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FOLDCRAFT KAYAK COMPANY
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Write for our folder on Hart-Sioux kayaks and accessories.
**WHITE WATER**

Sponsored by The American White-water Affiliation

November, 1960 Volume VI Number 3

**Contents**

**ARTICLES**

"Grand" Adventure .................. Walter Kirschbaum 5
The Paddle Brace ...... Paul Bruhin & Peter Whitney 11
The Selway, Wilderness Gem ............... Oz Hawksley 15
Living off the Land (Part 2) ............ Tim Traill 20
Crossing Currents ................... Jan Sule 26
AWA on the Clearwater .............. Peter D. Whitney 30
White Water ...................... Josephine Weaver 33
1961 River Trip Schedule .................. 40
Walt Disney Films Saga of Colorado River ........... 43

**DEPARTMENTS**

American White-water Affiliation .............. 2
Product Report ......................... 4
Racing Report ...................... George Siposs 10
Race Results ......................... 33
Safety As We See It .................. Red Fancher 34
Conservation Comment ................ Dan Bradley 35
Canoeing Articles .................. 37
Book Reviews ....................... 38
Secretary's Soap Box ................ Clyde Jones 41
From Your Editor .................... Martin Vanderveen 44

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American WHITE WATER is mailed to all members of the American White-water Affiliation in May, August, November and February. Membership is open to all who are interested in river sport, for the sum of $2.50 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, Clyde Jones, 5525 E. Bails Drive, Denver 22, Colorado.

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

Printed in the United States of America
Dear Editor: I am a new member of the AWA and enjoy very much the reading of our Journal. I don't participate in boat races but I am very fond of paddling and would like to see more articles like the one by George Radzke-wycz — Wilderness Journey (August, 1960). I find your guide notes very useful.

Would you be so kind as to advise me what is the best way of storing a rubber hull of a folding kayak for winter — loosely-folded or taut and assembled?

W. Milczyn
4472 Dupuis Ave.
Montreal 26, Quebec

More articles of the cruise-log variety are scheduled. See the ones on the Sel-way and Clearwater Rivers in this issue.

Best way to store your hull is loosely folded. A liberal sprinkling of tire talc before storage will help keep the rubber in good shape. Try to store it in a moderate temperature — hot attics and cold garages are equally bad.

---

Dear Sirs:

I'm enjoying my August issue very much and would like to have any information you might be able to furnish about the book Vodni Slalom, by Jan Sulc.

Dr. Edward L. Glassman
107 Edgevale Road
Baltimore 10, Maryland

The book was published in Czechoslovakia (in the Czech language) several years ago. This our latest correspondence with the author he indicated that it is currently out of print. However, with the author's permission we are planning to print translations of several more chapters. See the chapter in this issue.

The following has induced us to suspend in this one case our policy of never printing unsigned letters:

Gentlemen: It looks as though I will be unable to do any boating for some time to come. I store my boats in my garage and this year I was going to try a new system. I put a large pulley in the crown of the garage and put a rope through it. I then attached it to my largest boat and hauled the boat up to the roof. I tied the rope to the bumper of my car, took a ladder and put my folded kayak in the cockpit of the larger boat; still having some room left I put in my life raft, slalom poles, paddles, etc. All that was left was to untie the rope from the car bumper and tie it to a nail in the wall.

Unfortunately the filled boat was heavier than I was, and before I knew what was happening I was jerked off the floor. I hung on, and halfway up I met the boat coming down and received a severe blow on the shoulder. I then continued on to the top of the garage, banging my head on the roof and getting my finger jammed in the pulley. When the boat hit the floor it twisted and dumped all the stuff that was in the cockpit. It was now heavier than the boat, and so started down again at high speed. Halfway down I met the empty boat coming up and received severe injuries from behind. When I hit the ground I landed on the spilled foldboat parts, getting several painful blows from longerons, etc. At this point I must have lost my presence of mind because I let go of the rope. The boat came down again, giving me another heavy blow on the head.

I will soon be able to receive visitors at the hospital.

Unsigned

American WHITE WATER
Dear Van: The Ontario Voyageurs' movie, "Water, Waves and Voyageurs," which we announced was available for showing by other clubs, was accidentally lost in a fire. We are now working on a new film, so our friends who have expressed an interest in seeing it won't be disappointed.

