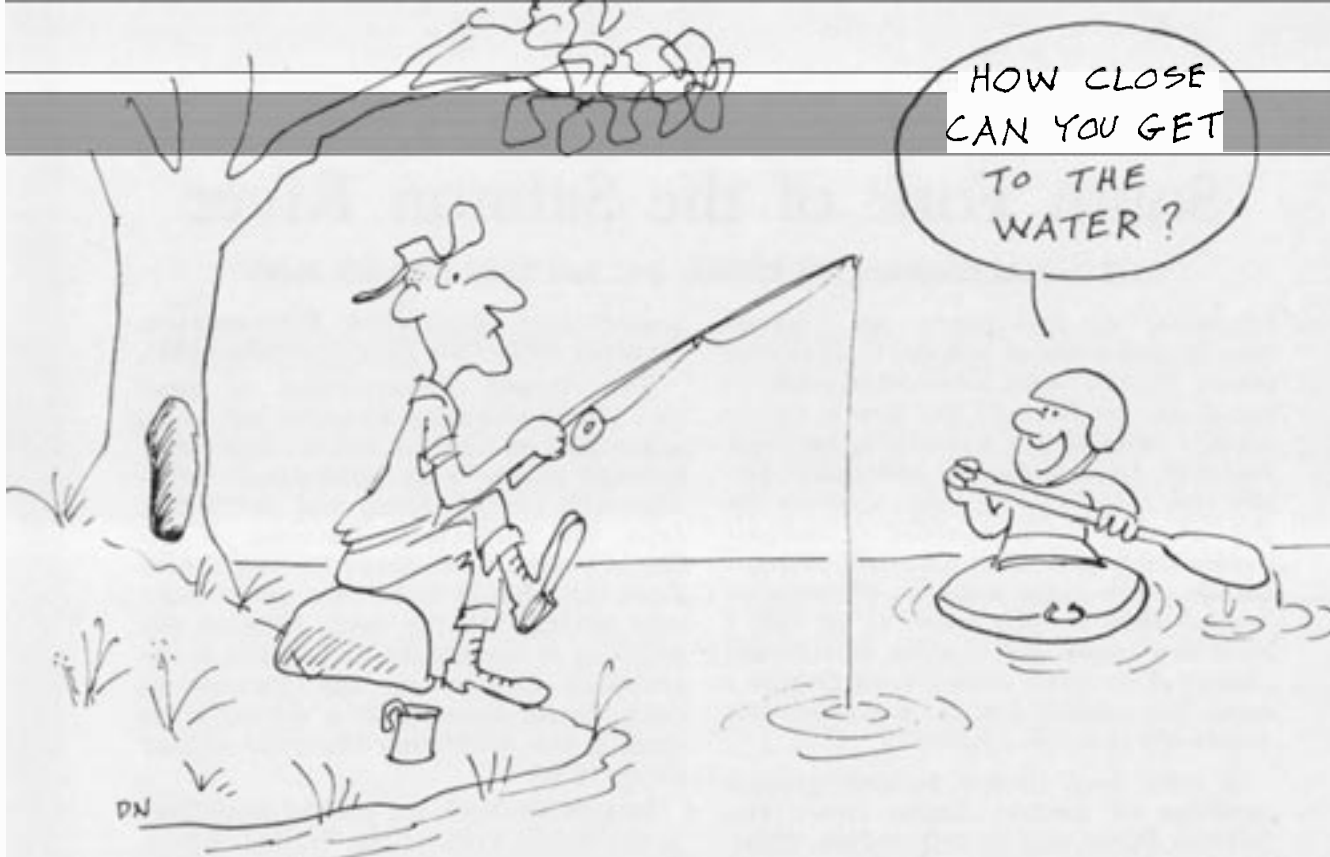
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JUST AS HAPPY AS IF HE HAD GOOD SENSE—Last year while paddling my C-1 on the long flat stretch of West Virginia's New River above the Gorge, I saw a mountaineer fishing on the bank in an area which was thought to be roadless. I assumed that the fisherman knew of an old road which came near the river and had driven to his fishing site. Hoping on a subsequent trip to use the same access to by-pass the nine miles of flat water, I paddled

to his side of the river to investigate. My question to him was, "How close can you get to the water along this section of the river?"

After asking me to repeat the question with a "Heh?" he answered, "Buddy, yer as close to the water as yer goina get in that thing!" I paddled on to catch my companions knowing that he was shaking his head over the lack of sense of us city folk. — Paul Davidson, Morgantown, W. Va.

FILMS AVAILABLE

Tuolumne River 1969: California downriver run, a fantastic whitewater challenge (Class IV-V), showcase of modern paddling technique. Filmed by John Googins and Jim Sindelar. Super 8mm, color, silent, 16 min. Rental fee \$3.50. Specify date wanted; write 30 days in advance to Sierra Club RTS, c/o Charles E. Smith, 1760 Walnut St., Apt. 203, Berkeley, CA 94709

USOC film: Whitewater, by Jon Fauer. Portrays in 16mm the thrill, excitement and pageantry of the U. S. Whitewater Team in slalom at the World Championships in Merano, Italy, June, 1971. With narration, 26 min. U. S. Olympic Committee, 37 Park Ave.,

New York, NY 10040.

The following four films are available free of charge from Tom Wilson, High Performance Products, Inc., 349 Lincoln St. Bldg. 56-H, Hingham, MA 02043. Phone (617) 749-5374, 5375, 5499.

Whitewater, by Jon Fauer. See description above.

1971 U. S. Whitewater Team, by Kemex Corp. 30-minute film for television. 16mm, color, with narration.

Kayaks, by Len Aitken. 16mm, color, sound (no narration), 13 min.

Merano 1971, by Sam Galpin. Super 8mm, color. Sequences of U. S. and top European competitors—excellent training film.

