

American

WHITE WATER

the Journal of the American White-Water Affiliation



SPRING, 1965

Vol. X, No. 4

GREAT GRUMMAN! THAT'S CANOEING!



There's no fun on earth — like the fun of "shooting the rapids"! It takes canoe know-how.

And it takes a *real* canoe — a famous Grumman Aluminum Canoe — to stand up to the tortures of the "wildest ride on water."

Grumman Aluminum Canoes glide over sunken rocks and stumps. They brush-off bumps and thumps. Unsinkable. They need no maintenance. Easy to handle — light

enough to carry — and when you've had your fun — store it anywhere, even outdoors. **What a canoe!**

Write for FREE new canoe brochure.



GRUMMAN BOATS

Grumman Allied Industries, Inc.,

Marathon 8, N. Y.

Grumman — world's most complete line of aluminum canoes and boats. 51 models to choose from — there's one for you.

The American Whitewater Affiliation

Executive Secretary
ROBERT G. FIELD
Haverhill St.
N. Reading, Mass.

Advisory Committee Chrm.
ROLAND DAVIS
14 Norwood Ave.
Berkeley 7, Calif.

Editorial Chairman
PETER D. WHITNEY
1544 La Loma
Berkeley 8, California

Conservation Chairman
DAN K. BRADLEY
312 W. 92nd St.
Sew York, N. Y. 10025

Safety Chairman
JOHN BOMBAY
229 E. Vanderbilt
Oak Ridge, Tenn.

Membership Chairman
HAROLD G. KIEHM
2019 Addison Street
Chicago 18, Illinois

Guidebook Chairman
WALTER KIRSCHBAUM
Colorado Rocky Mt. School
Carbondale, Colo.

Lihrary Chairman
ROBERT MORSE
El Paso, Illinois

Trip Planning Chairman
OZ HAWKSLEY
Route 5
Warrensburg, Missouri

Business Manager
CHARLES SMITH
1760 Walnut St.
Berkeley 9, Calif.

Contents

ARTICLES

The Thousand-Year Flood (Expect One Every Decade) D. B. Luten 2
Pioneering the Flathead by Packtrain and Paddle Oz Hawksley 9
Milo Duffek's Eskimo Roll 16

DEPARTMENTS

Racing Report Dave Kurtz, Tom Southworth 15
Conservation Comment Dan Bradley 21
Official Notice: AWA Constitution Changes 22
Safety as We See It John Bombay 24
Meet Your Secretary 25
Book Review 26
From Your Editor 29
Secretary's Soapbox 28
Five-Year Index to American White Water: Vols. VI-X 30

How to Write to American White Water

Please send only editorial matter to the Editors. Send all subscriptions, checks, changes of address and queries about non-receipt of copies to the Circulation Manager (address below). Send advertising matter and payments to the Business Manager, or to the Advertising Manager nearest you (address below). Send Affiliation matter to the appropriate Affiliation Chairman (addresses at left). THANK YOU.

Editor:

- Peter D. Whitney, 1544 La Loma, Berkeley, Calif., 94708
Eastern Editor: Eliot Dubois, Sandy Pond Road, Lincoln, Mass.
Midwest Editor: Nancy C. Jack, 805 Sandusky Ave., Kansas City 1, Kans.
Racing Editor: David A. Kurtz, 623 W. College Ave., State College, Pa.
Business Manager: Charles Smith, 1760 Walnut St., Berkeley 9, Calif.
Circulation Manager: Robert Hawksley, 1925 Hopkins St., Berkeley, Calif. 94707
Eastern Advertising: Mark Fawcett, Chadds Ford, Pa.
Midwest Advertising: Harry Rurshenbaum, 6719 N. Greenview Ave., Chicago 26, Illinois
Western Advertising: Douglas Simpson, 1015 Keith, Berkeley 8, Calif.

American WHITE WATER is mailed to all members of the American Whitewater Affiliation in June, September, December and March. Membership is open to all who are interested in river sport, for the sum of \$3.50 per year.

The magazine welcomes contributions of articles, photographs and drawings, but assumes no responsibility for them. Address all editorial material to the Managing Editor or to the nearest Regional Editor. Correspondence regarding the Affiliation or boating information should be sent to the Executive Secretary, Robert G. Field, Haverhill St., N. Reading, Mass. 01864.

Deadline for insertion of copy or advertising—first of month prior to month of issue.

Printed in the United States of America

Cover: Bryce Whitmore runs a 15-man raft on Redwood Creek, Calif. Photo by Peter D. Whitney. Leica IIIc, 50mm Elmar; f2.8 1/200, f5.6 on KB 17.



Catastrophe on the Eel: high railroad bridge washed out by December flood. Debris was deposited in the tunnel. — Photos by courtesy of Northwestern Pacific R.R.

The Thousand Year Flood

{ Expect One Every Decade }

By D. B. Luten

(Ed. Note: This article, delivered as a broadcast shortly after December's disastrous floods in Northwest California, remains the clearest, sanest statement that we have seen of the conservationists' attitude toward deforestation, overgrazing, floods, and dams).

Figuratively speaking, a lot of water has run over a lot of dams since early in December. Literally speaking, precious little water has run over dams in California, although a good deal has passed through their controlled outlets. But certainly a lot of water has run down the rivers of the north coast and those of the northern Sierra.

Meanwhile, we have read accounts that the Eel River flood was a "thousand-year flood," that its flow reached

a peak of 600,000 or perhaps 700,000 second-feet.

Next, we have seen a very interesting letter in the San Francisco Chronicle near the end of the year written by Martin Litton, a director of the Sierra Club and Travel Editor for Sunset Magazine, in which he said essentially that the storm was no thousand-year storm and that the flood was excessive because of deterioration of the watershed. Such deterioration, he intimated,



How the bridge used to look. A river trip two years ago.

stemmed from the way in which modern logging practices tear up the countryside, especially when harvesting the enormous timber of the redwood-Douglas fir coastal belt. He could also have mentioned the longer-term denudation at higher levels, due to grazing, especially of sheep.

Third, Harold Gilliam, in last Sunday's Chronicle, went over the same story in more detail.

All of this raises some questions. First, what is a second-foot and, in passing, an acre-foot? A second-foot is a stream of water flowing at a rate of one cubic foot per second. Your garden hose turns out about 5 gallons per minute, or a cubic foot in a minute and a half, say in about a hundred seconds. So the familiar stream of a garden hose,

on full, is about a hundredth of a second-foot. A second-foot is a considerable stream of water. Strawberry Creek in summer, I should guess, might be about a second-foot. I saw a stream last June; it was of Colorado River water entering a ground water replenishment project in Southern California, and it was flowing at 500 second-feet. It was a raging mountain torrent, not a large torrent, but a stream that you couldn't have crossed on your feet without a guy rope.

Gauging Stream Flow

It must be terribly hard to look at a stream and judge its flow. It's hard to be sure how wide a large stream really is: the Mississippi never looks to be a mile wide, even though it is. You don't know how deep it is, and the rate of

THE HAND OUT FOR THE HANDOUT

(Ed. Note: ███ hear a lot about the "welfare state" from so-called "rugged individualists" who wrest their hard-earned livings from the soil by ranching, lumbering, and the service industries that attend them. But surely no city bum on relief ever got a "gimme" hand stuck out with such prompt dexterity as Mr. William B. Smullin, a TV and radio network proprietor in the Eureka, Calif., and nearby area. Mr. Smullin is testifying before a House committee of inquiry into the recent Northern California floods. Listen to his ingenious plea.)

You gentlemen represent the Congress of the United States. As Congressmen, you must be aware that your Federal Government owns more than 50 per cent of the land in this area. In corporate language, this would mean that you have control and as such would be held responsible for the affairs of the corporation.

We respectfully submit that it is the Federal Government which is chiefly responsible for the economic strangulation which farming and business interests are today facing in Humboldt County. Not only do you own control of the lands which control the watersheds of the rivers . . . but you also are involved in the roads and bridges which provide the area's economic life-

line. Highways 199, 299 and 101 are your highways. Water from your lands rushed into the streams and rivers which originate thereon and flow therefrom. Last Thursday as we listened to the flood report of our TV station manager in Klamath Falls, Oregon, we thought of you gentlemen.

The water that raised havoc at Happy Camp and Orleans and Klarnath originated on U. S. lands and from Klamath County, Oregon, flowed through these same type lands which are administered by Bureau of Land Management and the U. S. Forest Service. You pass the laws which direct the activities of these agencies.

In summary, the Federal Government owns, administers and controls the lifelines of this area. You, the Federal Government, should put it back in the condition it was before the December 1964 flood. When you do, these Humboldt private enterprise people will re-establish their economy. The longer you delay in this restoration, the more you will make these people dependent upon government for the many types of aids that today are a part of the governmental system.

Thank you.

flow is the most deceptive of all. But if you want to learn more about such things look up the article entitled "Rivers" by Luna Leopold in **The American Scientist**, the quarterly of the Society of the Sigma Xi, December, 1962, p. 511. In it Leopold discloses some patterns of order in rivers which would never occur to most of us, including shape of channel and the fascinating proposition that most rivers flow faster at their mouths than at their sources.

Now this flow of 600,000 second-feet. Is that a lot? Well, yes, it surely is. It is just about the average discharge at the mouth of the Mississippi (see Leopold). It is four times the maximum recorded flow of the Colorado River. It was enough so that if continued for four days it would have provided an

average year's runoff. It represented 7 inches of water running off the entire watershed in one day. In contrast, the runoff from the basin of the Colorado River is about 1 inch per year.

The Colorado River's watershed is the size of Texas; the Eel's is the size of the five counties around southern San Francisco Bay.

The Years of Our Floods

Next, what is this jazz about "thousand-year floods?" After all, we have already had a whopping big flood on the Feather River in the last ten years. The Eel River flooded at the same time, reaching 430,000 second-feet. Was it a thousand-year flood, too? And, if so, how often do they arrive? Is it perhaps that time is coming to an end? Or simply that we live in the most momentous



There once was a railroad right of way along the right bank.

times of all, that if we are no longer the center of the universe, perhaps we are still at the climax of time?

California has had big floods before this. The most dramatic of these is described in some detail in Brewer's classic "Up and Down California." It occurred in the winter of 1861-62, and was undoubtedly aggravated by the enormous amounts of silt which had been dumped into the river channels of central California by the recent invention of hydraulic mining. At the peak of this flood you could go by steamer anywhere in the Central Valley. It was one great sea. Brewer's book, which is magnificent, has been out of print for some years, but look for it to appear as a paperback this year.

In this connection D. R. Powell, a most competent local geographer, has noted that analysis of climate by tree-

ring study suggests that a nine-sunspot cycle in rain and drought may exist. This could be plausible if any sunspot manifestations come to very sharp peaks or valleys, for in that event it could be nine cycles before this peak or valley came at the right time of year to generate special effects. Nine sunspots after 1861-62 is, by the way, the winter of 1964-65.

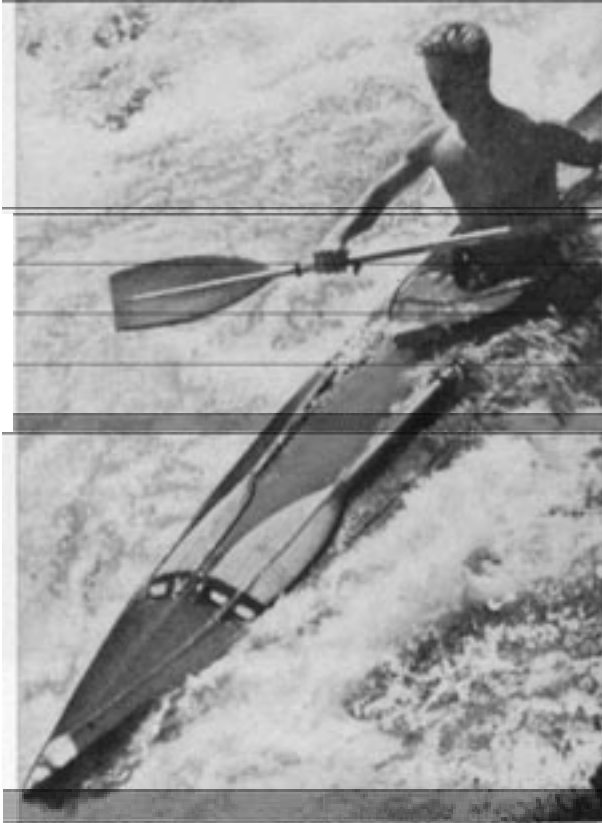
During the few decades that stream flows have been carefully measured, beginning on the Eel River in 1910, the greatest flow prior to this decade was in 1937-1938, coming to 316,000 second-feet for one day.

Floods in All Sizes

Of course, floods vary in size. Small ones are common, the bigger ones are rarer, and the engineers have established a correlation which gives an indication of the probable frequency of floods of given magnitudes. Thus, a

KLEPPER

Foldaways



World Leaders in Quality Folding Boats—Since 1907

- Winners of many International White Water Awards
- Easy to assemble, carry, store
- Wide selection of sleek models from kayaks to sailing sloops
- Guaranteed unsinkable; economical

Write for FREE catalog WW10

HANS KLEPPER CORP.