George Siposs
5 McArthur Avenue
Weston, Ontario

Editor: In many lands all foldboaters and canoeists greet each other by shouting "Ahoy" (or the equivalent). Don't you think it would be nice if paddlers over here did that too?

No need then, to holler "Hey" or to use some other indiscriminate meaningless term when meeting another boater on the river or on the road or in camp.

In addition, a special, accepted word of greeting just for us boaters would surely bring us somehow closer together in this wonderful fraternity of paddlers.

Helmut Peter
46-38 15th St.
Flushing, Long Island, N.Y.

Dear Van: I dislike the trend to more and more mechanization in many sports with less and less physical skill. It certainly cannot lead to success in the Olympics. I question that it is even good for our people. Yet the use of canoes and kayaks is officially discouraged in many ways. Kayaks are forbidden on Lake Sebago & New York. Neither canoes nor kayaks are allowed on Lake Michigan at Chicago. There was talk of banning white water boating on the American River in California. Many areas impose license fees that become excessive for a paddler with wanderlust. Launching restrictions for motorboats are applied to canoes also and launching fees are often the same for kayaks as for motor cruisers.

Some of this restricting is done in the name of safety. I think the members of this Affiliation will agree that canoes are not tippy, though some canoeists are. I feel that legislation is called for only when the safety of others is concerned. Individual safety should be taught, not legislated.

How widespread have these evils become? I think it is time we compiled a list of such encroachments on the liberty of paddlers. Would everyone who knows of specific examples please send them to me?

Bob McNaIr
32 Dartmouth Circle
Swarthmore, Pa.

Editor: I always thought letters to the editor were a lot of rubbish; now here I go at it!

The May issue did it—best ever! Those maps included were the best idea ever came out. Of course I want our New England rivers mapped and someone else wants Western rivers. How about just publishing a list of available maps and let us buy them. The text for these maps was fine, but the map itself should be bigger and the left hand edge would be more readable if enlarged.

While we're at it, Burmeister writes a nice article. BUT I'd rather skip the foreign stuff and stick to what we really are—American. There's plenty of good material in our own land and it could be very helpful to a lot of us as well as entertaining if written by the same man and carefully arranged as a guide to the trip.

John E. Burbank
1 Chestnut Hill Road
Stamford, Connecticut

See Clyde Jones' notes on river maps and guides on page 42 of this issue. On the foreign vs domestic question— we try to maintain a balance of material, and some stories on foreign trips seem to be worth printing.

American WHITE WATER
The American White-Water Affiliation

We are many individuals who wish to promote river touring, and to keep informed about wilderness waterways and the ways of white water.

We are an affiliation of outdoor groups, outing associations, canoe clubs, ski clubs, hiking groups, all interested in river touring for our members. Our groups range from the Appalachian Mountain Club in Boston, to the Washington Foldboat Club in Seattle. These groups have pioneered in developing river know-how. They are the local sources from which flow the currents tributary to our growing sport. Through group representatives, the knowledge of all is made available to all.

We are a non-profit organization. Our organizational simplicity permits all dues to go directly to the building of our magazine and services.

OUR PURPOSE

To encourage exploration and enjoyment of wilderness waterways; to foster research, development, and teaching of improved techniques and equipment designs for safely negotiating white water; to protect the wilderness character of our waterways for the growing number who are discovering the rewards awaiting the river tourist.

OUR PUBLICATION

All members receive our quarterly magazine "American WHITE WATER," which is a voice for all American boatmen. You are urged to contribute articles, pictures, cartoons, information and ideas (to increase the fun of our sport and ideas for improving our services to you.)

MEMBERSHIP

Membership is on an annual basis with the new year starting in March. Tell your friends who might enjoy canoeing or cayoneering about the AWA. Their $2.50 will help foster enjoyment of wilderness water and bring each into the boating fraternity through the pages of American WHITE WATER magazine.

COUNT ME IN

as a member of the American White Water Affiliation. As a member I will receive issues of American WHITE WATER magazine in May, August, November and February. Here is my $2.50. My address is

Occupation: ____________________________________________________________

Type of boat preferred: __________________________________________________

Boating club membership: ______________________________________________

Suggested articles: ______________________________________________________

Mail to: American White Water Affiliation, 2019 Addison St., Chicago 18, Ill.
Modern people, nowadays, use airliners across continents in the most relaxed manner and think flight the greatest fun on earth. I found myself trembling when my family flew to Europe this summer. To me it is terrifying to have to depend on a craft that is so extensively exposed. Modern people think it is suicidal to run the Grand Canyon in a cockleshell: "Gamblers" would do such a thing: "Screwballs."