South Fork of the Salmon River

by J. Calvin Giddings, 904 Military Dr., Salt Lake City, UT 84108

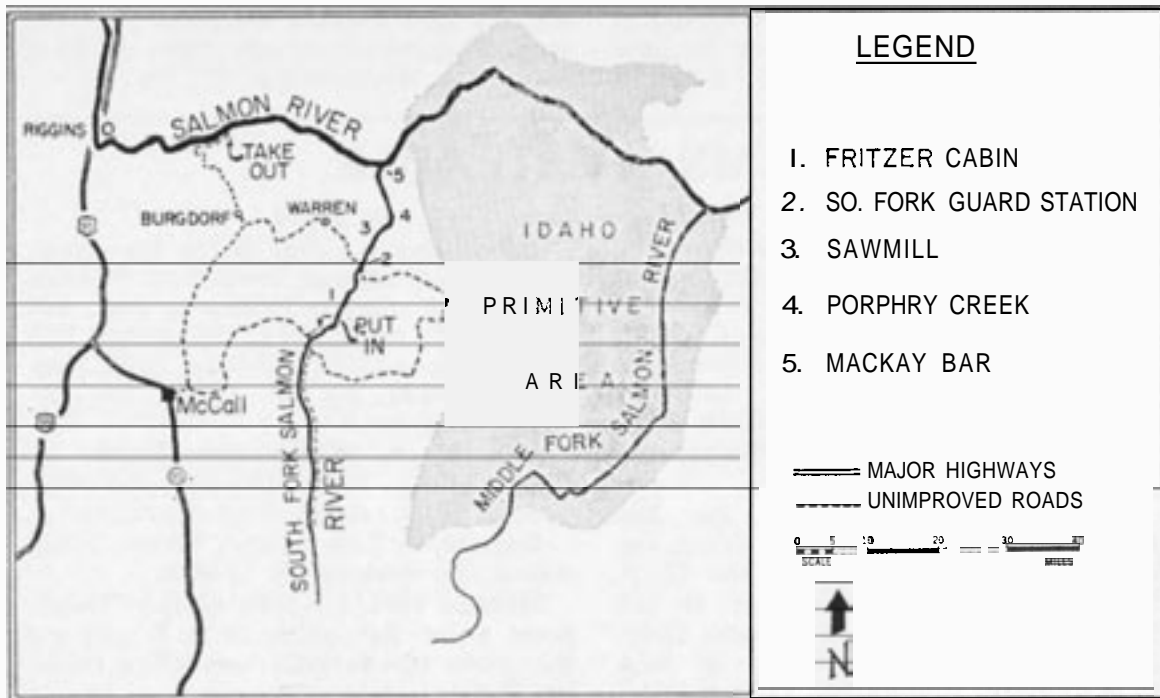
(Regarding the photography, Mr. Giddings says: "I *used* a Nikon *Nikonas* II all-weather camera. Perhaps many *whitewater enthusiasts* are already familiar *with* this camera, but for myself I *stumbled* onto it just before our South Fork trip. My enthusiasm is unbounded! Finally, after 15 years on the rivers, a camera that does not have to be swaddled in awkward waterproofing. Completely watertight, the camera *was* simply tucked under my life preserver *uncased*. Once in calm waters or an eddy I could *turn* around and in a few seconds snap pictures of the others coming down through a rapid. This explains why the bow of my boat occasionally shows in a picture.")

A mile deep in the twisted granite canyons of central Idaho flows the Salmon River and its tributaries, offering one of this nation's superb whitewater wilderness experiences. Eighty roadless miles of the main Salmon, "River of No Return," make this one of America's truly great wild rivers (see **American Whitewater**, Winter 1958). Even better known among whitewater enthusiasts is the Middle Fork of the Salmon, a classic among wilderness

waterways (**American Whitewater**, Summer 1958, Fall 1958, Summer 1968).

The rugged attractiveness of these two rivers and their canyons has lured expanding hordes of rafters and commercial guides with passengers, overcrowding campgrounds and detracting from the wilderness character of the Salmon area. Over three thousand now float the Middle Fork in a short summer season. On the main Salmon the problem of increasing raft traffic is aggravated further by the passage of noisy power boats. This is a busy river system, but altogether too good to stay away from.

In this context, we looked hopefully to the South Fork of the Salmon River. Next in size and length to the Middle Fork, the upper stretches of this eighty-mile tributary are followed by dirt road. Thirty-five miles from its junction with the main Salmon this glass-clear river enters a wilderness canyon, with roads and other traces of man's engineering thenceforth at a minimum. The river drops 1600 feet in this thirty-





J. Dewell avoids a rock in the South Fork of the Salmon. Photo by J. Calvin Giddings.

five miles, almost **50** feet per mile average like its Middle Fork sister. However unlike the Middle Fork, there is no commercial traffic. In fact, no traffic at all. Locals report that a few raft parties have started the river, but claim that "none have gotten through to the end with their equipment."

Indeed we feel we have uncovered a superb wilderness kayaking river, not suitable for rafts, not appropriate for commercial trips, and therefore not likely to become overcrowded for some time. It is well worth considering by expert kayak and canoe groups with a few extra days in the Salmon River area.

Our exploratory team was four boaters from Salt Lake City, including Roger Turnes in a C-1, Jim Byrne, J. Dewell and myself in kayaks. We be-

gan our trip at the road's end, three miles below the junction of the South Fork and the Secesh, on September **5, 1971**. Our trip took three leisurely days, in addition to one day used to paddle **27** miles out via the main Salmon, a nice bonus. The three days correspond very roughly to three major segments of the South Fork, which I now describe.

Upper stretch. Secesh to Southfork Guard Station (about **15** miles). This stretch begins rather modestly, but by mid-canyon (Fritzer Cabin on the Topo map) several challenging rapids which require scouting have been encountered. Below this are a few miles of easy rapids, a few more miles of very nice rock-garden rapids which can be "eddy scouted," an easy stretch in a more open canyon perhaps one mile

long, then three difficult rapids in a narrow canyon immediately above Elk Creek. The last of these ended in a falls with a 10-12-foot drop. The final segment from Elk Creek to the Southfork Guard Station is short and straightforward.