35 Union Square, West
New York 3, N. Y.

flood which, experience shows, occurs once in ten years—and the record is long enough for us to have this experience—is known as the ten-year flood. At Scotia, on the Eel River, the one-day peak in a ten-year flood would seem to be about 200,000 second-feet. The record is not long enough to give by direct information the size of the 100-year flood, but one of the engineers' correlations, given by Fair and Geyer in the textbook titled "Water Supply and Waste Water Disposal" suggests it should be about 375,000 and the thousand-year flood about 550,000 second-feet. On this basis the 1938 flood appears to be a 50-year flood, the 1955 a 200 year flood and the 1964 flood, if it really ran at 650,000 for a day, as the **5000-year** flood. Let's just say that the latter two are the sort to be expected, on the basis of the engineering correlation, about once in 1000 years.

The 1938 flood seemed reasonable when it occurred: thus, 30 years of records, one 50-year flood. The statistician may look at this with less favor than the man in the street, but at least it's in the right ballpark. But the two floods of the last decade, how about them? The notion of the thousand-year flood is, of course, not that it will only appear after a thousand years of records, but rather that there's one in a thousand chances of getting it this year. The chance of two such floods in one year is one in a hundred thousand. Anyone who believes in lotteries believes that such unlikely occurrences do happen

When buying a lottery ticket one hopes he has at least a random chance of winning. With rainfall, this is not quite the case, because wet years run in groups and dry years in groups, and clearly two enormous floods **do** have a better than random chance of coming close together. Are we then in a really wet cycle? No, we are not. In fact, 1955 and 1964 appear to be separated by a rather dry cycle. And certainly all evidence denies that the present wetness could be of the sort to occur once in each ten thousand years, once in each of the recent glacial cycles.

Why, then, such disaster? At this point, we bring in the Litton-Gilliam

thesis. Litton noted that while the Eel ran high and excessively muddy, carrying enormous cut logs which knocked bridges out, and Redwood Creek, running off of a logged watershed was, on a smaller scale, just as much of a mess, a stream running off an unlogged watershed farther north was clear and not even out of its banks. Gilliam said that Elder Creek, which drains an unlogged watershed, protected in part by the Nature Conservancy, caused no damage.

Development Will Do It

The proposition is, of course, straightforward. It is that when men tear up the countryside, it leads to a lot of changes, many of them not easily to be foreseen. We are all of us aware by now that when you have great brush fires in southern California followed by heavy, early rains you may have such torrential and erosional runoff that streams become mud flows. We are less aware that every time we build a house in the Berkeley Hills we accelerate runoff and increase flood burdens at the Bay's edge. We are inclined to resent inclusion in flood control districts

Question-Begging Quotes

"Some people still think it was the lumber industry's cutting of trees that caused the 'flood.' Preservationists groups outside this area are using this reason for pressing for immediate establishment of a Redwoods National Park. They are wrong, and Federal government agencies responsible for analysis of the cause of the flood state flatly, the flood was caused by excessive rainfall."

— Station KIEM-TV, Eureka, Calif.

formed, we believe, to provide protection for people who foolishly build on flood plains. In fact, people **shouldn't** build on flood plains, but in fact also, people who build on the hills contribute to the occurrences on the plains. A friend of mine once commented that when he built, quite early, by a stream near Walnut Creek, it flowed the year round and never flooded, Now, with the upstream watershed developed residentially, it doesn't flow in the summer,

CLASSIC RIVER TRIPS



THE MOST EXPERIENCED RIVER GUIDE

In 1965, as for many years, we of Hatch River Expeditions expect to be conducting tours on literally dozens of rivers throughout the North American continent. We welcome canoeists and kayakers; we operate by charter, by scheduled tours — you name it. We'll run it!

Don't Travel Second Class — Join

HATCH RIVER EXPEDITIONS

411 E. 2nd North

Vernal, Utah

and it floods every winter. Each square yard of macadam pavement, each square yard of roof leading to a storm sewer or even to drain tile, increases the severity of its floods.

However, the facts are that watersheds are changing, and that they are changing more rapidly now under our tenure than ever in the past. The result is that the correlation which says that, in terms of past records, a flood of such and such a magnitude will only come once in a thousand years is not valid. The watershed is changing and the big floods are going to come more often. If the alteration of the landscape continues they will come at increasing frequency and will get progressively larger.

A Millennium Every 10 Years

In an effort to confirm this, I prepared a plot of the ratio (really logarithm of the ratio) of peak flood to annual runoff for the period from 1910 to 1963. This is a blunt tool, but it seems to show no change. Others, I am told, have done much the same thing and see no change up to 1945 but thereafter a sharp turn upward occurs. The magnitude of the upturn and the magnitudes of recent floods are enough to suggest that what might have been thought to be a thousand-year flood is in fact only a 20-year flood and may be on its way to becoming a 10-year flood.

If there is, in fact, a sharp turn upward in floods, it corresponds to the improved technology of logging practices associated with the enormously increased human ability to tear up the earth's surface. It is almost certainly due to logging practices introduced after the war.

The matter is undoubtedly worth a lot of careful study. What I have just outlined is a superficial appraisal of a most involved and intricate system. Nonetheless, the qualitative conclusion is sound and will not be destroyed by careful analyses of the voluminous data being obtained.

The recent flood, it is said, has done \$300 million worth of damage. The big-dam people are pointing to the necessity of accelerated construction of big

dams to control these great floods. One comment to be made is that, if they propose to proceed along such lines, the dams will have to be made a lot bigger than heretofore proposed. Thus, last winter's peak flood flow would have filled all of the reservoir capacity proposed for the Eel-Mad River drainage in a good deal less than one day. Today's sediment burdens in this river system suggests a life of 250 years for the reservoirs proposed. Increasing erosion will diminish these lives, perhaps greatly.

It Doesn't Even Pay

Another comment is that the gross return at wholesale prices of the redwood lumbering operation is about a hundred million dollars per year. If this can be gained only at a flood damage cost of \$300 million every decade or two, the question may reasonably be asked whether we can afford such a luxury as an industry operated in this fashion. Greater care in logging would pay off in diminishing flood damage and would help the local economy.

The general conclusion is the same as always: we are treading too heavily on the American landscape, treading too heavily on our environment, treading more heavily on it some places than others, but too heavily almost everywhere we look.

The position of the provident man is that we should tread more lightly and that we should undertake to change our ways as rapidly as possible.

Do not, though, think that the blame rests on others alone. Remember the parable of the little, old lady who comes stumbling down through the spruce forest which has just been cut over for pulpwood, cut over and mangled as only modern equipment, used under extreme competitive stress, can mangle it. She stumbles because she is almost blinded by her tears, and she weeps continuously over this unnecessary destruction, weeps into her Kleenex.



When Renewing Give Your Zip Code! It Becomes Compulsory for Bulk Mailing in January!

American WHITE WATER



Horses laden with kayaks and raft, Bob Marshall Wilderness. — Photos by Dorothy Hawksley

Pioneering the Flathead

By Oz Hawksley
AWA Trip Planning Chairman

For a number of years the Trip Planning Committee has made attempts to get an AWA group onto the two wilderness branches of the Flathead in Montana. Again in '64, trips were planned for both the Middle Fork and the South Fork of the river. Not wishing to be thwarted again by low water, we planned the trips for late June and early July. Surely, we thought, there would be plenty of water that early in the season. As it turned out, we were more right than we wished.

First trip of the season was a base-camped affair with a dozen or more members from the Midwest participating in runs on the Bois Brule and the upper Flambeau in Wisconsin. By mid-

June we were headed for Montana's Flathead country with canoes and rafts. By the time we reached Bismarck, we began to get news of floods in the Glacier Park area. Something like eleven inches of warm rain on top of heavy snow had caused extensive damage and there were rumors that Glacier Park would not open for the '64 season.

From a base in Whitefish, Montana, we began to survey the damage to the area and the ways in which it might affect our Middle Fork trip. We finally flew up the river to our proposed put-in at Shafer Meadow. Although we couldn't get much lower than 3,000 feet we could see that the river was still too high and dangerous for our families.

One section with falls, turbulent drops and sheer walls was over two miles long with no place for rescue. When we reported to the party at camp, the decision was unanimous to ~~run~~ the North Fork instead. We had a pleasant surprise in store for us.

North Fork

Some of us had run the North Fork before, in an August rain, and had not been greatly impressed. However, from our put-in at the Canadian border to its junction with the Middle Fork, this river borders Glacier Park. With clear weather, we had a spectacular view of the snow-capped peaks of Glacier for the entire trip. The water was high, and although it was too milky to produce good fishing, it provided constant excitement with high bouncing waves and some downright heavy rapids of about the caliber of those on the Yampa and Green in Dinosaur. A gravel road parallels the right bank but this was out of sight and, since we always camped on the Park side, we had the illusion of true wilderness for the five days we spent on the river. The only sound

which broke the illusion was the air-boat used to bring members of the BOR's Wild River Study Team up the river. The grapevine had helped them find us and we spent an enjoyable noon-hour visiting with some of the men with whom we had been corresponding for a couple of years about wild rivers. They were apologetic about using the air-boat and, of course, we were happy to have them see an AWA trip in progress so we forgave this little transgression.

South Fork—Bob Marshall Wilderness

A few days after the end of the North Fork trip, the group reconvened at Seeley Lake for what was to be an almost unique river trip. The only way to get our boats in to the Bob Marshall Area was to pack them in on horses, but we had found a packer, C. B. Rich of Double Arrow Ranch, who was game to try getting our awkward equipment in. Before the trip was over, both "C. B." and the boaters had learned a lot which should make any future boat trips into the area much easier.

Topo maps of the area indicated

THE CHICAGOLAND CANOE BASE

NEW! The Canadien 16'

(Described in the Autumn 1962 AWA Article on Canoe Design)

Beam 33" Depth 12" Weight 66 lbs.

Fiberglass C-M-Cloth construction. Ash Gunwales. No Ribs.

All Stainless Steel Fastenings. Nylon Cord Seats.



Also available in 17'3" and 18'6" lengths

NORTHWAY Fiberglass Canoes

13½' to 20'

From \$171.25

CANOE RENTAL

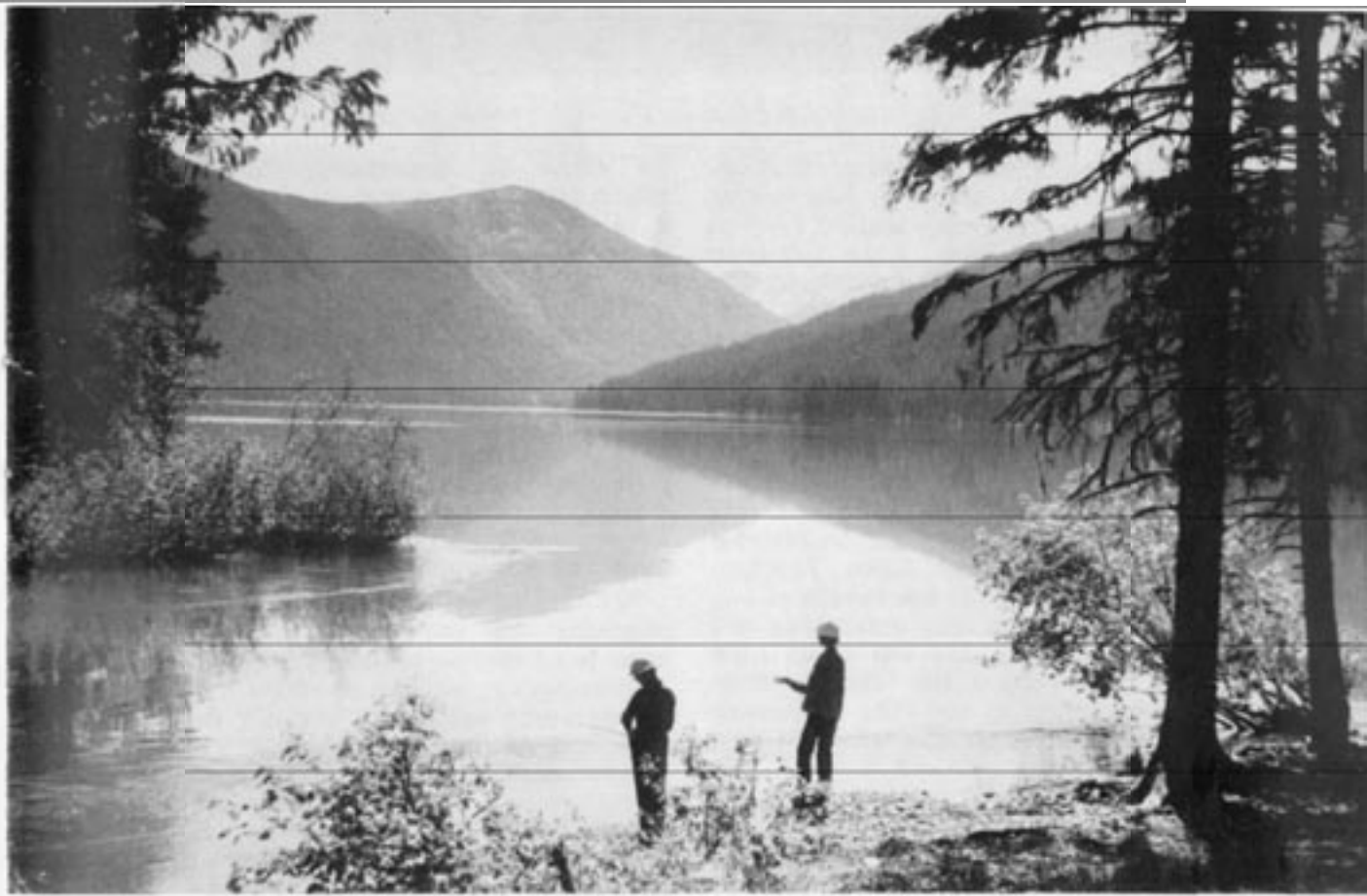
Chicago Area Canoeing Information

THE CHICAGOLAND CANOE BASE

RALPH C. FRESE

4019 N. Narragansett Ave.

Chicago 34, Illinois



Big Salmon Lake, Bob Marshall Wilderness Area

some pretty good gradients on the South Fork and we thought it advisable to take at least one heavy raft on the first trip. We selected the lightest 10-man we had (about 300 lbs.) and "C. B." picked two of his toughest horses to trade off on carrying it. Three light rafts and four foldboats completed the flotilla for our party of 14.