'Throughout the west the sight of my kayak aroused amazement. No one seems to understand that, so equipped, I am not interested in fishing. "What lake are you headed for?" Whenever I sincerely disclosed my plans and occasionally found people with an unspoiled approach and a little similar experience, they were hardly able to conceal their horror; they did not generally call me crazy, yet their opinions were obvious. As one Arizona State Officer put it, "You will never make it!"

One's approach seems to be the decisive factor; success is probably impossible without respect for the river, and respect again is impossible without due preparation, skills, and appropriate equipment. A lack of respect is bound to meet failure.

I have been fortunate. I learned to use a narrow kayak when I was 14, and in the succeeding 20 years have never omitted an opportunity to ride my kayak in good water. It was natural, as my skill increased, to attempt more and more difficult stretches. A number of spills and the loss of a foldboat taught me to be careful in seating arrangements and in the arrangement of safety lines. Caution made me wear a crash helmet. Theo Bock from Munich, one of the greatest canyoneers, taught me a great deal. When I first left Europe for the race in Salida in 1955, I had run essentially all of the canyons of reputation in the old country; there are still some that nobody else has tackled. In the bad summer flood of 1957 I lost another foldboat while exploring the upper Arkansas between Leadville and Canon City, and I
learned a lot again. I began to enjoy exploring remote rivers more than racing. I found wilderness canyons so attractive that all the success I had had in slalom and downriver races of national and international level faded in importance compared to the deep impulses experienced on my excursions. The Kayak Slalom World Championship I had won in 1953 is, to be sure, something I am very proud of, but I believe that successful canyon expeditions give far more and deeper satisfaction.

With such a background it is certainly not amazing that I consider a cockleshell kayak in rapids a safer craft than an automobile on today's roads, frail and exposed a craft as a kayak may seem to the uninitiate. But with all this background my planning was bound to arrive at the "Problem" trip—Grand Canyon. I studied the reports of the undertaking of Major Powell and other river pioneers (including "Zee" Grant's, of course) and listened closely to the hair-raising account that such superb canyoneers as Tyson Dines, Jr., gave of their experiences with the ill-reputed river. Tyson, after he had seen me operate in canyons, encouraged and invited me to join his party in running the "Grand" in June, 1960.

Obtaining a government permit required rather rugged methods. After my written request to be admitted with my kayak had been coldly turned down by the Park Service, it happened that the then Assistant Park Manager, Dan Davis, a most proficient river rat himself, crossed my path on a San Juan trip. Following, right at the river, was the most vital exchange of arguments I had ever heard. Ty Dines, speaking in my behalf, employed all his brilliance as an attorney in convincing Dan of my boating abilities. Dan, of course, had to be concerned with Park rules and the prevention of a huge rescue action which he feared inevitable if anybody entered the Grand Canyon in so frail a craft. Ty won after a violent sounding half hour. Dan had promised to obtain permission for me to join Ty's party of a pontoon and a 22 foot Peterborough Canadian freight canoe provided I first proved myself by running Cataract Canyon successfully, and, if possible, other canyons of similar difficulty.

Cataract Canyon, between Moab and Hite, Utah, two weeks later, proved to contain the ruggedest 30-mile stretch of water I had ever run. As a matter of fact at a probably water flow of 20,000 second feet, two long rapids require more skill in dodging rocks than any rapid in the Grand Canyon at 40,000 second feet (of course, Grand Canyon rapids necessitate more strength, wider experience and much greater consistency than Cataract Canyon in general). Although I spent approximately 90 minutes above the greatest drop in Cataract Canyon before I decided to run it and how to run it, I conquered everything without a spill. Also, in line of my preparations for the Grand in this summer of 1959, I joined Ty in travelling through Hell's Canyon of the Snake River at a stage of 20,000 second feet of water flowing, a circumstance which made the Snake's rapids rather formidable. On this trip, I spilled in Buck Creek, had to roll up four times in Granite Creek and skipped Wild Sheep altogether. Ty ran it alone in his freight canoe and was tossed out while coming down through Granite Creek's first wave. The empty craft, with its motor running at high speed, rushed on down the river past me, and only eddies prevented its escape. While I was trying to get alongside in order to enter it and get it under control, I ended up being driven around sideways and in circles by its bow that sat behind me on my deck. The impact with a cliff finally broke the motor handle, enabling us to recover the canoe.