At the Southfork Guard Station a Road crosses the river, giving egress if desired. We recommend that boating parties start with the upper stretch to get a feel for the river before making an irrevocable commitment to the entire canyon. The rapids in this stretch are fairly typical: 100-200-yard-long gardens of large boulders, each having a 10 to 25-foot drop. Most are Class III-IV, but some rate higher. About seven major rapids, which we judge to be IV or above, occupy this stretch. A few rapids are severe enough that accidents are far from inconceivable. In a large rapid near the Fritzer cabin, Roger Turnes, a powerful boater, had his bow pulled sideways in the current because of an unbalanced load of camp gear, then slammed into a rock. Roger was pinned against this rock for some time, his boat crushing in around him, before he could pull himself up on the rock. After several hours' work with a

fiber-glass kit, and after dubbing the rapid "Red-Horse Rapid" after Roger's red C-1, we were able to proceed down the river using only duct-tape repairs thereafter.

Middle stretch. From Southfork ranger station to Porphyry ("poor-furry") Creek (about 10 miles). A Forest Service train follows both this and the lower stretch of river, although we observed no traffic on it. The stretch begins easily, following the road about one mile. It then drops into a canyon, presenting many nice rapids in the next five miles. Two of these are rather large and should be scouted.

At the end of this segment the canyon widens and a large but nonoperating sawmill appears on the left bank. The map shows this as the McDowell Ranch. A rather steep road comes in at this point should access be needed. According to the caretaker, the road begins near the Warren Ranger Station, some ten miles away and three thousand feet above.

Immediately below the sawmill we encountered one of the most exhilarating rapids on the river; a fast, three-segment chute near the right hand shore dropping 10-12 feet in about 100

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feet. Numerous other rapids appeared before we reached Porphyry Creek, including three of major status.

Lower stretch. From Porphyry Creek to Mackay Bar on the main Salmon (about 10 miles). This is the narrowest canyon and the most exciting white-water. Beginning about one mile below Porphyry Creek a drop of 400 feet is spread rather continuously over six miles, being an admixture of simple and complex rapids, fast current and occasional pools. There are roughly nine major rapids in this stretch, two of them, near the lower end, containing falls. The falls are only a few blocks apart and can be scouted together from a trail on the right side (watch out for rattlesnakes!). Both falls are preceded by rapids and the scouting serves to get one near the lip so that lining is minimal. The lower falls resembles more a steep cascade, but is known in that country as "the Falls." It could perhaps be run (Class V or VI), but the risks of cracking up so far from the nearest road would make such a venture seem rather foolhardy.

Below this the canyon opens up, and one encounters only moderate rapids in the three remaining miles to the main Salmon. At this junction some supplies and beer can be obtained by paddling or hiking a few blocks up the main Salmon to Mackay Bar.

The rapids of the South Fork are boulder gardens, probably too intricate for most rafters except at high water. The falls would require lining or portaging at most water levels, an inconvenience too great for the steady thrill-ride demanded by most commercial passengers. Yet all of the 22 or so major rapids can be run by kayak or decked canoe, excepting, of course, the three falls.

Our trip was late in the summer, with a water level probably somewhat be-

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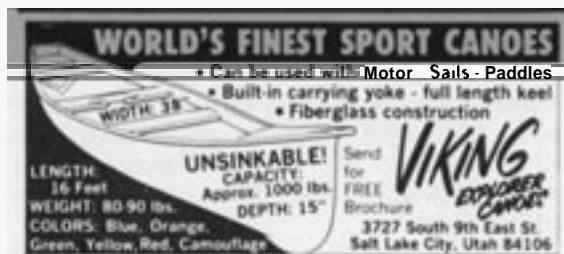
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low optimum, estimated at 500 cfs near the top increasing to 1000 cfs as the main Salmon was approached. Through June and early July this river might be carrying from 2000 to 20,000 cfs, and should be approached with great caution. Later in the summer it is a white-water dream, a thirty-five-mile stretch of wilderness waterway with few man-made intrusions.

Ironically the South Fork, where one can escape the growing crowds of the main Salmon and its Middle Fork, is outside the official primitive areas which embrace major parts of the other two. It is predictably suffering encroachments—the most obvious to us being a clanking bulldozer cutting a road above the east bank of the rugged upper stretch. Prospects are rather dim that without protection the South Fork can fill its unique whitewater role in the Salmon River area—that of a short and testy wilderness river for kayaks only. In this role it would admirably compliment the other Salmon waterways, and with them would provide in a single region an unsurpassed marriage of rugged wilderness and white-water challenge.



TRAINING FOR THE OLYMPICS BEHIND THE IRON CURTAIN

by Josef Sedivec, P. O. Box 369, La Mirada, CA 90638

Whitewater canoeing has been dominated for a long time by Czechoslovakia and East Germany. Only in the last few years has the West German team been able to compete successfully with these two rivals. From time to time several good individuals of other Western countries were able to reach for the highest places at summit competitions. This year, for the first time in history, whitewater slalom is going to be included in the Olympic Games Program. U. S. paddlers trying to make the Olympic Team might be wondering what kind of training canoeists from behind the Iron Curtain will have. An even wider community of U. S. paddlers may possibly be interested in what makes these guys so good. As an eight-year member of the Czechoslovakian National Whitewater Team, I can deliver some authentic information.

Whitewater slalom is a comparatively young sport. Canoeing in its basic form has provided transportation to people for ages, but setting up gates above a rapid and paddling through them just for fun didn't start until shortly before the Second World War. It started at the same time in Germany and Czechoslovakia. In both countries cruising — pleasure canoeing — had already been popular for a couple of decades. It then provided the base for a new sport called Water Slalom (**Wasser** Slalom in Germany). After World War II (when Czechoslovakia and East Germany were added to the Russian hemisphere), races were regularly held in this sport. It spread then in Central Europe, especially in mountainous countries with plenty of fast-running rivers. Nations like Austria, Switzerland, France, Italy and Yugoslavia started to contribute to whitewater canoeing.