Early on July 4, with some snow still in the pass, we set out with 30 head of horses for the start of the South Fork at the junction of Youngs and Danaher Creeks. Our first day's ride was to be about 16-18 miles, the total distance to the put-in about 26.

Going up to the pass was easy and the scenery was breathtaking. In the pass and on the other side we were often plodding through deep snow. The farther we descended, the wider, deeper and more swollen the streams became until we reached some that swept pack animals off their feet. The horse with the bulky 10-man hanging down on each side of him had the toughest time but there were no mishaps.

Our saddle-sore crew was mighty

glad to reach camp that night even though it was nearly dark and raining. It was just the night to have a commissary catastrophe, and we had one. We hadn't thought about the fact that a plastic bottle of liquid detergent had a "pop-top" and that the high altitude of the pass would pop it! One of the black rubber boxes and everything in it was thoroughly coated with a mixture of detergent and Malto-Meal. Somehow, we got a hot meal prepared but the real hero of that evening, in the cook's memory, was Gene Klymko who was so glad to be out of the saddle that he volunteered to clean up that awful mess!

The next day's ride was short and easy. We reached the put-in by noon but decided to camp there and rest up from the ride before setting out on the water. We had to put up our rafts and foldboats at once, however, because the wranglers just didn't want to leave until they saw those crazy things they had struggled with put into the water.

Next forenoon was spent floating down the shallow, multi-channelled

river to Big Prairie Ranger Station. Below Big Prairie, the river narrows as it passes through a clay-walled canyon which has some easy, pure fun-type rapids. We reached the mouth of the White River by mid-afternoon and found a beautiful open flat across the river from it where we could camp amid the scattered ponderosas. An eddy just above camp produced enough trout for breakfast.

The "First" on Big Salmon

One of the objectives of our trip was to take advantage of the wonderful fishing at Big Salmon Lake. The run down to a campsite at the mouth of Big Salmon Creek took only a morning and left the afternoon for the short hike up the creek trail to the lake, for fishing and bathing in the lake and other exploring activities. The creek was a wild whitewater run and naturally its "runability" began to be discussed. John Hawksley and Malcolm Coulter were certain that they could make the run in a small raft, and after much adult stalling and cautioning were given permission to take the 5-man raft down. The gradient was in the neighborhood of 100 feet per mile, but they made it with "no problems." Their run gave Gene Klymko the fever and he decided to make the same run next morning in his foldboat before we shoved off.

After breakfast the whole company migrated up the creek again to watch Gene. Some helped carry his boat, others took positions with throw lines and the remainder were spectators or photographers. It was a good run and Gene emerged at the lower end very out of breath, but with the satisfaction of a "first."

Fast water compensated for our late start that morning. Above Black Bear Creek we encountered the heaviest water we had met to date, but it was quite open and rated only III. A threatening shower encouraged us to camp just above Black Bear Creek but the shower passed and we found some eddies downstream that produced good-sized cut-throats as fast as one could cast and take them off the hook.

Warnings of the Impasse

Now the tough part of our trip lay just ahead. We had had conflicting stor-

ies about an impassable canyon in which there was a slot so narrow that a boat could not pass through. The stories did not agree on just where this was and the width of the spot was mentioned as being anything from about 50 inches to 10 feet. All tales agreed on one point—if you passed the last take-out there was no way out of the canyon! One party had had a raft get away with a man in it, and he had drowned. Supposedly the Forest Service had erected a warning sign at the take-out but we were warned that recent floods might have removed it.

We moved cautiously that morning, checking and rechecking the map at each bend and at each tributary creek. It was lucky we did, because even a Ranger who had spent his life in the area had marked the take-out too far downstream on our map. We were supposed to pass through a narrows just before reaching the take-out, and we had soon passed through the ominous sucking, surging spot only to find ourselves about to pass through another turbulent narrows. There was no sign nor any rock cairn which might have anchored a sign, but we became suspicious and landed.

We left the families to prepare lunch while a few of us looked for the trail and scouted. Once we found the trail, several hundred feet above river level, we followed it on down to Meadow Creek Guard Station. Views of the river from the trail showed us a gorge with rapids which appeared to run as high as V in difficulty.

It was not until we reached the horse bridge at the Guard Station that we found out why we had heard conflicting stories on the impassable gorge--there were two of them! The really impassable place is located about one-half mile upstream from the bridge. The 50-inch guess was about right for it. The river is narrowed for a few feet by a tremendous boulder which has blocked the channel. However, a party which had walked down to scout and knew exactly where this was could land on the sloping rocks on the left bank and portage around it if they had only light boats. Such a portage would



The Impasse. Narrowest point hidden from view, but indicated by arrow.

not be at all risky in normal summer water.

The Second Impasse

The second narrow place is a true gorge which begins at the horse bridge and continues for a mile. As we looked down into this deep gorge with sheer walls, the surging, sucking, boiling action of the water made cold chills run up our spines. Even if a raft could squeeze through some of the narrowest places, it seemed certain that it would eventually be thrown against a wall, upset, and sucked under. Forest Service personnel told us that a week earlier, the water had been 50 feet higher in the gorge! We were very happy that we had been advised and had arranged in advance for seven pack animals to be brought up from the KNL Ranch the ext morning to portage our boats and gear.

By the time we got back to camp it was late afternoon. The group left behind had located the vestiges of the old spur trail from the take-out to the

main trail and had cleared it enough with machetes for horses to get down to the boats. We made camp halfway up the hill that night and spent the evening deflating and packing rafts and foldboats.

It was only about four miles to the campground at Meadow Creek Airfield but the portage took us all the next day. Every man, woman, and child carried something and eventually, with stops at the gorge for sightseeing, everyone made it. The Meadow Creek campsite is not one of the greatest in the National Forests; the spring **and** the put-in are down a steep 150-foot bank. This is just outside the Marshall Wilderness boundary and sportsmen can fly in to fish for "bull trout" which make their spawning run up the river in early to mid-July.

Loading next morning was accomplished by making a human chain down the bank and once that was accomplished, the remaining 10 miles of river to the KNL Ranch, where we had left

our cars, was easy and scenic. A couple of miles below the ranch, a bridge site at the upper end of Hungry Horse Lake provided a good clean gravel bar for take-out. Our eight days of adventure in the Marshall area were ended, but some of us were already looking forward to the next trips on the schedule—the Selway and Middle Fork of the Salmon.

AWA Summer Trips, 1965

A few similar trips for this summer are planned, though due to uncertainty about his free time, the chairman cannot commit himself to more than those trips listed below at this time. Boaters who would like a trip in any other area should contact Oz Hawksley, Route 5, Warrensburg, Mo., as there is a good chance that something can be worked out.

Ontonagon River, Michigan. This trip in the Upper Peninsula will be scheduled for late June (probably June 20-26). A description of the river, which should stimulate any canoeist, is given by Dick Snellgrove.

"The East Branch of the Ontonagon provides a canoeing experience not to be found in Wisconsin. It is steep and fast, but nonetheless devoid of falls or ledges. Instead, it has entrenched itself deeply into the glacial debris, resulting in numerous rocks to dodge and many sharp turns to cope with. The swiftness of the water, the continuity of the rapids, and the wild nature of the country make this an exciting and demanding run." The rapids rate II and III. This trip will be at least partly base-camped; other rivers in the area will also be explored.

Middle Fork of the Salmon, Idaho. Last week of July. There have been a number of requests for this classic river. Some folks couldn't make it last year so we are scheduling it again. But yours truly had to run a raft on it last summer instead of his canoe so **this** time we will have one of the most experienced outfitters handle the raft support, duffle and food end of the trip so that all the paddlers who want to go can paddle their own craft. The cost will be about the same as it has been on previous AWA trips on this river run with our own rafts.



14 So. Willard Street
Burlington, Vt.
Tel.: 802-862-2146

Imported Finnish and British
Double-Bladed Paddles

Imported Canadian Canvas
and Fiberglas Canoes

5% discount on canoes, paddles and accessories to AWA members.

FREE CATALOGUES

COME RUN THE RIVERS WITH US

Special Arrangements for
Canoeists and Kayakists

IDAHO: Main Salmon, Middle Fork of Salmon, Selway; **UTAH:** Glen Canyon; **BRITISH COLUMBIA:** Canoe - Columbia rivers, Bowron - Spectacle lakes; **ONTARIO:** Quetico country; **MAINE:** Al-

logash River, ARIZONA: Grand Canyon.

Write for complete details or up-to-date schedule. Ask about special group rates for clubs.

American River Touring Association
Adventure River Tours, Inc.

1016 Jackson Street • Oakland, Calif.

849-1962 94607

415-751-8040



Keith Daniel practicing in the turbulence before tidal Cohasset Slalom, 1964.
— Photo by Bart Houthaway

RACING REPORT

By **Dave Kurtz**
Racing Editor

Roger Paris has been elected Team Captain for the 1965 United States Team. He will be assisted by David Kurtz, National Slalom Chairman, as Associate Captain. The election was by the ACA Slalom Committee. Roger, in addition to the duties of Captain, has

been appointed by the National Slalom Chairman to be in charge of selecting the K-1 Slalom and Wild Water participants. Details of the intended selection process are herewith presented in this column guest-written by Thomas Southworth.

Selection of the U. S. Team

By **Tom Southworth**

Choosing a U. S. slalom and down-river team is an impossible job. Every World Championship year the National Slalom Chairman must adopt some system for choosing a team and use it to compile a list of qualified competitors. Unfortunately no single system has yet been generally accepted. To those who have tried to develop such a system, it seems that no one system could be perfectly fair. In the absence of any perfect system we must content ourselves

with understanding what has been done in the past and what is currently being done this year.

Competitors from the United States have entered the last three World Championships. In every case, individuals initiated the effort to send themselves to Europe. It has never yet been a team effort.