With all this experience duly reported to Dan Davis, I finally obtained my permit for the Grand Canyon in late fall of 1959 and spent spring weekends on the upper Colorado, in Black Canyon of the Gunnison River and in lakes practicing the eskimo roll.

After a little road incident with a gusty wind that carried two kayaks plus rack from my car and about 20 yards into Arizona's desert, and due repair hours, we finally left Lee's Ferry late one June afternoon, to spend six wonderfully exciting days (a total of 30 hours in the boat) with this mighty...
companion river. Ty was steering his new freight canoe with an 18 HP motor and three experienced river men to lend a hand. Ted Hatch from Hatch River Expeditions captained a pontoon with six selected passengers. Handpropelled, I left camp ahead of them most of the time in order not to delay them, but waited for their company at major rapids.

The large holes in Badger Creek Rapid were not too hard to avoid by sneaking down close to the right bank, and Soap Creek allowed me easily to cut, from the center of the tongue, out through the waves that come in at an angle to funnel into the tail waves. While "Zee" Grant called Badger Creek a typical Grand Canyon rapid when he ran it at 20,000 second feet (what he called "high water"), its features seem to differ thoroughly at 40,000 second feet, and, 20 years later, I would tend to describe Soap Creek as being typical in structure: the V-shaped tongue, swiftly but smoothly gliding down the drop with the tail waves beginning where diagonal waves meet to form the V. Some effort is necessary to cut through these diagonal waves and out to the side, in order to avoid greater exposure that would come with riding out the tailwaves. A considerable number of Grand Canyon rapids follow this pattern while they are mostly more powerful than Soap Creek. When I was a little younger, I considered the practice of avoiding the "big stuff" to be cowardly; I don't anymore; and now know of no experienced kayaker who would not attempt to outsmart heavy waves. It would amount to unnecessary exposure. Besides, I think that avoiding it brings more satisfaction. In the Grand, it is not always easy to stay out of heavy waves, and yet to stay close enough to get the benefit of the downstream current that comes with them. Sometimes I was unable to prevent being spun around and was then, at a stage of minimum speed and consequently minimum stability, forced to regain some of the downriver current. Backcurrents, at points, are too powerful to be fought efficiently and one is taken way upstream before arrival at the right channel.

After a very pleasant camp on a large sand beach in Marble Canyon, the river was, on our second day, accompanied by a strong upstream wind which could have wreaked havoc with an unfeathered paddle. It did not stop us, however, from going 40 miles in 4 hours, with relatively few rapids. The sight of the incredible color of the copper-laden Little Colorado, at first, made me think of an extremely poor reproduction of blue skies in a badly colored movie, but we all enjoyed swimming in and hiking around it.

My experiencing the Grand Canyon in a kayak would have remained incomplete, I believe, had I not turned over. I spilled in running Hance Rapid on our third day. I had entered at its extreme right and attempted to cross its entire width diagonally towards the backwater at the left. My spill may have been caused by lack of strength or an underestimation of the current's power or both. I ended up sideways in the formidable tailwaves. Able to lean efficiently against the first two, it was only the third that tipped me and the picture my friends took show that in the course of another hundred yards I tried twice to recover, but failed due to the sweeping power of these haystacks. A giant's fist, then, it seemed, dragged me out of my kayak. I regained the craft, braced on it and found myself being whirled around in circles, my paddle encircling me at a distance. As soon as I began, in the ordinary manner, to push my boat towards shore and swim after it, in short spells, I was pulled under and had to struggle to recover and reach my boat. A second attempt ended the same way: my life jacket seemed to have no effect at all and then I realized that the whirlpools were working strongly toward the center of the river bed, making it impossible to get ashore the orthodox way. I was clinging to my kayak, bow and stern of which are sprayed full with floating foam, and tried to figure out a way ashore. The whirlpools never seemed to end, and when one of them released me another one was waiting to take over. The water was pleasantly warm, one great advantage, but I did not mean to swim through another rapid; and yet the sheer cliffs
I spent 90 minutes deciding about this one.