It is well known in the West that sport, as a political tool, is subsidized in Communist countries. But the ex-

tent of this subsidy varies with the publicity of the particular sport. It pays more to support a well-known sport such as soccer, ice hockey, basketball, athletics, etc. A small, unknown sport such as whitewater slalom has less favorable conditions. The general public is the same as in the U. S.: many people, when asked, even interchange canoeing with rowing (sounds terrible to me).

To be more specific about this support, I will give an idea about the training conditions an Olympic contender from behind the Iron Curtain can expect. First of all it does not cost a penny to be a whitewater canoeist. In a good club one even gets training dress, including tennis shoes. The beginner, unless he is very promising, might need to build his own boat, but usually he can borrow club boats for training. When one gets through the first steps and gains some racing qualifications, he is supplied with a free boat of his own. Those paddlers who prefer to build their own boats are given free material and use of the club workshop.

Large companies have special funds to organize sport clubs that carry the company name. For example, for my last couple of years in Czechoslovakia I was a member of **MOTORLET** Canoe Club, sponsored by the huge aerospace company which manufactures famous Russian MIG fighter planes. It does not cost anything to go for a race. Transportation, accommodation and sometimes even money for food are provided by the club. Transportation is usually taken care of by a big bus with a trailer carrying about twenty boats. There is an entry fee at every race but it is also paid by your club. Members of a national team and hopefuls with high qualifications have even more privileges.

There are three types of canoeists in

Czechoslovakia: students, working people and servicemen or active duty military personnel. The last group has the best support and training conditions. We used to call them "professionals" in our boaters' slang. The same name was used for East German whitewater canoeists. It was nearly perfectly right, because they paddle several hours almost every day of the year. Most of them are in army service and members of military canoe clubs.

In Czechoslovakia members of a national team who have regular employment are entitled to a certain amount of paid leave of absence from their work. It ranges from a couple of hours a week to 10-15 hours a week in full season. It means, in effect, that one can leave his job earlier to go for training while his wages remain the same. Besides these allowances there are usually three to five training camps per year, generally lasting one week. The first one is the skiing week in winter before the season even starts. Remaining weeks are scheduled prior to top competitions. As I mentioned before, whitewater canoeing has not been supported as much as other, more popular sports because of its small publicity. Still the support far exceeds any dreams an American canoeist might have about better training conditions. After my experience here in the United States I can sincerely say that an American whitewater Olympic contender does not need to be a bit worried about the tough amateur standards set up by Sir Avery Brundage. It looks to me as though an American canoeist must be wealthy to be able to try for the highest places in international competition. It is not the equipment that is expensive but the time needed for training to match the paddlers from Eastern Europe. In today's tough competition even the most skillful paddler has no chance without a tremendous amount of hard training.

I would like to describe the basic framework of the hard training done by members of the National Team living in Prague, Czechoslovakia. There is quite a severe winter which distinctly separates canoeing seasons. Early birds ("dark horses") start to paddle by the

end of February and almost everybody else in March. The first races are in April. By the end of October, paddling season is over, but physical training goes on all year round. We always had evening gymnasium training sessions available four times a week. We usually attended two or three of them. They lasted two to three hours with the following program: approximately $\frac{1}{2}$ hour of general body warmup; then the people were split up into three groups of approximately the same strength for basketball. If there were more than six or seven per group, four groups were formed. Two groups played basketball together and the third exercised in another room on gymnastic equipment. Weight lifting was also available. Besides that there were special weight-lifting sessions not lasting more than one hour. The groups had ten-minute intervals between playing basketball and exercising. With three groups it gave 20 minutes of basketball and ten minutes of exercising. There was a race held on the exercising equipment every session. The course included all the equipment — jumping, climbing rope, etc. The duration was two to four minutes and one was really dead after racing full-speed through such a sequence. The results of all members of the team were then posted. Basketball nicely builds up the heart, respiratory and circulatory systems. It was used for a change quite often even in full season. Every member of the team also trained in private according to his taste and will. All of us enjoyed skiing and skied regularly on week ends. A one-week ski training camp was always held in February. Emphasis was given to cross-country skiing which builds more strength in the hands and upper part of the body than downhill skiing, but we did both.

Paddling season started with slow conditioning, usually paddling a longer distance (5-7 miles per session) on flat water. Everybody was training individually on the water according to his own private plans and objectives. Slow paddling through the gates was added the second week. In the first weeks of the season about three or four sessions per week were most usual. In April

training was intensified. Most of the top paddlers were not specialists and trained both slalom and downriver. The interval method of training was used to a large extent (maximum power with rest periods at $\frac{1}{2}$ - $\frac{3}{4}$ power). To avoid having the training become a tiring routine, the following types of sessions were most commonly used:

1. Paddling through the slalom course using only $\frac{3}{4}$ power.

2. Practicing groups of 3-6 gates, with time measured. The duration was 30-90 seconds with intervals for rest generally two to three minutes. Each set was paddled three to five times.

3. In a downriver boat, 20-40 minutes of maximum-power training on a course of known length. Time was measured and results compared for an indication of condition during the season.

4. Free paddling through the gates for one to two hours.

5. Slalom on whitewater, training preferably with gates on a rapid one can get back up without leaving the boat.

6. Intervals of 30-90 seconds of maximum speed in a downriver boat with two to three minutes of free paddling. Done for 20-30 minutes.

7. Paddling a few miles of whitewater in a slalom boat with emphasis on slalom technique: turning, crossing, eddies, upstream paddling, etc.

8. Timed short distances (90-120 seconds) on a flatwater course of known length in a downriver boat, returning to the starting line at $\frac{3}{4}$ power (time about three minutes), repeated five to ten times. The improvement as the season goes on is noted. (If the time between consecutive runs increases substantially, it is a sign of overtraining and this type of training is abandoned.)