It is interesting to see what makes Americans go at all. Some racing en-

Continued on Page 18



Fig. 1

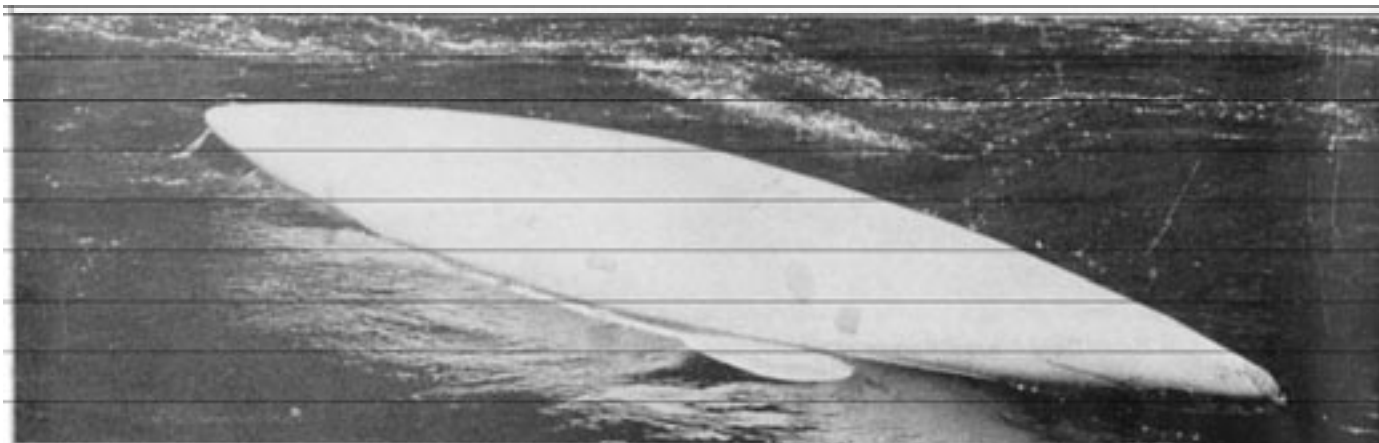


Fig. 2

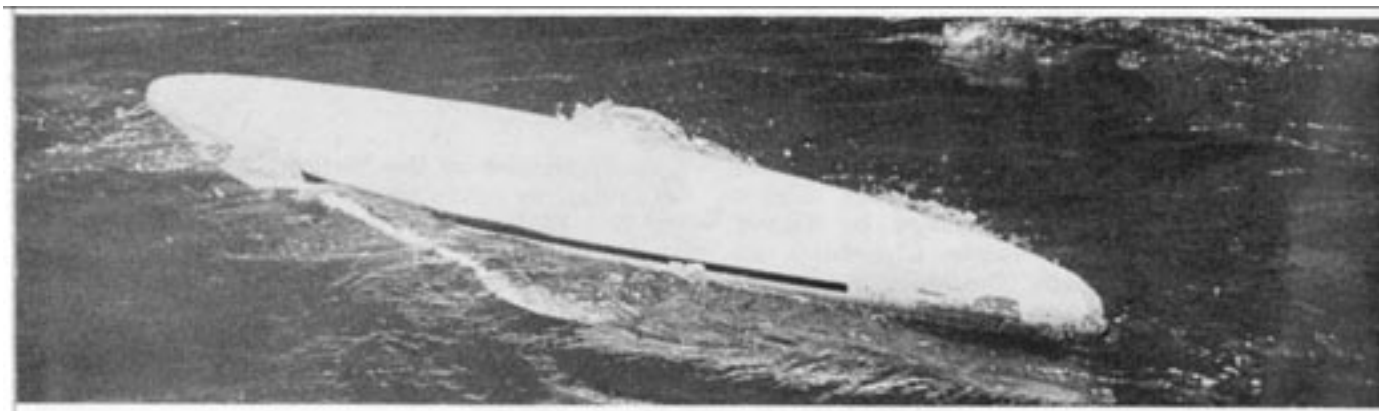


Fig. 3

Milo Duffek's Eskimo Roll

We promised to show you the way Duffek makes an ordinary screw roll. The series is a composite—Fig. 3 was shot during a different roll from the others. We substituted it because it caught a better moment in the beginning sweep stroke than its corresponding frame in the other series.

These photos were taken with a Leica IIIc equipped with a Leicavit manual rapid wind. Six or seven frames could be shot during a roll—which shows the lazy grace with which a good **esqui-mauteur** can do it. Milo is using a Roger Paris slalom boat.

Significant is Fig. 2: Note that, al-

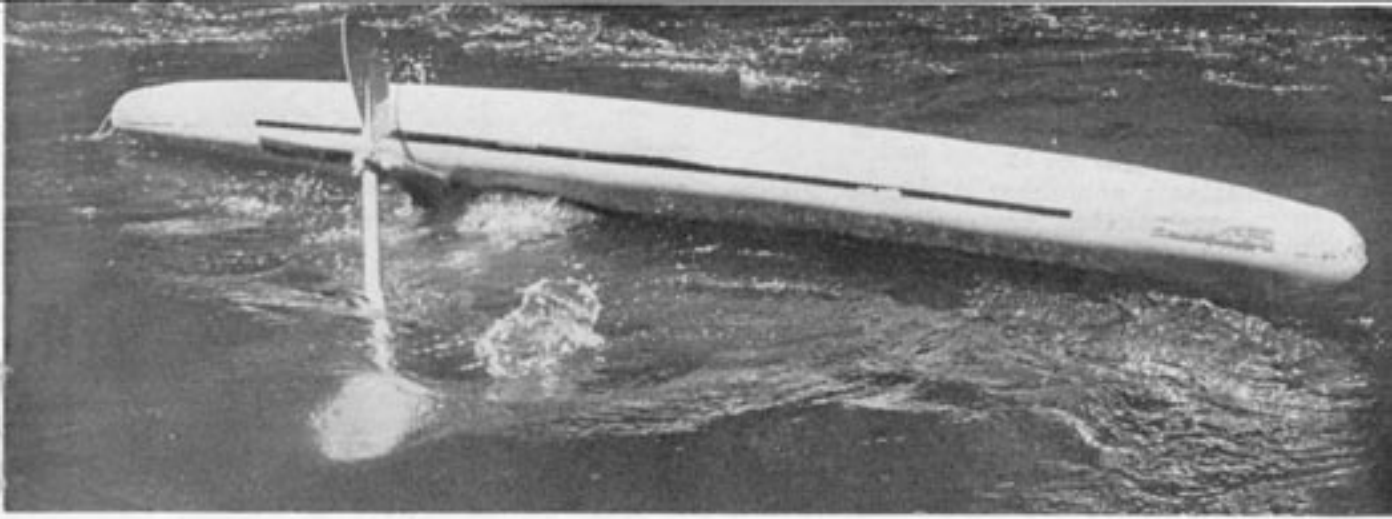


Fig. 4



Fig. 5

though the kayak is not yet upside down, the paddle is already at the surface on the other side, ready to lift without loss of tempo.

Always elusive in photography of esquimautage is the moment (between Figs. 4 and 5) when the hip swing lifts the boat, but the body remains in the water, before the arms have begun to lift it. As all students are aware, this is the trickiest and most important moment. Fig. 5 makes it look as if Dufek came out of the water as stiff as a soldier at attention. Actually, he has

just straightened his hips on the way up.

We will try to show some photos later that catch this important transition, which comes and goes so quickly (photo contributors, try to snap it!).

Photos taken on the No. Fk., Feather River, by Peter D. Whitney.

This is the Last Issue for 1964-65. Renew Your Membership . . . Send \$2.50 to Robert Hawley, 1926 Hopkins St., Berkeley, Calif. 94707 (or \$5.00 for Two Years, \$7.50 for Three). Give Zip No.!

Continued from Page 15

thusiasts somehow discover within themselves that they really want to go. Some are talked into it by Europeans. Others figure they are about the best around and ought to spread some of their talent to Europe.

Natural Selection

Fortunately a natural selection process has operated and the paddlers who have gone have been of highest quality (by our standards anyhow). That is, only the better paddlers have even considered the matter. Thus there has never been the serious problem of weeding out those who should not go.

Those days are rapidly coming to an end. This year we can be proud of the fact that we have a controversy (of sorts) over who will represent the United States in Austria this summer. We can regard this controversy as an index to progress in its purest form. But with this retreat from being an underdeveloped canoeing country come demands to select a team in a proper way.

Team selection is one of the duties of the National Slalom chairman of the A.C.A. His biggest headache is deciding just how to select a team. Most chairmen seek assistance from advisors. But the value of numerous advisors is questionable since most of them don't answer letters. The few that do write back at all invent their own systems. And they are about as willing to accept someone else's system as they are to use someone else's toothbrush.

The 1961 and 1963 teams were picked by the Harrigan (National Slalom Chairman in 1961) system. This was a point system based on two races in the East and two races in the West. In 1963 the system was still appropriate, as there were still few big events in the country. But Ron Bohlander, Chair-

PLANS KAYAKS CANOES

13 Designs. Racing, Cruising, Slalom and Eskimo. Easy chine construction. \$3.00 each postpaid. Write for list.

W. SCHALLE (Kayel Plans)

151-20 17th Avenue, Whitestone 57, New York

Race Schedule

May 22-23 Delaware River Race, Belvedere, N. J. (Murray Hill Canoe Club)

May 22-23 Crystal or Roaring Fork Slalom, Colorado. (Roger Paris, Colorado Rocky Mountain School, Carbondale, Colo.)

June 5-6 Esopus White Water Race, Phoenicia, N. Y. (KCC-NY)

June 5-6 Downriver & Slalom, Roaring Fork R. (Roger Paris, Colo. Rocky Mt. School, Carbondale, Colo.)

June 6-13 Training week for Slalom and Downriver Team selected for Europe, also other advanced paddlers. (Roger Paris, Colo. Rocky Mt. School, Carbondale, Colo.)

June 18-20 Salida Slalom and Arkansas Wild Water Race, Salida, Colo. (National Kayak Wild Water Championships) FiBArk

June 26-27: Pacific Invitational and National Men's Kayak Singles Slalom and Downriver Race, No. Fk. Feather River nr. Belden, Calif. (Peter Whitney, 1544 La Loma, Berkeley, Calif. 94708)

man for 1963, explained that the system did not necessarily place the contestants in "perfect order."

The situation this year has grown in complexity. Some positions on the team might be hotly contested due to many equally qualified competitors. National Slalom Chairman Dave Kurtz made a gallant effort to come up with a watertight system. In addition to other difficult problems, he had to cope with choosing between Eastern and Western paddlers who had never raced each other. Armed with Divisional Slalom Chairmen, special advisors, and previous team members, Kurtz led the attack. The response was heart-warming. Systems were tested and polished. Three major systems, the "Percentage Compromise System," the "Points Behind System," and the "Who Beats Who System," were mimeographed

with lengthy explanations, charts, graphs, names, six-digit numbers, and even some elements of what is known as the "Kurtz Factor."

They Didn't Buy It

The report totalled ten pages and a copy was sent to all advisors. It's not fair to say the effort was a catastrophe, nor is it fair to consider the effort totally in vain. But it didn't sell. Moreover the reaction, although not hostile, suggested that there might well be a problem if many of the systems were used.

The system that was finally agreed upon was to have each Divisional Slalom Chairman make his own team listing using any means he wished. By January, Dave Kurtz had collected all the lists, added his own list, made a tally, and shortly thereafter sent notices out to all competitors who had been picked. The results were quite consistent and satisfactory for all the canoe classes and K-1W.

The K-1 class will be decided by team captain Roger Paris, who has scheduled a training camp to be held at Carbondale, Colorado, June 6-13. Due to regional differences, this inconvenient late decision date cannot be avoided. Ten kayakists are being invited to compete for positions on the team. They are strongly urged to attend if they want to be selected. The training session is also open to anyone who is seriously interested in canoe and kayak racing.

This year's selection procedure is probably as honest an attempt as is possible. Dave Kurtz reports that so far no one has objected to its use. He reasons that silence must imply happiness. As long as we can accept our Divisional Slalom Chairmen as reasonable men of good will, this process should be fairly accurate. A final list of those chosen for the canoe and K-1W classes will be presented after all acceptances are in (since if some turn down their positions, others will be able to move up).

Team selection is indeed a difficult job, but it's only the first step. Interest will quickly shift gears to matters of money, travel, and training. For those

of you who do travel to Europe as part of the team Roger Paris has requested a team practice in late July at the slalom site, Lieser River, Spittal, Austria. This will be the last and major training for the U. S. team in preparation for the World Championships which will be August 6 to 11.

Canadian Team

Canada, for the first time, is planning to send a 5-man team to the World Slalom Championships in Austria this summer. Picked from clubs of the Canadian White Water Affiliation will be Roger Parsons and Ross Durfey of Weston in the C-1 class, Heinz Poenn and Manfred Baur of Toronto along with Eckhart Rapin of Peterborough in K-1.

Contributions to help finance the Canadian team should be sent to C.W.W.A. treasurer, Barry Brigley, 72 Robert St., Weston, Ontario, Canada (no apologies to the U. S. paddlers).

* * *

Racing Notes

Fund-Raising for 1965

The United States Slalom and Wild Water Association has been formed. Membership is made up of those who contribute to the U. S. team travel expenses to the World Championships in Austria this year. Chairman of the Association, David A. Kurtz, explains that the organization has as its sole purpose the collection and the distribution of funds in connection with the U. S. Team. This may also include expenses for top-seeded paddlers to travel over the United States in the championship races. Donors for 1965 will be classified in the following way:

Corporate Member	\$5000
Benefactor Member	1000
Sponsoring Member	250
Sustaining Member	100
Contributing Member	50
Supporting Member	25
Associate Member	10
Paddling Member	5

Application to the Internal Revenue Service has been made for Federal tax-exempt status.

It is hoped that various other pro-

grams will be sponsored all over the United States by clubs in helping to support the expenses of the best paddlers. The Sierra Club has been charging \$0.25 for movie entrance to go toward this purpose. The Wildwater Boating Club and Canoe Cruisers have been charging boat mold rental fees for their use also to go for these purposes. The West River Championship Slalom entrance fee includes a \$0.50 per class entered as a donation. Small approaches like these will go a long way when they are added up.

Amateurism Regulations

The National Slalom Committee has agreed to some procedural policies regarding amateurism rules. These statements are designed to protect the paddler and sport alike by allowing appropriate fair play among the parties affected. The official policy of the Slalom Committee governing the slalom and wild water sport is:

1. Anyone who declares himself to be an amateur canoeist will be considered to be amateur until he has been declared professional by a majority vote of the National Slalom Committee.
2. A vote for disbarment from amateur status by the National Slalom Committee may not take place without the accused being given notification a reasonable time in advance, in order that the accused may present his case to the members of the National Slalom Committee or appear in his own defense if he so desires.
3. Any canoeist disbarred as a professional may apply to the National Slalom Committee for reinstatement to amateur status to be eligible to participate in amateur competition one year after his disbarment or last act of professionalism, whichever is later.
4. Any canoeist who **has** once been reinstated, and who is later disbarred again for reasons of professionalism, will not be eligible for future reinstatement.