Big drop, lower Cataract Canyon. I ran it close to far shore.

South Platte Canyon near Denver.

did not offer a place to land, even if I had been able to reach shore.

Finally, I thought of the spare paddle that I always keep on my rear deck, assembled, feathered, and ready to be used. I pulled it off, rode and paddled my boat ashore as it was, upside down. I found a tiny beach, got back into the kayak, closed the spray cover and rushed downstream after my original paddle, catching it after another two rapids, and went ashore to wait for the big boats. This incident taught me about features of a river that were new to me, but it left me quite relaxed and eager to go on.

Sockdolager Rapid is unique in structure and a most pleasant rapid to run in any boat. A quarter mile of huge, but long and soft haystacks could not be avoided because they cover the entire width of the narrow river bed. Running Sockdolager was a strange and impressive experience and to me it resembled the peculiar feeling that a hot shower brings to a man who spent the last 12 hours in a sticky airliner.

This third day of our trip, with about 60 miles of river to cover, offers a great deal of delightful and exciting news, for the Granite Gorge above Bright Angel brings a quick succession of remarkable and steep drops, and the first larger whirlpools; these whirlpools which started out as a sort of a frisky turbulence accompanying the lower end of most minor rapids, had been mentioned by “Zee” Grant, and the Hatches had warned me of them more than of the Canyon’s rapids. Consequently and luckily I had built my kayak long enough (16’8”) and I spanned most of them. Once, however, upon shooting down at high speed from the last wave of a smaller rapid, I ended right in the funnel of such a monster, without the slightest chance of outsmarting it; it “had” me, and the only choice left for me, while in the water up to my throat, was to keep upside up and wait. Two seconds perhaps, and the pool released me, bow upstream. These fierce, circular currents with funnels that were sometimes larger than my cockpit did indeed require more skill and sound reactions than any of the steps or ledges. It might well be that a kayak with a wider beam than
mine (19") would not be sucked under so easily.

Once, in the lower Granite Gorge, I tried a passage between the current of a little rapid and a cliff and, for no apparent reason except for some turbulence, my kayak was suddenly sucked under with only the cockpit left above water and held there for what may have been ten seconds or more. Throughout such wearing and tearing forces, my 35 pound kayak which consists of a fibre glass hull and an ordinary canvas deck (glass cockpit plate, however) suffered not the slightest damage and I was very happy to see the primitive craft last throughout this heavily silt-laden and tremendously powerful river.

On this trip I greatly failed to supply my own food which I usually carry in my own boat. This was simply because I was eating three times the quantities I had expected to, and I ran out of everything good on the third day (I don't go for powderized meals). Ty Dines admitted me to his commissary roll for the rest of these marvelous days and I then had the kind of meals I appreciate. At Phantom Ranch, I enjoyed a "civilized" sandwich, but this was all the civilization I cared for, anxious as I was to enjoy more of the Canyon, and curious, above all, to see Lava Falls.

Dan Davis had asked me very kindly to portage Lava Falls, at least, if not some others of the "big ones." There are big ones, not all of them adequately named (numbered only), and Lava Falls is certainly the biggest of them, in drop, power, and formidableness. The subject "Lava Falls" was steadily gaining priority in conversation as we got closer. Despite the fact that in a kayak one is unable to see the channel he has chosen but must estimate by the distance from the bank, despite the tremendous tension that lay upon all of us, I had an easier run through Lava Falls than through many another rapid in the Grand. Quite fortunately, in a last minute decision, I had given more consideration to the possible draft toward that horrifying hole and so managed to follow the route I had thought out, a little left of center.

Georgie White, whom we had caught up with on our fourth day, ran Lava Falls twenty minutes later with some 30 passengers in three linked pontoons of 30' length. She rode right through the Falls' worst section where a kayak would definitely be lost. One of the pontoons was thrown up and turned over to a point 45 degrees past vertical so that this boat's passengers were hanging head down over the heads of their companions in the center pontoon, for a split second. (To me, this was the greatest spectacle I had even seen and I must have screamed with fear, watching it from the shore). At this point, and due to a special device in the linking of the pontoons, the boat was flung back to its normal position. No one fell out. I understand that the weight of the pontoon which is turned up has a tremendous stabilizing effect on the center section of the combination craft. I failed to comprehend how elderly people in particular managed to remain seated.