10. Ten to twenty miles of whitewater paddling in a downriver boat. Short maximum-power paddling can be practiced, especially in the rapids.

The above were arranged in a typical sequence; this was of course randomly varied to support a long-term plan. Every day there were more such sessions. If there was one-phase training, a typical example would be as follows: coming to the club in the afternoon and paddling for one to two hours

freely through the slalom gates. Resting for an hour or playing basketball. Then paddling some of the timed downriver training sessions. The net time spent in the boat every training day was two to four hours. Before important races, two-phase training was often used. Usually it was early morning and evening, or lunch time and evening training. To my surprise my paddling friends from Czechoslovakia told me that last year before the World Championships they trained in a three-phase-per-day mode for several weeks. I hope it will not change this year into four-phase training, adding some mid-night session! At the special one-to-two-week training camps, one never spent more than four to five hours in the boat per day. It was usually divided into two or three phases with ball games in between.

In a year we paddled some 500-700 miles of whitewater and spent countless hours in a slalom boat (most of it on flat water, not having any other available). There is a saying that the best training is a race. Every year we paddled in 15-20 competitions, most of which had both slalom and downriver.

I can imagine that this year much more money will be spent on the support of whitewater Olympic teams from Czechoslovakia and East Germany. Olympic results are more highly praised than World Championships in Eastern Europe. The Czechoslovakian team had already had a full-week ski training camp before Christmas and another in February. If this article gives potential paddlers for the U. S. Olympic Team an idea of how much training they should plan to do this year, it has met its purpose.

(Josef and Jirina Sedivec left Czechoslovakia in the fall of 1968 after a visit from the Russian Army. They are holders of one gold and three silver medals from World Championships they have paddled. Last year they paddled at Merano on the U. S. Team and placed fourth, just behind three boats from Czechoslovakia. Joe says that they had some 10-20 per cent of the training they used to have back in Czechoslovakia. —ED.)



OLYMPIC REPORT

by Jay Evans, U. S. Olympic Coach

It might be worthwhile for those of us who are rushing headlong toward the Olympics next August to stop for a moment to consider where we are heading and why.

Much was accomplished in 1971. Thirty-four Americans competed at the World Championships in Italy last June, and an extraordinary 20-minute 16mm film was taken of this event which is being distributed by High Performance Products of Hingham, Mass. A training squad was chosen from America's top boaters who have entered a year long training program. They have been issued a U. S. Olympic Whitewater Training Handbook; they are exchanging training films this winter; and, more recently, Karl Knapp's very helpful 'Unified Training System' has been made available through the Ledyard Canoe Club. Regional training centers have been established in the greater Washington, D. C. area (May McEwan); Pennsylvania (Tom Southworth); central New England (Guy Newhall); northern New England (Jay Evans); and the Pacific Coast (Tom Johnson). Local regional trials have been assigned and the final Olympic Trials are scheduled for July 27-30 at the Savage River in Maryland. And, lastly, a much needed computerized national whitewater ranking system has been devised.

Thus we are all moving inexorably forward with increasing momentum toward some intangible — maybe even mystical goal called THE OLYMPICS! That name has a magic effect on most Americans. There is something clean, noble, and uplifting and almost unattainable about it. None of us, however, in whitewater slalom has ever travelled this road before. It would be well to give this historic centuries old movement some thought and study.

One hears and reads a lot about the Olympics in the media; about gold fever, about how many gold medals a

country is likely to win, and about politics. But, there seems to be a distinct dichotomy here between what appears in the nation's media, and what the actual Olympic Creed suggests.

First of all, the Olympics are supposed to be beyond politics. By communicating with people from different nations around the world through sport a spirit of international brotherhood and good will can be established. A nation is not supposed to be concerned with the number of gold medals its athletes can win. According to the Olympic Creed, "The most important thing in the Olympic Games is not to win but to take part. The essential thing is not to have conquered but to have fought well."

Baron De Coubertin, whose vision and energy re-established the modern Olympics, felt that the mingling of cultures by gathering people together in friendly amateur sport would help to bring out the best in people and thus make this a better world. Don Scholander, a 4 gold medalist, goes even further when he states that the Olympics may be man's last chance; the only place where the people of the world can get together regardless of creed, race or ideology and make an effort to understand each other. I'll buy that!

To say that the purpose of the Olympic Whitewater Canoe Slalom next August in Augsburg is to determine the world champion is sheer nonsense. Our sport already has a world championship regatta every other year where all 20 events are up for grabs. In the Olympics there is no wildwater racing at all (which cuts out 10 events), and in slalom there is no C-2M class or team races (which cut out 6 more events). This leaves an emasculated version of whitewater sport.

A person becomes — technically — a champion of the world when he wins over all comers in open and fair competition. The only thing it proves, how-

ever, is that on a given day, through his own native skill, and the quality of his training and coaching he becomes the standard by which all other boaters **present** are judged. We pride ourselves in this country in holding the heavy-weight boxing championship of the world. Is this person really the best in the world or might there be many others in any number of countries who, if properly coached and trained, could beat him? The same could be said for the so-called World Series in baseball.

Therefore, it follows that the boater with the most native skill who has been best trained and best coached **and** is the most familiar with the race course at Augsburg is the most likely to win a medal in whitewater slalom.

I further submit that if a boater has all the aforementioned qualities and wins a medal he can still be a failure at the Olympics. He will have missed the main point of the Olympics if he hasn't worked just as hard to make friends and try to understand people from other nations.

Therefore, as coach, I urge anyone who is giving serious thought about making the Olympic Team to adhere to the following Olympic training outline:

1. Learn at least one other language than your native tongue. If you are already competent in French (for example), then try German, and vice versa. Then you should make a distinct commitment to meet and talk with each and every boater from every country that sends a white-water team. If you already know several foreign boaters then seek out new faces and make new friends. Since this is the main point of the Olympics wouldn't it be realistic to have the passing of a foreign language test as a prerequisite for making the team?
2. Between now and August 28 try as hard as you can athletically to do as well as you can. As coach, I'll help wherever I can, and we'll let the winning of medals take care of itself.