ICF News

The International Canoe Federation Slalom Rules listed in the Winter 1964-65 AWW are official, having been adopted at the ICF Meeting at Tokyo last October.

A proposal from the Federal German Republic for steps to be taken to get slalom and wild water racing on the Olympic program was withdrawn by that same group at the Tokyo meeting.

The 1967 Slalom and Wild Water Championships have been allocated to Czechoslovakia and will be held at Spindleruv myln, tentatively. This is the site of their yearly championship races.

National Slalom Committee


Jay Evans, Dartmouth College, has been appointed Eastern Division Slalom Chairman to succeed Bob Field, 1965 AWA Executive Secretary.

Errata

The dates of the World Slalom Championships on the Lieser River in Spittal, Austria, should have been reported as August 6-11, not as August 14-18. Spittal is located about 25 miles northwest of Villach.

When Renewing Give Your Zip Code! It Becomes Compulsory for Bulk Mailing in January!





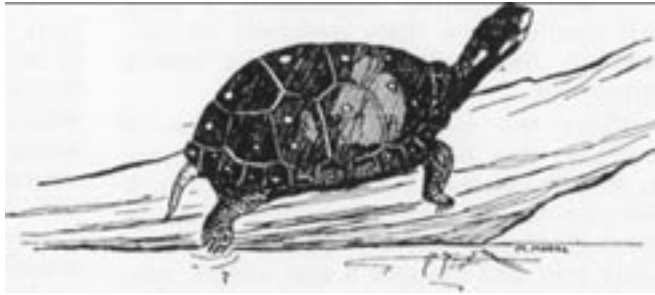
At Last . . .
AWA Emblems
 (Shoulder Patches)
Handsome, Durable, Colorfast
 New Approved Design
Let's Show Our True Colors!

Send \$1.00 apiece to
Harold "Deacon" Kiehm
 2019 Addison St., Chicago 18, Ill.

Conservation Comment

By Dan Bradley

AWA Conservation Chairman



Rivers in Crisis

"I propose we increase the beauty of America and end the poisoning of our rivers and of the air that we breathe."

President Johnson,
State of the Union Message

Two critical controversies concerning important rivers illuminate similar problems regarding the peculiar immunity to legal restraints enjoyed by river-destroying projects, and the high palisades which must be stormed by us ordinary people who would like to see these rivers left as they are. One would think that in a Great Society it would be the other way around!

The **Buffalo River** flows through sparsely populated Ozark country in northern Arkansas, the last wild river in that state. Its striking scenery and unique wildlife features have been eloquently set forth in the report of the National Park Service, which proposes to preserve it as a "National River"^w—a permanent natural resource which would attract "tourism" business into the area in increasing volume far into the future. Supporting this plan are Sen. Fulbright, several federal and state outdoor agencies, and many local people.

The Army Engineers, however, are seeking authorization for a high dam at Gilbert with a small flow-control structure a mile below. In this it is supported by the REA (which supports the Engineers all over), and by the local Improvement Association, whose most rational argument appears to be that Marshall, a town of 1045 population, needs a \$60 million dam for water supply. (They don't mention that an appreciable part of the \$60 million would flow into their own pockets, via a tem-

porary business boom, nor that the profits from the power plant would not accrue to local people.)

The Engineers claim they have studied all the economic and social effects of their project, but they have given out precious little information. They have held public hearings, after which they proceeded to approve their plan without modification on the District and Division levels and sent the project on to the Engineers' Board for Rivers and Harbors in Washington for final approval. **And no one can say them nay:** an injunction was sought to postpone the last hearing on the ground that insufficient information was available to the public, but the judge held that such proceedings were not judicial in nature and therefore outside his jurisdiction.

Now the bitter controversy has gone to Washington. Sen. McClellan (Ark.) called Secretary Udall and representatives of the National Park Service and Army Engineers together in an effort to reach a compromise. Udall is said to have exploded when the Engineers suggested that a "small" 45-mile reservoir would not materially disturb the rest of the river, and the battle must now go to a showdown conference between the Secretaries of Interior and the Army before President Johnson. A decision is expected some time soon.

Meanwhile Rep. James Trimble (Ark.) has introduced a bill (HR 2245) to authorize the dam. It has been referred to the House Committee on Public Works, George H. Fallon (Md.), chairman. Sens. Fulbright and McClellan appear to be waiting for the White House decision before introducing legislation. The former favors preservation, but he has commented that while the dam is unlikely to pass due to high

cost **and mounting opposition**, a park bill would have little prospect of success in the fact of Trimble's active opposition.

There the matter stands at time of writing. The Engineers are in a hurry to knock up the river before the Park Service can get conservation legislation through Congress. Who can stop them? Only you and me and a few others who cherish our few remaining wild rivers. This one in particular is a wonderfully scenic float stream, usable virtually the year round.

The Ozark Society in Fayetteville is waging a heroic battle to save the river, with strong support from our largest affiliate, the Ozark Wilderness Waterways Club. Each of us in the AWA should sit down **right now** and write to his Congressman, urging his unwavering opposition to the unnecessary dam and support for legislation creating a national river on the Buffalo. Whether we live in Maine or Oregon or in between, the Buffalo is our river and our business. Don't put it off—tomorrow may be too late!

* * *

The **St. Croix River** controversy in Minnesota is somewhat different, in that the culprit is a private utility, and for the details I am indebted to a comment in the New Republic by James Ridgeway, associate editor. The St. Croix is not a wild river, but "the last clean river" near a metropolitan area that is left in America. It is a small, shallow stream, 20 miles from the Twin Cities, and a river playground for some two million people. The proposed coal-burning plant would add to the scenery 785-foot smokestack, a half-mile-long pile of coal, and a steady stream of coal barges plying up and down the river. More serious would be the pollution of the air with quantities of sulphur dioxide and, more particularly, the immense amounts of river water the plant would draw in and spew back — 15 degrees hotter. The devastating effect of chaotic hot and cold currents on swimming and on underwater plant and animal life can only be imagined. But again, **no one can say them nay.**

"The trouble with the St. Croix dispute," says Mr. Ridgeway, "is that there is no mechanism for resolving it. To build the plant, the company needs permission from the municipality. One branch of the state government (conservation) needs to approve sucking the water out of the river; another (water pollution control) must approve gushing it back in." The FAA decides on the smokestack, the Army Engineers on the docks for the coal barges. "Other federal agencies . . . hover on the sidelines. They can't jump in before the plant actually is built, because there is no pollution to 'abate.' All in all there are something like 14 different state or federal agencies that have an interest in some aspect of this works, and nobody to bring the results together."

A pretty kettle of fish indeed! Everybody on tenterhooks, a lot of wheeling and dealing, and no one with the authority to shout "Thou shalt not!"—only "Thee really shouldn't have" after the monstrosity has been created. With this story in mind, the President's words fell pleasantly on the ear: "We

MENDESTA

The Finest Line of European Whitewater Equipment is Now Available. Superb Belgian Craftsmanship and Design in Fiberglass That Equips Many of The Top Competitors at Very Reasonable Prices.

for information

WALTRUSS

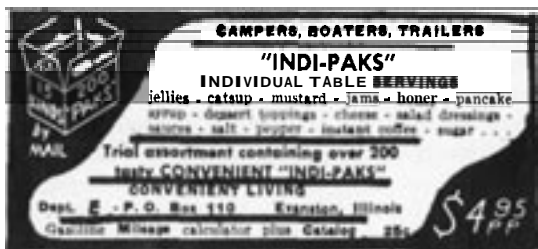
446 Cabrillo St.

Costa Mesa, Calif. 92627

Also Available, the 15' Canoe that has become the Standard in the Southern Calif. Program.

will seek legal power to prevent pollution before it happens."

On the **Selway River** in Idaho the intruder is a government agency: the Forest Service in one of its uglier aspects. This is a project initiated long before the present Secretary of Agriculture took office. The former Selway-Bitterroot Primitive Area was halved and reclassified into a wilderness area, excluding the upper Selway basin for "multiple use." Now the Forest Service is spending hundreds of thousands of dollars to widen the road into the basin—an improvement necessary only for logging. But since the area contains only a limited amount of poor quality timber, this operation raises some questions as to what else they are after. It is feared that slash logging of the watershed will result in flash floods and heavy siltation of the river within the wilderness area, and seriously impair its attractiveness for AWA and Sierra Club float trips. It may also ruin the restoration of commercially valuable chinook runs, on which over \$1 million has already been spent. (These consequences may offer the Forest Service an excuse for invading the remaining wilderness area on the grounds that it is no longer wilderness.) Agriculture seems to be spending a million with one hand to negate the results of a similar expenditure already made by another hand. We had thought President Kennedy had put an end to this sort of thing, but apparently his orders failed to penetrate to the Selway. This is solely an Executive matter, and protests should be addressed to the Hon. Orville L. Freeman, Secretary of Agriculture, Washington 20025, urging a stay of execution of further activity in the upper Selway basin pending a re-study of the problems at issue.



Official Notice

The following amendments to the Constitution and By-Laws of the American Whitewater Affiliation are being presented herein to the membership-at-large for their consideration.

Robert G. Field
 Executive Secretary

PROPOSED AMENDMENTS to the CONSTITUTION AND BY-LAWS

ARTICLE 5—For "Executive Secretary" substitute "President."

For "Operating Committee" substitute "Board of Directors."

ARTICLE 6—Same changes as Article 5.

ARTICLE 7—Same changes as Article 5.

Article 8—Change to read as follows:
 The President, Secretary and Treasurer will be elected by the General Committee from the membership at large.

The President's duty, with the help of the Board of Directors, will be to assign responsibilities and to coordinate all efforts toward attainment of the Purpose.

The Secretary's duty will be to conduct correspondence and maintain records for the Affiliation.

The Treasurer's duty will be to receive, hold and disburse all monies for the affiliation and to maintain financial records. He may, with the President's concurrence, designate persons to maintain special funds such as the guidebook fund, the training film fund, etc., provided such individuals rendered a detailed report to him not less than once a year. The Treasurer's book shall be audited once each year and upon the succession of a new Treasurer.

BY-LAWS—In each place where "Executive Secretary" appears, substitute "President." In each place where "Operating Committee" appears, substitute "Board of Directors."

Section 5, Paragraph 2—Delete words "and business managers."

Section 3—For "Executive Secretary," substitute "President, Secretary and Treasurer."

Safety as We See It

By **John Bombay**
AWA Safety Chairman

In the replies to the recent inquiry I sent to all affiliates, requests were made to advise our membership on the use of helmets and wetsuits — their characteristics and the conditions under which their use is advisable. We have already discussed the wetsuit — let's discuss the helmet now.

Every white water boater must have been confronted by outsiders with the same question that I have been asked many times: "Don't you get your head bashed in when you turn over?" I will be the last one to belittle the problem but the possibility of such a mishap is rather remote in Class I through III water conditions, with a properly equipped and reasonably skilled boater. Generally during a tipover one is already performing a paddle brace, and if one's brace fails then this very same brace will pull the boater out of the boat before a complete tipover. A swimming boater with a good life jacket will always have his head up, therefore the only time one possibly could have his head damaged would be during an eskimo roll or in tumultuous class IV rapids, since here even a person with a life jacket will be tossed about.

My observation is that especially beginning boaters have the tendency to leave the boat before it is turned over 90 degrees and consequently some don't even get their head wet. We may then conclude that a helmet should be worn by boaters who want to eskimo-roll in rapids and those who want to run class IV rapids.

What Type of Helmet?

I have seen a variety of designs in use, from an inverted plastic kitchen mixing bowl to an elaborate motorcyclists' type, complete with sun visors and movable sunglasses (only the window wipers were missing).

The choice of helmet is dependent on: 1) the amount of security the wearer wants vs. the amount of comfort one

wishes to sacrifice; 2) The type of rock formations prevailing in the river; 3) The skill of the boater; 4) The classification of the rapids run. Elaborating on the above points we can say:


Most outdoor people dislike headgear unless it rains, or when the sun is very hot, or when they are bald. Consequently, a light helmet will be favored for comfort. A lightweight helmet can be easily made from an inverted sturdy mixing bowl, padded on the inside with some non-saturable plastic foam, and a chin strap attached. Such lightweight helmet will serve most conditions one may encounter.

Since the rocks in rapids are generally rounded by the eternal polishing action of the water, localized impact is unlikely and this helmet will need not to be excessively strong or extremely reinforced. A rubbing rather than an impact action may be contemplated in not too violent rapids, especially since any rounded boulder in current has a water "pillow" on its upstream face. Also a dunker's speed generally will be less than the water speed due to his weight and relatively clumsy contours, as compared to that of the shape of fish (this last part to keep me in good standing with the ladies). The impact in terms of energy dissipated is thus not likely to be very great when swimming.