A 19"-wide kayak with an (around its beam) half-circle shaped hull offers only a fractional portion of what the large flat hull of a pontoon offers in resistance to the tipping tendencies of waves. So, used in proper place, this kayak hull is capable of consuming relatively wilder power of the water. The weight of a craft, then, appears to me of minor importance.

The rest of my story is told in a minute: because of the nightmare-like stories of various parties' impressions, Lava Falls is the climax of the trip, and, after you have run it, you tend to feel all relaxed. This is dangerous, however. You are still above a long and narrow, awe-inspiring gorge that "Zee" aptly describes a "nest of whirlpools." Indeed, they tend to be an obsession, and the small rapids with more or less clear-cut current conditions with which they alternate, are a rather welcome change. All alertness is needed to comprehend in time the steadily changing situation in order to adapt the balance; this particularly when the sun is low ahead in the late afternoon. Here it is impossible for even a powered craft to maintain a steady course and more than once was Ty's canoe suddenly turned and headed toward a cliff. Violent impacts were avoided by an efficient bowman who used an oar against the obstacles. My kayak changed directions very frequent-
ly and I hustled to escape the numerous
and strong currents which are headed
upstream. A few very tight and mean
rapids in the Lower Grand Canyon, like
"Mile 234 1/2", confronted me as a sur-
prise. This one does not offer much of
a choice of approaches, the narrowness
of the canyon concentrates the rapid and
it seemed to me that evening that this
obstacle was as tough as any of them
in the entire 235 miles.

Shortly below, I was nearly swept by
the mouth of a tiny creek in which my
companions had pitched a beautiful
camp and were awaiting me cheerfully.
This sixth and last day on the flowing
river was my hardest; it had begun
with Lava Falls and there were 58 won-
derfully rough miles since. I welcomed
the hearty drink I was offered at my
arrival and we spent our most charming
evening there with accordion music and
Western songs.

Everybody was sad when we slid into
Lake Meade. I gave up paddling after
10 miles, retiring on the pontoon which
carried kayak and me to Pierce's Ferry
where I mounted the canoe and enjoyed
a refined night trip to Temple Bar.

This was certainly my greatest boat-
ing adventure; it was "grand," and I
will most probably remain attracted by
the "Grand" for the rest of my days.
When I return, I plan to spend more
time on it, especially exploring the Hav-
asu region. This time, I first passed the
mouth of Havasu creek par hazard, and
so had to paddle upstream for a quarter
of a mile to a point from which I was
able to hike and climb into the creek's
gorge. I would also like to see more of
the wild jackasses which were of such
importance to Major Powell's expedi-
tions, and I would like to watch more
of those strange catfish, one of whom,
within the reach of my hand, made
a curious appearance, staring at me with
large eyes as if admiring the eighth
world wonder.

Both the canoe and the pontoon cap-
tains were skilled enough to have ac-
complished perfect passages throughout
the Canyon, a fact that naturally con-
tributed endlessly to my welfare.

PRODUCT REPORT

A long day spent at the big Boating
Trade Show in Chicago in September re-
vealed relatively little of interest for
white-water enthusiasts.

Pere Marquette Boat Co., Scottville,
Michigan, is now producing a 16' keel-
less fiberglass canoe weighing 75 pounds.

Johnson & Johnson has come out with
an excellent and long-overdue product—
a waterproof first-aid kit. The rust-
proof gasketed box, in addition to a well-
balanced assortment of the usual first-
aid items, includes a resusitube airway
(a device for use with the Red-Cross ap-
proved mouth-to-mouth system of resus-
citation). Priced at $6.95, the kit will
probably be available through boating
supply houses as well as drug stores.

An unusual item marketed by the
Bowman Products Company 850 E. 72nd
St., Cleveland 3, Ohio, is the Vimaraine
Rope Whipping. A soft plastic cap com-
plete with cement for attaching it, this
slips over the ends of your rope to pre-
vent fraying or ravelling. The result is
both neater and less bulky than the
usual backsplice. 2 for 19c.

Of interest to those who mold their
own fiberglass boats, Verra Products,
15820 Benson Road, Renton, Washington,
produces grooved aluminum rollers for
impregnating layups. The grooved de-
sign is said the remove air from the
laminate without pushing it. Cleaning
is simple, as the gelled resin can be
burned out.