Let's be real pioneers and follow the true Olympic Spirit in its true perspective.

TRAINING MANUAL

Last summer Steve Ruhle, Linda Hibbard and Randy Spencer spent a couple of weeks training with Coach Karel Knap at Grevenbroich, West Germany. Knap had recently migrated from Czechoslovakia to German and was busy training whitewater paddlers. He brought with him a training manual, published in Czech, which had been compiled in 1969 by a team of authors in Prague headed by Knap..

Before the three Americans left Grevenbroich, Karel Knap, in the true spirit of international friendship, graciously gave them his copy of the manual to take back to the United States. We learned later that it was Knap's only copy. The Ledyard Canoe Club of Dartmouth was then given permission by Knap to have parts of the manual translated into English for the benefit of American boaters.

The **Unified Training System**, as the manual is called, divides the calendar year into various training periods and gives detailed suggestions on proper training for each period. It also includes sections on nourishment, fatigue, control of physical condition, prevention of injury, difference between slalom and wildwater preparation, advice to women, as well as a series of performance tests.

The Ledyard Canoe Club, at its own expense, subsidized the translation and has printed up a limited number of copies and will prove them **at** cost to those paddlers who are seriously interested in training for whitewater competition. It should also prove invaluable to coaches. The translation itself (50 per cent of the cost), plus the costs of mimeo, printing of covers, binding, and providing mailing envelopes and stamps came out to \$5.00 per manual.

If you are interested in securing a copy, please send five bucks to Steve Ruhle, c/o Ledyard Canoe Club, Robinson Hall, Hanover, NH 03755. Steve will ship out your copy to you—as long as they last. Checks may be made payable to Ledyard Canoe Club.



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1972 RACE SCHEDULE

To avoid duplicating the service offered by **Kayak and Canoe**, the racing information center located in Hingham, Mass., we are not printing the entire race schedule for this year. For a mere quarter, this is what you get: 1) a 1972 Racing Schedule for the entire U. S. and parts of Canada and including several important international races (it will also include some non-competitive events such as clean-up campaigns, conservation projects, etc.). 2) A newsletter (monthly during the busy season, otherwise once every two or three months). 3) Application blanks for races whose organizers are taking advantage of K & C's mailing service. For those who did not realize this service was available, for a fixed fee K & C will send application blanks for the race specified to everyone on the K & C subscription list plus those whose names are supplied by the race organizer. Further information may be obtained by writing to:

Kayak and Canoe
Hingham Industrial Center,
Bldg. 56
Hingham, MA 02043

Also available through K & C is the **1972 Whitewater Racing Program**, edited by Tom Wilson, which contains not only a complete listing of U. S., Canadian and International races, but also a wealth of information about whitewater racing in general as well as many beautiful action photos. Individual copies are \$1 plus 25¢ for postage and handling. Since the **Program** is valuable for race spectators who "want to know what's going on," race organizers may wish to obtain larger quantities for sale at their races. For particulars, write to **1972 Whitewater Racing Program** at the above address.

We are including a schedule of the April races as well as the regional and national championships to fill the gap for those who may have been depending on **American Whitewater** for race information.

Date; Race; Type; Location; Sponsor

April

1. 2 Farmington (SL), Westfield (WW); George Thomas, 24 Barnard Dr., Oakland, NJ 07436.
- 2 Stoney Creek; WW; Roger Hager, RD 5, Box 256, Johnston, PA 15905.
- 3 Red Moshannon; WW; Dr. John Sweet, 118 S. Buckout St., State College, PA 16801.
- 8 Quadrathlon (ski, run, kayak and swim); Vancouver, B. C.; CANOE BC, Brian Creer, 4032 W. 37th St., Vancouver, R. C., Canada.
- 9 Iishacoauillas: SL (training course also available during preceding week); Robert Martin, Lock Box 179, Rellefonte, PA 16823.
- 15, 16 Tarrifville; SL; Guy Kewhall, 99 Dudley Rd., Cochituate, MA 01760.
- 15, 16 Brandywine; SL; Ed Seuratt, 3206 Tanyo Dr., Delwyn, Wilmington, DL 19803.
- 22 Quaboag Novice Slalom; SL; West Warren, MA; David Hietke, Brown Outing Club, 7 Pittman St., Providence, RI 02912.
- 22, 23 Cedar R. Slalom & Downriver; SL, WW; Maple Valley, WA; LKCC, Dwight Gibb, Lakeside School, 1400 4th Ave. SE, Seattle, WA 98148.
- 22, 23 Loyalsock; SL; R. Martin, Lock Box 179, Rellefonte, PA 16823.
- 22, 23 Otowi Bridge Slalom: Beginners SL; Los Alamos, NM; Laverne Pollat, 74 Future Dr., Los Alamos, NM 87544.
- 22, 23 Sugarloaf Canoeski Weekend; WW, WW (Open); Baxter, Gen. Mgr. Sugarloaf Mt., Kingsfield, ME 04947.
- 29, 30 Peshtigo Wildwater Race: MIDWEST DIVISION WILDWATER CHAMPIONSHIPS, Athelstone, WI. Rruce Campbell, Univ. of Chicago Whitewater Club, 2445 E. 72nd St., Chicago, IL 60649.
- 29, 30 Savage R.: NATIONAL CANOE SLALOM CHAMPIONSHIPS; Joe Monahan, Box 1162, Cumberland MD 21502.
- 29, 30 Kernville Race: SL, WW; Kern R.; Tom Johnson, Box 675, Kernville, CA 93239.
- 29, 30 Rocky Mountain School Warm-Up; SL; Roser Paris, Colorado Rocky Mountain School, Carlondale, CO 81623.
- 29, 30 Kenduskeag Canoe Race: STATE OF MAINE CANOE CHAMPIONSHIP; SL, SL (Open), WW, WW (Open); Dale Theriault, Bangor Recreation Dept., City Hall, Bangor, ME 04401.
- OR: EKCA, Alex Lane, 874 Sunnyside Dr., Eugene, OR 94702.