Different for the 'Cowboy'

The situation differs, however, for the "devil may care" eskimo rolling daredevils in class IV and up rapids. Class IV (and some III rapids) are often very congested, steep, fast and very turbulent; they often hide sharp rocks. Here a strong and sturdy helmet with a high-impact rating is advisable. The minimum type of helmet one should sport here would be the leather basket cyclist's helmet, which is quite comfortable and gives a good protection against most rocks, although it will not distribute the impact force evenly on the head

but quite locally. Most European boaters use this kind of helmet. If one wishes to distribute the impact forces over more skull area one should obtain a fiberglass **cloth** reinforced helmet. One could obtain a plastic construction worker's helmet like one being marketed by: E. D. Bullard Co. called "hard boiled." Such helmet comes with a chin strap and costs about \$6.00. One needs to remove the inside suspending webbing, line the hat with some resin impregnated cloth (the hat is made with matting only), and glue plastic foam to the inside to fit the head, close fit is required to prevent accumulation of water inside the helmet. The sun visor should be partially removed since it produces a hazard in fast water because the water force on this protruding visor would yank the head violently. A few drain holes might be drilled in the top and sides (in hat only). The chin strap buckle might be exchanged for a quick removable clasp of sorts. The above product would give a fine and very effective piece of protective head gear.

(Ed. Note: A pretty  mountaineers' hard-top helmet can be purchased from the Ski Hut, Berkeley (see their ad in this issue) for \$15.00 plus postage. We intend to run a picture story in the next issue showing home construction of a helmet like that used by Noel DeBord (cover, Autumn, 1964 issue) Noel is one of those who likes to practice esquimautage in big rapids.)



When Renewing Give Your Zip Code! It Becomes Compulsory for Bulk Mailing in January!

Boston C-2	\$195
Boston Kayak	\$185
Boon C-1	\$185

Also: Spray Skirts, Knee Pads, Portage Pads, 17-ft. Open Canoe

STEWART T. COFFIN

Old Sudbury Road RFD 1
 Lincoln, Mass. 01773
 Area 617 CL 9 8348

Meet Your Secretary

Your 1965 Executive Secretary is Robert (Bob) G. Field. He has been a member of AWA since 1955. His canoeing story begins 3 years earlier with the Connecticut Chapter of the Appalachian Mountain Club. With this club he has gone on over 150 week-end trips in the New England and New York area.

Bob has made several wilderness trips in Maine and Ontario. Last year he even persuaded his wife to go on a one-week trip on the Magnetawan River in western Ontario.

With or without his wife he has competed in numerous slaloms and downriver races over the years. Some of these are the ones on the Brandywine, Credit, West, Hudson, Salmon (Conn.), Westfield, and at Peterboro, Ontario.

In 1956 Bob, along with Roland Palmedo and Eliot DuBois set up and ran the first white-water slalom in New England. This was the first Eastern White Water Slalom Championships. He was the chairman of the 1959 and 1961 Eastern Slalom Championships on the West River in Jamaica, Vermont. In addition he and his wife have conducted a low-pressure-type, cruising class canoe slalom on the Salmon River in Connecticut in 1963 and 1964.

In addition to canoeing he also does some skiing, hiking and camping in the New England Mountains.

Bob, his wife Rosalie and two future canoeists, Keith, 4, and Heather, 2, live in North Reading, a bedroom town of 10,000 about 20 miles north of Boston.

He is employed by the consulting engineering firm of Anderson-Nichols & Co. Inc. of Boston as their senior hydraulic-hydrologic engineer. The scope of his work is mainly in the flood control and flood damage prevention field of civil engineering. It is through his interest in canoeing and his firm's interest in the water resource field that the company has donated a permanent revolving trophy to the Eastern White Water Slalom Championships at Jamaica, Vermont. This 15-inch Revere Bowl is inscribed with the names of the winners of the C-2 mixed class and replicas are given to each winner.



BOOK REVIEW

FROM START TO FINISH. George Siposs. 58 pp. Haystackers White-water Club, c/o Paul Kipers, 1304 Truitt St., Glendale 1, Calif. 1964. \$2.50.

FUNDAMENTALS OF KAYAKING. Robert Jay Evans. 33 pp. Ledyard Canoe Club, 201 McNutt Hall, Hanover, N. H. 1964. \$2.00

Reviewed by David A. Kurtz

"Preparation . . . the way to success"—so starts George Siposs's new pamphlet on whitewater competitive boating, *From Start to Finish*. A pamphlet that could have been subtitled "The psychology of racing with accompanying instructions," this new work has found a definite place on the reading table of each competitor. George talks about the whole gamut of training, not just paddling techniques. He includes physical training, diet, race planning, and, of course, preparing the mind. Another pamphlet currently available, *Fundamentals of Kayaking*, is written by Jay Evans. This second work, an outgrowth of his outing club instructional program, treats in detail important aspects of kayaking (only) in a sparkling dialogue.

Siposs divides his training program into three zones: long range of up to 2 to 3 months before the race, short range of up to two days, and immediate training. To prepare the paddler's mind is all-important to George as he opens his chapter on long-range training. He notes the effect of worry, anxiety, and defeatism. On physical training he includes details of a plan and discusses a graph on bodily fatigue. Such methods are not usually found in this type of literature. His ideas on equipment selection cover important points but in no way does he bother to make a study or to list desired specifications or availability. This is left to the reader to find elsewhere.

In the specialized training on wild-water racing George talks about the paddler giving himself a pep talk ("Quick, the crocodiles are coming!"). For slalom training he mentions indoor practice and lists various maneuvers but leaves it to other publications as

Whitney's "White-Water Sport" and Evans's (below) to discuss in detail.

Short-Range Preparation

In his chapter on the short-range preparation Siposs indicates that the paddler should have a different mental preparation. He also suggests other total preparations including race application and lodging problems.

For immediate preparation Siposs delves into every detail a competitor should check on at the race site. Last-minute gamesman activities are suggested.

George's next two chapters describe a typical wild-water and slalom race, respectively. Actual helpful hints are not meant for the top competitor; the beginner will benefit most in this discussion. One exception: his advice about the psychology and mental analysis deserve attention especially by the top-ranked.

Races Are Listed

The second section, written largely by guest writers, covers the various races currently being held. As each race is given about a page, careful details are presented the reader. It is suggested that the author should send revised second sections to his text for sales in 1965 and beyond.

Serious errors are few in this text. On page 13 Siposs refers to the World Wild-Water Championships as a down-river championship, the latter term being incorrect on an international level. In the second section an error is made on page 2 regarding the finish for a team race; it should be, of course, the stern of the last boat through the finish line (**bow** only if a gate).

George Siposs has made an excellent contribution to the boating literature primarily in the area of mental and psychological preparation for racing. The reviewer did feel that its text could be improved in the area offering paddling tips for canoeists, and in the section describing brief rules for gate judging slalom. It was also a bit unclear in certain sections as to whether his discussion applied to the wild-water or the slalom aspect. The pamphlet will serve alongside Whitney's "White-

Water Sport" for novice and expert alike.

Evans on Kayaking

Jay Evans treats a different subject in the training of kayakists. While Siposs directs his work to both kayakists and canoeists, Evans talks only to the former. Ideas are presented in a very straightforward manner but in a sparkling style. In fact the style itself is worth the price of the pamphlet.

In free-wheeling manner Jay gives minute details in the following order: a table comparing prices to buy or build the various equipment items needed and used, addresses for kayak purchase, and a complete (and I repeat, complete) list of materials to build a fiberglass kayak. This data is hard to get ordinarily except by personal contact or an occasional magazine article and is thus very valuable.

His discussions on basic paddling fundamentals are excellent and add to the treatment given by Whitney. Evans goes into much greater detail in describing the execution of basic maneuvers and serves to supplement Whitney's discussion. Similar statements could be made for the section discussing the kayak in white water.

Self-Rating Table

Jay's suggestions for slalom preparation, particularly that involving the English gate, are excellent. Details are given as to the execution and a table

Classified

Imported Boating Accessories: Paddle jackets, lifejackets, "sit saks," helmets. GIBB, 708C Eagle Heights, Madison, Wis.

FOR SALE: Klepper single folding kayak S-59 model; bags, paddle, sprayshield; in water once, spotless. Bargain. R. Nichens, 1202 Waukazoo, Holland, Michigan.

Klepper Folding Boats

Enjoy Western rivers, lakes and waterways. Many models to choose from! Write for free catalog.
THE SKI HUT
1615 University Ave.,
Berkeley 3, California

shown rating a paddler's own performance. Jay then lists the 1964 Eastern slaloms and wild-water races.

Several errors are noticed by the serious reader. No gate width is mentioned for the English gate (3 feet for kayak, more for canoe). Two glaring errors appear in his typical race course: the 360-degree gate has not been a legal gate for several years, and the required roll is not in the international rules (though may be added by inventive organizers for special slaloms). Organizing club errors appear on the schedule page: the Kishacoquillas Slalom (cf., Moshannon Slalom) is run by both Explorer Post 32 and the Penn State Outing Club and the West River race is run by all Eastern clubs, with the chairmanship rotating. The Loyalsock sponsor is the Wildwater Boating Club.

Jay Evans has written a how-to-do-it pamphlet for the kayakist that differs from the Whitney discussion-approach and therefore adds to the printed knowledge of this subject. He does treat only the slalom aspect, no space being given either to cruising or wild-water racing. Buy it and start a club in your own area.

WHITE-WATER BOOKS

Buy Them Through AWA

Bookseller's profit goes to the Affiliation's fund for projects like Guidebooks, etc.

Available:

"White-Water Sport,"
by Peter Whitney \$4.00

"Canoeable Waterways of New York State,"
by Lawrence Grinnell \$5.00

"The Exploration of the Colorado River,"
Major Powell's diaries \$3.75

Send orders, with checks made out to
AWA Guidebooks Committee, to:

ED ALEXANDER

6 Winslow Ave

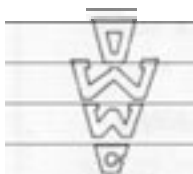
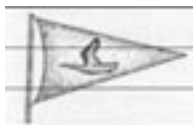
East Brunswick, N. J.

Books will be send Postpaid. No COD's.

SECRETARY'S SOAP BOX

By Bob Field

AWA Executive Secretary



First of all, as the 1965 American Whitewater Affiliation Executive Secretary I want to extend to all the Affiliates through their representatives a hearty hello and I hope that I will be receiving correspondence from each and every club. As to an answer to these letters the reply shall most likely be in the general newsletter that I hope to send out several times throughout the year.

All Affiliations: Please send me your 1965 Dues as soon as possible. All Affiliates should correspond with me concerning the payments of dues and the establishment of a complete and accurate list of the affiliates and their representatives.

If any of you put out any type of a newsletter I wish that you would see to it that I get on your mailing list. In this way I can help keep abreast of what is going on throughout the country and be able to pass on interesting facts to other clubs.

A new club has joined the ranks of the Affiliation. The Canoe Cruisers of Northern Vermont. This is the first organizational year for this young club. They hope to cover the full range of canoeing: white water, flat water, sailing and surfing. They are located in Burlington, Vermont. Their president is Dr. Walter Burnett, 41 Kingsland Terrace, Burlington. As yet they have not designated a representative to the general committee. One

of the guiding lights behind this club is 77-year-old Homer B. Dodge, who is well known to many canoeists. Homer by the way is planning to run parts of the Yampa River this summer.

A major AWA project which has at long last come to a partial completion is the canoe and kayak training film. John Bombay in association with Mack Tucker have completed the canoeing portion of the film. The film shows much detail of canoeing techniques not available in film form elsewhere. The film is in color and is to be shown at 24 FPS, lasts 26 minutes and has a separate sound tape. Optical sound will be added to future copies when money becomes available.

Those clubs that have assisted in the realization of this film through their contributions of money, time and filmed material can use this film free. Those clubs that have not contributed can rent the film at \$10.00 per showing when available.

I urge all clubs that have not done so yet to assist in our training program to enable us to complete the unfinished kayak section. Another \$400.00 is needed. Those clubs that wish to participate can do so by sending a minimum contribution of \$20.00 to John Bombay, 239 E. Vanderbilt, Oak Ridge, Tenn. Please make checks out to American Whitewater Affiliation.



Mr. and Mrs. Edward Dolder on the Sacramento. — Photo by "Prof" Davis

FROM YOUR EDITOR

With this issue, ten years of the American Whitewater Affiliation and of your magazine are accomplished. It is a highly satisfying anniversary. Think of it: a decade ago, after a small group of enthusiasts for a little-known sport had communicated amongst each other by mail, hardly ever meeting, they set up our affiliation among five clubs. Today, as you'll note from the affiliate page, the roster has grown to 54 whitewater groups, many of them formed under the aegis and with the encouragement of this Affiliation.

Your magazine, which began as a lithographed one, then lapsed into mimeographed style for an issue or two, has held the same format over the years. It is now printed in letterpress, like a fine book, by one of the Nation's best-regarded printers, Howell-North of Berkeley, Calif.