For those who have had difficulty
finding an insurance company to write
policies on their canoes and kayaks,
Hardware Mutuals, Stevens Point, Wis-
consin, offers to insure any sort of craft.

A number of new epoxy adhesives and
patch kits were to be seen. One of the
more promising looking ones is Marine-
Tex, produced by Travaco Laboratories,
233 Condon Street, East Boston, Mass.
The product cures fairly hard, but for
light-weight boats that flex considerably
the company will supply a flexing agent
without charge.

American WHITE WATER
The first thing about acquiring a reliable paddle-brace is to learn to lean properly.

Leaning and trusting your weight on a paddle require you to overcome a reflex that you acquired when you first learned to walk. That is the automatic tendency, when you begin falling, to lean in the opposite direction.

Instead of this "compensating" type of lean, which works when you are on your two feet, you have to learn the reflex for the opposite lean, which is akin to those required for cycling, skating, tumbling, and other action sports.

In other words, by throwing your weight on the unstable side, and by committing it to covering the deficit, you get stability again. The cyclist and the ice skater "steer" themselves up out of their tight leaning turns; the paddler lifts himself with his blade—at once paying his debt to gravity and increasing the efficiency of his turn.

The comparison is illustrated in these figures.

You can see and sense, no doubt, that the paddler in the "wrong" series of pictures has thrown his disposable weight—his torso above the waterline—in a direction that only worsens his instability, instead of compensating for it. In terms of elementary physics, his motion in one direction produces an equal and opposite (but unforeseen) reaction in the other.

The effect, when this happens fast in rapids, is very familiar—it gives the picture of the "stiff-hipped" paddler, who does all right in mild tossing waves but at a certain point "loses it" and goes over suddenly, like a duck in a shooting gallery, with even his paddle blades arranged on the wrong side.

Learning the Paddle Brace

Many kayakists (and canoeists) never get real instruction in paddle-bracing. That is particularly true in this country, where there is a shortage of fully trained instructors. The average paddler is lucky if he is told that he must lean on his blade; he watches good paddlers do the more usual braces and settles down with a style of his own that includes a version of the good old standby strokes and braces.

What he never learns is that braces and strokes can be applied subtly, in a number of different sectors of the water next to his boat, and that they can be continuously interchangeable—a given maneuver can at one moment be 75% stroke and 25% brace, at the next moment, with a change of blade angle, the proportion can be 40-60; and so on.

What is a paddle brace, anyway, but a stroke designed to keep the kayaker erect rather than one to drive it forward (or back) in the water? It can only be passive, as the word "brace" inexact suggests, in cases where the current will supply the effort rather than the paddler. And that is only sometimes, at best.

We are going to describe here a so-
plunging current. Instead, you offer the rounded bottom to the current. You can cross some very violent water if you will keep the downstream rule in mind. Sometimes the actual direction of the water is not easy to divine—it changes from moment to moment, as when you are running down beside a line of choppy waves, or when you are fighting your way back upstream across a sharp jet. But you should be ready to throw your weight over the tops of high waves, when necessary, to brace on the glassy face beyond the curlers, if any.

**Back brace on approaching a chute.**
*Photo courtesy Hans Klepper Corp.*

The shift from the wide to the narrow kayak is the first essential step. You can brace a touring kayak of 26 inches or more, but the wide boat inevitably has strong opinions of its own and does not behave docilely in waves or currents. The narrow boat has that negative but valuable kind of stability that consists in not being easily influenced from outside. A stick will ride down a river more sedately than a chip, for instance. And yet the narrow boat is more easily managed by the paddler.

In the narrow boat, then, stability is pretty much up to you. Even in calm water you need to have your paddle ready to correct the least disequilibrium that might grow to a tipover. Also, you are going to be leaning a good deal on purpose, for steering reasons, using the paddle to prop you up.

Always Brace Downstream

Brace downstream. That is the law and the prophets—a rule to which there is almost no exception. And it means not only to use the paddle blade on the downstream side; it means also to arrange your paddle blade at a "climbing" angle in the current, so that it stays at or near the surface during the brace.

And one corollary is that, by leaning your boat downstream, you prevent the upstream gunwale from going under the plunging current. Instead, you offer the rounded bottom to the current.