May

- 6, 7 Mad R. Slalom: NEW ENGLAND SLALOM CHAMPIONSHIPS; Campton, SH; John Wilson, Lancaster, NH 03584.
- 7 Youghiogheny R.; NATIONAL CANOE WILDWATER CHAMPIONSHIPS; Dr. P. A. Liehman, Phila. Canoe Club, 4900 Ridge Ave., Philadelphia, PA 19128.
- 13, 14 West R.; EASTERS SLALOM CHAMPIONSHIPS; SL, WW; Wm. Heinzerling, Brogg Hill Rd., Waisfield, VT 05673.
- 20, 21 ~~Wash~~ R.; NATIONAL KAYAK SLALOM CHAMPIONSHIPS (tentative); White Lake, WI; Hooper's Outing Club, U. W. Memorial Union, Madison, WI 53706.
- 28 ~~Wolf~~ R.; NATIONAL OPEN CANOE WHITEWATER Championships; Lilly, WI; Wolf R. Canoe Club, George Stead, Jr., Wolf River Lodge, White Lake, MI 48491.

August

- 19, 20 Dead R. Races; EASTERS OPEN CANOE WHITEWATER CHAMPIONSHIPS; Dave Luce, Sugarloaf Mt., Kingfield, ME 04947.
- See also Olympic Report, p. 35.

1971 RACE RESULTS IV

Westfield River Wildwater Race—April 4, 1971—Westfield River, Massachusetts

Expert C-2 Open

| |
|-------------------|
| 1. Smith/Wiggin |
| 2. Hixson/O'Brien |
| 3. Jones/Myers |

1:07:58
1:09:13
1:09:57

1. T. Foster
2. H. Mason
3. F. Perkins

Expert C-1 Open

42:13
44:28
44:34

Expert C-1 Covered

1. D. Joffray 34:10
2. B. Eaton 37:22
3. J. Lehman 41:50

Novice K-1

1. K. Pincince 47:20
2. W. Siegfried 48:16
3. A. Levine 50:40

Expert K-1

1. D. Nutt 28:34
2. C. Townsend 31:08
3. S. Campbell 32:56

Savage River Slalom—September 4-5, 1971—Grade III

Expert

C-1

1. J. Sweet 436
2. S. Morrison 439
3. J. McEwan 472

K-1

1. S. Campbell 383
2. R. Mason 452
3. T. McEwan 494

K-IW

1. L. Hibbard 513
2. P. Nutt 528
3. L. Holcombe 580

C-2

| |
|-----------------------|
| 1. Hager/Endicott |
| 2. Southworth/Bechdel |
| 3. Benham/Benham |

463

| |
|-----|
| 519 |
| 541 |

C-2M

| |
|----------------------|
| 1. Holcombe/Holcombe |
| 2. Chladek/Chladek |
| 3. Sweet/Shuster |

| |
|-----|
| 674 |
| 750 |
| 807 |

K-1 Team

| |
|----------------------------|
| 1. Alexander/Nelson/Fisher |
| 2. Campbell/Bechdel/McEwan |
| 3. Martin/Martin/Schmitt |

| |
|------|
| 973 |
| 1006 |
| 1222 |

K-IW Team

| |
|----------------------------|
| 1. Nutt/Nutt/Hibbard |
| 2. Holcombe/Ashton/Goodwin |
| 3. Clark/Henry/Martin |

| |
|------|
| 1426 |
| 1576 |
| 2840 |

C-1 Team

| |
|----------------------------|
| 1. Brummond/Powers/Nichols |
| 2. Lenkerd/McEwan/Douglas |
| 3. Taylor/Gertler/Holcombe |

| |
|------|
| 1406 |
| 1557 |
| 2840 |

Intermediate Class

C-1

1. J. Looker 485
2. C. Walbridge 675
3. K. Titley 862

K-1

1. D. Morin No
2. T. Annable Times
3. D. Ackerman Listed

K-IW

1. C. Martin 640
2. M. McEwan 731
3. B. Henry 922

C-2M

| |
|--------------------|
| 1. Brame/Feldman |
| 2. Yeisley/Yeisley |
| 3. Hull/Hull |

| |
|-----|
| 499 |
| 685 |
| 761 |

Youghiogheny Slalom—September 11-12—29 gates, Class 2-3

C-1

1. T. Irwin 298.1
2. D. Kurtz 324.3
3. J. Holcombe 327.3

K-1

1. J. Fisher 254.6
2. S. Schmitt 301.0
3. T. McEwan 312.7

K-IW

1. L. Holcombe 306.5
2. C. Goodwin 376.5
3. L. Ashton 478.3

C-2

1. Burton/Southworth
2. Benham/Benham
3. Draper/Rogachenko

| |
|-------|
| 333.8 |
| 341.3 |
| 464.7 |

C-2M

| |
|----------------------------|
| 1. N. Holcombe/B. Holcombe |
| 2. Yearick/L. Holcombe |
| 3. Clark/Irwin |

| |
|-------|
| 397.4 |
| 492.6 |
| 517.2 |

Last Ditch Slalom—October 10, 1971—10 gates, Class III

C-1

1. S. Morrison 171.6
2. A. Button 172.4
3. B. Weber 279.4

K-1

1. B. Campbell
2. S. Rock
3. G. Kosowski

| |
|-------|
| 177.1 |
| 201.9 |
| 331.8 |

C-2

| |
|---------------------------|
| 1. Morrison/Rice |
| 2. Weber/Campbell |
| 3. Button/Wonson ((C-2M)) |

| |
|-------|
| 222.2 |
| 251.6 |
| 275.1 |

Note: It has been suggested that competitors decide whether to use either formal or nickname and stick to that name on all entry forms to facilitate identification; consistency in the use of names is especially important to ACAA effort in computing paddler rankings.