Our circulation today is well over the thousand mark, though of course it

drops automatically, with the end of the membership year, and will not regain this peak again until enough of you have sent in your renewals. We do what we can to make this easy for you: please make it easy for Bob Hawley, our Circulation Manager, who would like to get the mass assembly of the new 1965-66 punchcards out of the way at once. It also costs us less at the Post Office when we can send out as nearly uniform a mailing, all at once, throughout the year.

This issue features a five-year index, prepared by the editor's spouse, Frances Whitney. The first five years were indexed by Pat Vanderveen, the editorial spouse of that year, in the February, 1960 issue of the magazine.

Those desiring back issues of the **first** five years will find some gaps—some day, no doubt, a complete file will be a collector's item with commercial value. But many issues are still available.

Harold "Deacon" Kiehm, our Membership Chairman, is the man to handle requests for these (2019 Addison St., Chicago 18, Ill.). Back issues of the second five years are available either through Bob Hawley, 1925 Hopkins St., Berkeley, Calif. 94707, or through Deacon. Price .75 postpaid, or \$2.50 for four issues.



Photographs that have appeared in this magazine are often available, at moderate rates, from the photographers who have made them. Mounted and framed, they can make fine decorations for the den or the clubroom. Your Editor will be glad to pass on any inquiries about prices and sizes.



The fight to conserve some of our Nation's rivers and streams in free-flowing condition has gained a truly remarkable head of pressure in the last five years. See Dan Bradley's comment in this issue. Dan, who had been away from the field for a number of years, was unprepared for the change since his first stint as Conservation Editor, three years ago and more.

What needs to be done now? Well, for example, why not invite leading officials of your State's Park and Recreation Department, even some of the less

corpulent of your politicians, to make a kayak-escorted rubber raft trip on one of your moderate rivers? This was what paid off for the Sierra Club's River Touring Section, last, year when "Prof" Davis invited the Chief of Beaches and Parks, Edward Dolder, to raft the Sacramento with his wife. Dolder sat in the raft for only a few hours, then tried Prof's double kayak. Now, not only is Mr. Dolder "Ed" to everybody involved, but he is a river touring fan.

More important, the park people he supervises are now proposing riverside campgrounds **without road access!** And whole sections of the banks of the Sacramento and Feather River are being set aside for park use. True, these are relatively tame areas from the viewpoint of most of our members, but the precedent will serve for white-water sportsmen when the time comes.

Of course, you should invite recreation executives and members of the Corps of Engineers to your slaloms too. "Multiple use" dams are supposed to have a built-in recreation factor. That is why the Engineers are occasionally willing to regulate the water level for your benefit. More of this could be done with a little purposeful planning. It's a small compensation for the loss of stretches of wonderful boating to the dam mania.

Five-Year Index — Vols. VI-X

(The first five years are indexed in the February, 1960 issue: Vol. V, No. 4.)

I N D E X

Boating Organizations

ACA (letters).....	Vol. VII, No. 4, p. 3
	Vol. VIII, No. 1, p. 29
ACA Issue Again.....	Vol. VIII, No. 2, p. 30
American White Water Affiliation.....	Vol. VII, No. 2, p. 35
Coordinating AWA and ACA.....	Vol. VII, No. 3, p. 37
Is a Life Sentence Justified?.....	Vol. II, No. 3, p. 34
Meet "Prof" Davis.....	Vol. IX, No. 4, p. 13
Meet Dave Morrissey.....	Vol. VI, No. 4, p. 43
Meet George Siposs.....	Vol. VII, No. 4, p. 23
Meet Martin Vanderveen.....	Vol. III, No. 4, p. 23
Roster, New AWA.....	Vol. VII, No. 3, p. 38

Books and Writing

<i>Appalachian Water</i> (Burmeister).....	Vol. VIII, No. 4, p. 17
<i>Campground Atlas of United States and Canada</i> (Bier and Raup).....	Vol. VIII, No. 2, p. 28
<i>Canoeing White Water</i> (Carter).....	Vol. VIII, No. 2, p. 28
<i>Conservation</i> (Coyle).....	Vol. VI, No. 2, p. 33
<i>Exploring the Little Rivers of New Jersey</i> (Cawley).....	Vol. VIII, No. 2, p. 28
<i>From Start to Finish</i>	Vol. X, No. 4, p. 26
<i>Fundamentals of Kayaking</i>	Vol. X, No. 4, p. 26

<i>Goodbye to a River</i> (Graves).....	0 1 VI, No. 4, p. 44
Guidebooks.....	Vol. IX, No. 1, p. 24
<i>Nature and the American</i> (Huth).....	0 1 VI, No. 2, p. 32
Plea for a Guidebook.....	Vol. VII, No. 3, p. 24
<i>Recreational Use of Wild Lands</i> (Brockman).....	Vol. VI, No. 2, p. 32
<i>Tackle Canoeing This Way</i> (Blandford).....	Vol. VII, No. 2, p. 30
<i>This Is the American Earth</i> (Adams).....	Vol. IV, No. 2, p. 27
<i>Torrent in the Desert</i> (Weston and Lee).....	Vol. IX, No. 1, p. 3
<i>White-Water Sport</i> (Whitney).....	0 1 VI, No. 3, p. 38
<i>Wisconsin Water Trails</i>	Vol. IX, No. 3, p. 26
Writing on (White) Water.....	Vol. IX, No. 2, p. 19
<i>Young Sportsman's Guide to Canoeing</i> (Camp).....	Vol. VIII, No. 3, p. 29

Canoes

Canoeing as Exercise.....	0 1 IX, No. 2, p. 14
Decked Canoe.....	0 1 VIII, No. 1, p. 27
Evolution of Canoeing Styles.....	0 1 VI, No. 1, p. 16
Jet-propelled Canoe.....	0 1 X, No. 2, p. 19
Making a Canoe Deck.....	1 VI, No. 4, p. 5
Making Knee Straps for a Canoe.....	Vol. VII, No. 1, p. 16
Principles of Canoe Design.....	1 VIII, No. 2, p. 3
Sound of Metal.....	0 1 X, No. 2, p. 26
Well-Furnished Canoe.....	Vol. IX, No. 4, p. 3
White-Water Canoeing in a College Outing Club.....	Vol. VI, No. 1, p. 44

Conservation

Allagash.....	0 1 VI, No. 1, p. 37
	Vol. IX, No. 4, p. 20
Buffalo, St. Croix, Upper Selway.....	Vol. X, No. 4, p. 21
Canyons Lands National Park.....	0 1 VIII, No. 1, p. 25
C. & O. Canal Hike.....	0 1 VII, No. 2, p. 27
Death of a River (Mattagami).....	Vol. IX, No. 1, p. 4
Death of a River System (Northwestern California).....	Vol. IX, No. 4, p. 23
Disappearing Rivers.....	0 1 VI, No. 2, p. 12
Farewell to Glen Canyon.....	Vol. VIII, No. 4, p. 15
Fight to Save Rivers.....	1 VIII, No. 4, p. 31
	Vol. X, No. 1, p. 25
	Vol. X, No. 2, p. 2
	Vol. X, No. 3, p. 23
Indiana Dunes National Lakeshore Park.....	Vol. VII, No. 4, p. 35
It Takes a Lot of Law to Protect a Babbling Brook.....	Vol. VI, No. 4, p. 47
Lake Powell.....	0 1 X, No. 2, p. 31
Lost Beauties of Glen Canyon.....	Vol. X, No. 3, p. 26
"Nor Any Waters Flow" by Eliot Dubois.....	0 1 X, No. 1, p. 3
River Monuments.....	0 1 VIII, No. 1, p. 35
Selway-Bitterroot Controversy.....	Vol. VII, No. 1, p. 25
Those Wasteful Rivers.....	0 1 VIII, No. 1, p. 14
Thousand-Year Flood.....	0 1 X, No. 4, p. 2
To Save a Beautiful Surfing Beach.....	0 1 VIII, No. 1, p. 12
Tragicomedy of Colorado River.....	1 X, No. 2, p. 27
Water Management Programs.....	Vol. VII, No. 3, p. 28
Wild-Rivers Study.....	Vol. IX, No. 4, p. 20
Yellowstone Lake.....	0 1 VI, No. 4, p. 35
	Vol. VII, No. 2, p. 29
	Vol. VII, No. 4, p. 35

Equipment

American Sectional Super-Canoe.....	Vol. VIII, No. 4, p. 29
Calypso White-Water Camera.....	Vol. VIII, No. 3, p. 17
Hull Breathing Devices.....	0 1 VIII, No. 4, p. 24
Kayak of the Eskimo.....	Vol. VII, No. 2, p. 3
Knee Straps for a Canoe.....	Vol. VII, No. 1, p. 16
Laminated Maps.....	Vol. VII, No. 3, p. 40
Life Jackets.....	0 1 IX, No. 2, p. 27
~addles	
Kayak (Coffin).....	Vol. IX, No. 1, p. 22
Klepper.....	0 VII, No. 3, p. 40

Slalom Blade (Hauthaway).....	Vol. IX. No. 2. p. 27
How to Make Your Own.....	Vol. VI. No. 1. p. 41
Seats, Sacks and Self-Shuttles.....	Vol. IX. No. 1. p. 12
Snorkel for Kayak Spills.....	Vol. VIII. No. 2. p. 16
These Signs Could Save You.....	Vol. VII, No. 4, p. 29
Films	
Advanced White-Water Kayaking.....	Vol. X. No. 2. p. 23
Beginners' White Water.....	Vol. VIII. No. 2. p. 21
"Ten Who Dared." Saga of Colorado River Conquest.....	Vol. VI. No. 3. p. 43
Humor and Miscellany	
Bushed on a Budget.....	Vol. VI. No. 1. p. 30
Canadian Kayak Stamp.....	Vol. VI, No. 4, p. 15
Credo of a River Mooch.....	0 1 IX, No. 2. p. 3
Dog of the River.....	Vol. VI, No. 1. p. 23
Harrigan's Photo in <i>Sports Illustrated</i>	Vol. VIII, No. 3. p. 31
How to Not Take Pictures.....	Vol. VII, No. 4. p. 10
Living Off the Land.....	0 1 VI, No. 2. p. 8
	Vol. VI, No. 3. p. 20
Look Out, Russia!.....	Vol. VIII, No. 3. p. 7
Needed: A Technique for a Chicken-out.....	Vol. VIII, No. 1, p. 9
Questions for a High I-Q Paddler.....	Vol. VIII, No. 2. p. 12
Some Ideas on Diet.....	0 1 VII. No. 2. p. 12
<i>Sports Illustrated</i> and Dresden World Championships.....	Vol. VII. No. 3. p. 39
We Flee the Wild Wind.....	1 IX, No. 3. p. 3
When Downstreamers Meet Upstreamers.....	Vol. IX. No. 1. p. 10
Navigation Rights	
More About River Navigation.....	Vol. VI, No. 1, p. 24
New England and Navigation Rights.....	Vol. VII, No. 1, p. 3
Paddleboats and the Law.....	0 1 VI, No. 4. p. 25
Restrictions on Boaters (letter).....	Vol. VI, No. 3. p. 3
Right of Passage over Portages.....	0 1 VI. No. 2. p. 18
Right to Navigate our Rivers.....	Vol. IX, No. 2. p. 11
Racing	
British White Water.....	Vol. VI, No. 1. p. 2
Choosing Championship Teams.....	Vol. IX, No. 1. p. 2
Clorox Bottle Slalom.....	Vol. VIII, No. 3. p. 22
Dartmouth Phenomenon.....	Vol. IX, No. 2. p. 12
First Sylvan Slalom.....	Vol. VII. No. 2. p. 19
How to Finance U. S. Slalom Team.....	Vol. IX, No. 1. p. 8
How the Maoris Run their "Hurdle Slalom".....	Vol. VIII. No. 2. p. 29
U. S. Team in East Germany.....	0 1 VII. No. 3. p. 4
World Championships. 1963.....	Vol. IX, No. 3. p. 7
Rivers and Trips	
Austrian Journey.....	Vol. VI, No. 1, p. 9
AWA on the Clearwater.....	Vol. VI, No. 3. p. 30
By Kayak through Darkest Maine.....	Vol. VIII, No. 4, p. 8
Canoeing in Wilderness Quebec.....	Vol. IX. No. 4. p. 13
Cumberland South Fork.....	0 1 IX. No. 4. p. 13
Fighting the Gales at Isle Royale.....	Vol. IX. No. 1. p. 5
Following Thoreau on the Merrimac.....	Vol. VIII. No. 1. p. 2
French Broad.....	Vol. VIII, No. 3. p. 27
Glory of the Selway.....	Vol. VII. No. 2. p. 15
"Grand" Adventure.....	Vol. VI. No. 3. p. 5
Grand Canyon White Water.....	Vol. VI, No. 1. p. 19
Great Cacapon.....	Vol. IX, No. 4, p. 7
Greenland Summer.....	Vol. VII. No. 4, p. 18
Joys of the Staircase.....	Vol. VIII, No. 3. p. 11
Leaning and Learning with KCCNY on the Neversink.....	Vol. IX. No. 1. p. 16
Little Big-Hearted River (Provo).....	Vol. IX, No. 3. p. 27
Morning on the Lievre.....	Vol. X, No. 3. p. 3
North for Uranium.....	Vol. VIII, No. 3. p. 3
Old Man Feather River Again.....	Vol. IX, No. ? p. 16
Painting River Gauges in New England.....	Vol. VII, Nov. 4. p. 17
Pioneering the Flathead.....	Vol. X, No. 4, p. 9
Pioneering a Tennessee River.....	Vol. VIII, No. 1. p. 6

Queen McCloud Preserves her Mystery.....	Vol. VII, No. 4, p. 6
River Marking System.....	Vol. IX, No. 2, p. 2
Rivers: Their Rise and Fall.....	Vol. VII, No. 4, p. 13
Selway, Wilderness Gem.....	Vol. VI, No. 3, p. 15
Tennessee's Obed.....	Vol. X, No. 2, p. 21
Thirteen on the Petawawa.....	Vol. IX, No. 4, p. 27
Thirteen on the Petawawa (II).....	Vol. X, No. 1, p. 27
Tidal Slalom (Mill Rapids, Cohasset).....	Vol. IX, No. 2, p. 18
Washington Too Was a White-Water Man.....	Vol. IX, No. 1, p. 14
We Learn the Autrian Way.....	Vol. IX, No. 2, p. 8
We Never Portage in the Ozarks.....	Vol. VIII, No. 4, p. 4
We Vanquished the Neversink.....	Vol. VI, No. 4, p. 13
Wilderness Cruise by Foldboat.....	Vol. VII, No. 1, p. 18
Wilderness Journey.....	Vol. VI, No. 2, p. 3
Yellowstone Idyl.....	Vol. VII, No. 3, p. 20
Youghiogheny Escapade.....	Vol. VII, No. 1, p. 14

Safety

Accidents, Causes.....	0 1 IX, No. 4, p. 24
Bow Lines.....	0 1 VIII, No. 4, p. 21
	Vol. IX, No. 1, p. 27
	Vol. IX, No. 2, p. 24
Draft of a Training Program.....	Vol. VII, No. 4, p. 33
Eskimo Roll Pays Big Dividends.....	Vol. VI, No. 3, p. 34
Licensing (letter).....	Vol. VII, No. 3, p. 2
Life Jackets.....	Vol. IX, No. 1, p. 27
Life Vests.....	0 1 VI, No. 2, p. 30
Rescue Procedure.....	Vol. IX, No. 2, p. 28
Rescue Rope.....	Vol. X, No. 3, p. 2
AWA Safety Code.....	Vol. IX, No. 2, p. 31
Skill.....	Vol. VIII, No. 3, p. 28
	Vol. X, No. 1, p. 19
Testing Program.....	0 1 VII, No. 2, p. 25
Value of Danger.....	0 1 IX, No. 2, p. 26
Wet Suit.....	Vol. X, No. 3, p. 2

Techniques

Archimedes Helps Us Roll.....	0 1 VIII, No. 2, p. 9
Canoe Surfing in the East.....	0 1 VII, No. 1, p. 10
Capistrano Flip.....	Vol. X, No. 2, p. 3
Colorado Hook.....	Vol. VI, No. 1, p. 6
Crossine Currents.....	Vol. VI, No. 3, p. 26
Duffek, Milo	
Eskimo Roll.....	Vol. X, No. 4, p. 16
Topol proposes Duffek visit.....	Vol. VIII, No. 2, p. 2
Siposs on proposed visit.....	Vol. VIII, No. 3, p. 20
	Vol. VIII, No. 3, p. 2
In America.....	Vol. X, No. 1, p. 22
	Vol. X, No. 2, p. 24
	Vol. X, No. 3, p. 4, 32
Elements of Paddling.....	Vol. VI, No. 2, p. 21
Emptying a Kayak.....	Vol. VI, No. 4, p. 34
English-Gating at Dartmouth.....	Vol. X, No. 2, p. 14
Eskimo Roll.....	Vol. VI, No. 4, p. 17
Esquimautage Sans Paddle.....	Vol. X, No. 3, p. 14
Everready Snorkel for Kayak Spills.....	Vol. VIII, No. 2, p. 16
Hamming.....	Vol. VI, No. 2, p. 29
How Fast Do We Have to Shoot to Stop Action.....	Vol. VII, No. 2, p. 22
How to Read the Weather.....	0 1 VII, No. 3, p. 14
How to Waterproof a Camera.....	Vol. VI, No. 4, p. 31
Kayak Surfing in the West.....	Vol. VII, No. 1, p. 5
Making Modern Kayak Strokes.....	Vol. VII, No. 4, p. 38
More About River Navigation.....	Vol. VII, No. k, p. 24
Ontario Voyageurs Rating System.....	o . VII, No. 1, p. 22
Paddle Brace.....	Vol. VI, No. 3, p. 11
Paddling Tips from Paul Bruhin.....	Vol. VI, No. 3, p. 11
Psychology of Esquimautage.....	0 1 VVII, No. 1, p. 22
Red Ridge Colleg.....	Vol. IX, N. 3, p. 32
Test Your Slalom Skill in Still Water.....	VI, VIII, No. 2, p. 18
To Feather or Not to Feather.....	1 . VIII, No. 2, p. 20
Varieties of Canoe Tipover.....	Vol. VIII, No. 2, p. 14
Walking on Water.....	Vol. VII, No. 4, p. 36
White-Water Education.....	Vol. VIII, No. 4, p. 11
	Vol. IX, No. 4, p. 11

AWA Affiliates

Adventure Unlimited
Homer Hicks, Rep.
Box 186
Belvidere, N. J.

Albuquerque Whitewater Club
Earl D. Oliver, Rep.
4717 Palo Duro N.E.
Albuquerque, N. Mex.

American Camping Ass'n.
Ernest F. Schmidt, Rep.
Bradford Woods
Martinsville, Ind.

American Youth Hostels, Inc.
Metropolitan Chicago Council
Roy Koselund, Rep.
10416 South Normal Ave.
Chicago 60, Illinois 60628

American Youth Hostels, Inc.
Columbus, Ohio, Council
Fred Appleton, Rep.
442 S. Drexel
Columbus 9, O.

American Youth Hostels, Inc.
Pittsburgh Council
B. E. Sundquist, Rep.
2060 Township Rd.
Monroeville, Pa. 15146

American Youth Hostels, Inc.
Greater St. Louis Council
Bradford Davis, Treasurer
Room 202, Downtown YMCA
1528 Locust St.,
St. Louis, Missouri 63103

Appalachian Mountain Club
Boston Chapter
Paul T. McElroy, Rep.
5 Joy St.
Boston 8, Mass.

Appalachian Mountain Club
Connecticut Chapter
Richard H. Booth, Rep.
12 N. Main St.
East Hampton, Conn. 06424

Appalachian Mountain Club
Vermont Chapter
Arthur N. Cooley, Rep.
78 Indian Road
Riverside 15, R. I.

Appalachian Mountain Club
New York Chapter
Ruth Walker, Rep.
95 Dartmouth Rd.
Manhasset, N. Y. 11030

Blue Ridge Voyageurs
Art Cochel, Rep.
12606 Dalewood Drive
Wheaton, Maryland

Boy Scouts of America
National Council

National Professional Training
Center
Ernie Schmidt, Rep.
Mendham, N. J.
BSA Post 111
Richard Wiggan
114 Forest St.
Wellesley, Mass. 02181

B. C. Kayak & Canoe Club
Geert Sonderhoff, Rep.
P. O. Box 2237
Vancouver 3, B. C.

Buck Ridge Ski Club
L. B. Abronski, Treas.
124 Ashby Road
Upper Darby, Pa.

Calgary Canoe Club

Canada Folding Boat Co.
P.O. Box 1002
Calgary, Alberta

Canoe Cruisers Association
John W. Lentz
2907 Olive Avenue
Washington 7, D.C.

Canoe Cruisers of
Northern Vermont

Dr. Walter W. Rurnett, Rep.
10 Alfred St.
Burlington, Vt.

Central Missouri State College
Outing Club
Dr. O. Hawksley, Rep.
Central Missouri State College
Science Dept.
Warrensburg, Missouri

U. of Chicago Outing Club
Harold W. Lucas, Rep.
1212 East 59th St.
Chicago 37, Ill.

Colorado White Water Association
Monte Hostetter, Treas.
3105 So. Fox St.
Englewood, Colo.

Cornell Outing Club
Tom Southworth, Rep.
Willard Straight Hall
Cornell University
Ithaca, N. Y.

Delaware Canoe Club
Ed Ott, Rep.
729 Cattel St.
Easton, Pa.

East Tennessee White Water Club
Richard E. Reed, Rep.
100 W. Newcome Rd.
Oak Ridge, Tenn.

Explorer Post No. 15
Ken Hubbell, Rep.
804 San Anselmo Ave.,
San Anselmo, Calif.

Explorer Post 32
David A. Kurtz, Rep.
623 W. College Ave.
State College, Pa.

Explorer Post 20
J. H. Fretwell, Rep.
4091 Trinity Drive
Los Alamos, N. M. 87544

FibArk
Wuerfmansdobler, Rep.
Salida, Colo.

Fourth Weston Scout Troop
Roger Parsons, Rep.
15 Langside Avenue
Weston, Ontario

Gahonga's Elite
Howard S. Bass, Rep.
1387 E. Valley Rd.
Santa Barbara, Calif.

Genesee Downriver Paddlers
Raymond J. Allen, Rep.
27 West State Street
Wellsville, N. Y.

Haystackers Whitewater Club
Gail Minnick, Rep.
908 N. Vista
Los Angeles 46

Indooroopilly Small Craft &
Canoe Club
Garry Gardner, Rep.
Flat 4, 46 Foxton St.
Indooroopilly, Brisbane
Australia

Ka Na Wa Ke Canoe Club
Chuck Berg, Rep.
2877 Amber Rd., RR 1
Marietta, S. Y.

Kayak & Canoe Club of Boston
Barbara Wright, Rep.

Massachusetts General Hospital
Boston 14, Massachusetts

Kayak and Canoe Club
of New York
William Prime, Rep.
50 East 80th St.
New York 17, N. Y.

Ledyard Canoe Club
Jay Evans, Rep.
201 McNutt Hall
Hanover, New Hampshire

Michigan Canoe Racing Assn.
W. Staples, Rep.
Rt. S, 6181 E. Price Road
St. Johns, Michigan

Mohawk Rod & Gun Club
Hugh Stark, Rep.
115 Wesley Avenue
Toronto 18, Ontario

Monocacy Canoe Club
Lawrence Swann, Rep.
RFD 1, Walkersville, Md.

Mountainlair Outing Club
C. Daniel O'Sullivan, Rep.
West Virginia University
Morgantown, W. Va.

Murray Hill Canoe Club
F. I. Smith
81 Stony Lane
Short Hills, N. J.

Niagara Frontier Sons of Ahab
Austin Hoyt, Rep.
99 Highland Avenue
Buffalo 22, N. Y.

Norwich University Outing Club
L. J. Hurley, Representative
Northfield, Vermont

Oneonta State College Outing Club
Sidney Feldman, Rep.
72 Ford Ave.
Oneonta, N. Y.

Ontario Voyageurs Kayak Club
Sandy Burke, Rep.
122 Fenelon Dr.
Don Mills, Ont.

Ozark Wilderness
Waterways Club

Mrs. Margaret Hedges, Rep.
Rt. 2, Lake Quivira
Kansas City 6, Kansas

Penn State Outing Club
William W. Bickham, Jr.
422 W. Fairmount Ave.
State College, Pa.

Prairie Club Canoeists
Ed Swanson, Rep.
4140 Elm St.
Downers Grove, Ill.

Purdue Canoe Club
Mark Moore, Rep.
800 Southwestern Ave.
W. Lafayette, Ind.

Sierra Club
W. Noble, Rep.
1050 Mills Tower
San Francisco 4, Calif.

Sierra Club
Great Lakes Chapter
Henry Karels, Rep.
609 Parkside Circle
Streamwood, Ill.

Sierra Club
Mother Lode Chapter
Bill Weber, Rep.
9013 Talisman Dr.
Sacramento 26, Calif.

Sierra Club
River Touring Committee
Roland W. Davis, Rep.
14 Norwood Ave.
Berkeley, Calif. 94707

Sierra Club
San Francisco Chap.
River Touring Section
Maynard Munger, Rep.
13049 Broadway Terr.
Oakland 11, Calif.

Viking Ski Club
Robert Weiler, Rep.
P. O. Box 57, Morin Heights
Quebec, Canada

Washington Foldboat Club
Wolf Bauer, Rep.
5622 Seaview Avenue
Seattle 7, Washington

Wildwater Boating Club
of State College
David A. Guss, Rep.
368 Br A
~tat;

Winnipr
Harry G
Box
Winnipeg
Wj
Rich:
2405