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| C-1 | (2 bags) | 4.5 lbs. | \$12.00 |
| C-2 | (3 bags) | 5.5 lbs. | \$15.50 |
| C-2 | (center bag) | 3.2 lbs. | \$ 9.60 |

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PRESIDENT'S SOAP BOX

By Ed Alexander, President, AWA Board of Directors

Many of our members and friends who have at one time or another paddled, rafted or in many other ways enjoyed the beautiful scenery of the Youghiogeny River in southwestern Pennsylvania, have been impressed, as I have, by the realization that the small town of Chiopyle, the hub of whitewater activities in this area, appears fully committed to our sport.

At the Ohiopyle State Park the visitor's attention is drawn to the lookout over the falls and to the public launching site below it where thousands and thousands of potential and actual whitewater enthusiasts are starting their journey by raft, kayak or canoe under the guidance of the various commercial outfitters in this area. From spring through fall four or more professional outfitters run daily drips on this river. Whitewater clubs schedule exciting cruises on the various sections of the "Yough," as the river is referred to by the initiated, depending on the proficiency of the respective groups. You may also find groups of individuals selecting sections of their own preference.

While visiting Ohiopyle State Park and the public launching site your eyes are drawn to the various park signs. One of them has impressed me especially, and I am sure you will agree with its importance and challenge to our affiliation. It reads:

"DANGER — WILD WATER

1—INNERTUBES AND AIR MATTRESSES ARE PROHIBITED

2—INFLATABLE CRAFT ~~MUST~~ HAVE AT LEAST TWO SEPARATE AIR COMPARTMENTS

3—ALL BOATERS MUST WEAR APPROVED LIFE JACKETS

4—BOATING MUST BE DONE IN ACCORDANCE WITH THE AMERICAN WHITEWATER AFFILIATION SAFETY CODE"

The importance of our organization's activities thus appears to be widely accepted, and it behooves us to maintain a functional safety code at all times. We have many suggestions on file regarding the updating of our present code, and I take this opportunity to ask those who have submitted their suggestions to further serve on the safety committee in order to fully establish the necessary amendments to update our proven and recognized SAFETY CODE. Those who have submitted their recommendations as well as those who have new contributions to make, please contact our Executive Director, James Sindelar, under whose direction the safety committee is being reactivated.

I am pleased to announce to our membership that Jim Sindelar has agreed to assume the position of Acting Executive Director until such time that a new board will have been elected. That new board will then act to make its own appointment or recommendations. With the resignation of Vice-president John Bombay, we were faced with the requirement of a replacement, and we are more than fortunate in having Oz Hawksley agree to assume that position.

American WHITEWATER



A nominating committee consisting of Oz Hawksley, George Larsen, Jim Sindelar and myself are presently accepting the names of candidates for the board of directors and for appointments to standing committees. It is our desire and aim to present to the membership the nominated candidates in the summer issue (Vol. XVII, No. 2) of our journal for election. These candidates, we hope, will be known to their "constituents" for what they have done in the past rather than the fact that their names are well known. Nominations will be accepted up to April 30, 1972.

I should like to take this opportunity to thank Iris and Jim Sindelar, George Larsen, Charles Smith, Henri Eble and Deacon Kiehm for their unselfish, continued and constructive work in and on behalf of AWA. My appreciation is also extended to those who have otherwise contributed and those who have offered their help and willingness to serve in the administration of our affiliation. I humbly accept your kind and enthusiastic offer.



FROM THE EDITOR

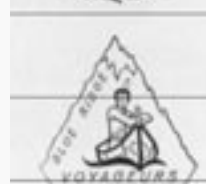
Readers will note that a major portion of this issue is devoted to Carl Trost's article on lifejackets. We felt that this was justified, not only because the subject should be of interest to every paddler (since lifejackets are basic to safe paddling, especially in heavy spring water) and because of the value of some of the information to competitors, but also because of the importance of being knowledgeable in the subject at this particular time. Some readers had perhaps not been aware of the recent legis-

lative developments regarding lifejackets for paddlers (see p. 11) and the possibility of Coast Guard-approved lifejackets being required for whitewater boaters. We are very grateful to Carl for bringing to AWA's attention the hearings which were held last December in time for us to alert our membership to the proceedings (via letters to Affiliate Representatives) and solicit their reactions. We wish to thank all who responded, especially Bob Harrigan, AWA Director, who apparently was the only representative of paddle boaters who testified at the hearings, and the dedicated group of Colorado boaters who bombarded the legislative committee with fifty letters! Your enthusiastic participation was vital since a bill of such import to the paddling community should by all means take into account the needs of the people whom it will affect.

American Whitewater would like names and addresses of government agencies, legislators and other individuals who should be concerned with updated, more meaningful lifejacket regulations. Send to the Circulation Manager, P. O. Box 1584, San Bruno, CA 94066 and copies of this issue will be sent to them. * * *

Racing Editor: Until a new racing editor has been recruited, please send all racing material to the Editor, 264 East Side Dr., Concord, NH 03301.

Watch **Sports Illustrated** for Dr. Walt Blackadar's account of a really hairy trip on the Alsek River. He had quite an opportunity to practice all those techniques he described so well in his recent article "Hair" (American Whitewater, Vol. 16, No. 4, Winter, 1971).



AWA Affiliates

CALIFORNIA

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Tom Johnson
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YMCA Whitewater Club
Gary Gray
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Stockton, Calif. 95202
Feather River Kayak Club
Mike Schneller
1773 Broadway Street
Marysville, Calif. 95901
Sierra Club
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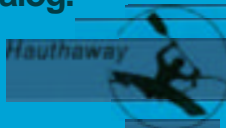
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