You can cross some very violent water if you will keep the downstream rule in mind. Sometimes the actual direction of the water is not easy to divine—it changes from moment to moment, as when you are running down beside a line of choppy waves, or when you are fighting your way back upstream across a sharp jet. But you should be ready to throw your weight over the tops of high waves, when necessary, to brace on the glassy face beyond the curlers, if any.

**Brace High, Brace Low**

The braces, like strokes, can be classified as forward, back-, and drawing effects. The simplest and most used is the back-brace, in which the paddler uses the convex, "downstream" face of the paddle blade, trailing on the surface; he naturally and easily flips his paddle over to this position at the end of a forward stroke. (Fig. 1).

The back brace is a low brace. The upper hand hardly ever rises above the paddler's chin. The wrists are "cracked" forward, and the power of the brace comes from the upper arm lifting while the lower arm presses. The paddle can be swept forward, and the low brace may be used in broadside positions, at ninety degrees from the boat, as in entering jets from eddies.

Few paddlers learn to lean hard enough on this brace. The harder you lean, the more effective it is.

The back brace is probably the most reliable of all, particularly if a paddler does not know exactly what is coming next on the river. It goes with a cautious, ferrying attitude in rapids; it readily turns into a backstroke, and the boat is easily steered with it.

**Practice** of this brace on flat water should begin with a wide sweep on the back of the paddle. Then, pick up speed and get the same result by holding the paddle out sideways, with the boat's motion supplying the force of the sweep. This gives you the same relationship as when going downstream and bracing on an eddy or other slower water.

American WHITE WATER
The High Braces

But the back brace is not the only one by any means, and the American repertory of paddle effects should be enriched by some of the high braces we are going to describe.

In the high braces the concave face of the blade is used; the upper arm is almost always at least shoulder-high, the wrists are "cracked" backward, and the power of the brace comes from the upward push of the upper arm against the hanging grip of the lower (Fig. 2).

In controlling blade angle, it is useful to have mastered the feathered paddle. That is because the 90-degree angle forces the paddler to be aware of where his blades are "cocked" at any moment; he uses the full range of 270 degrees between the back brace on one side and the draw-stroke on the other. Incidentally, avoid spooned blades (across the palm) that would cause twisting in the water.

The Forward Brace

The forward brace is a necessary prelude to esquimautage. The brace is very much like a forward stroke, only the boat is leaned, so the paddler's effort goes to raise the boat rather than to propel it.

Insert the paddle near the bow and sweep it out wide to 90 degrees from your seat. Keep the arms high, the paddle extended, and lean into this brace. You should, after practice, be able to get your torso half-submerged, then to dig it out with the final powerful push of your bent upper arm at the moment when your blade is out at your side, at maximum extension.

This brace, it will be obvious, can never be passive; it is something you throw in when you are fighting for control, as when you are running high waves and are tossed. The forward brace is continuous with esquimautage—particularly the type of eskimo recovery that is not a roll but a quick lift back on the same side as the tipover.

The High Brace at the Side

This high brace is the position that is reached at the end of the above maneuver, and at the halfway point in esquimautage. The side brace can, however, be passive; when the paddle is thrust out downstream in heavy currents, it is the pivotal arm of a tripod that is stable. And it is the point around which you will make eddy turns when leaving fast current for slower.

It is essential for these high braces to give them honesty by leaning into them. The upper arm should be so high that the upper blade is just over the paddler's head.

The high brace at the side is particularly useful in high waves because it keeps the paddle and arms clear of the water, and gives a more favorable angle of insertion for the working blade. Particularly will this be found true in surfing, where the waves are higher than is usual in the river, and are in motion so that they attack the kayak.

Practice of this brace: In a kayak as in a canoe, make a draw stroke, and lean on it. Then turn the blade and, while maintaining the lean, slice the paddle out for a new draw-stroke. This takes rhythm and wrist-control. After you have mastered it, give the boat forward way and hold the leaning draw-stroke.

The canoeist will find himself using these high braces, in particular when he ventures out to "play the chutes" from eddy water, a regular practice in some whitewater clubs.

Choice of Braces

Suppose you consider your strokes and braces like a set of golf clubs, available by free-will choice whenever you want them. What rules should govern that choice?

Of course the question is self-defeating because you do not always have
free choice; often you have to use the brace that fits the situation that suddenly looms on the river; the brace moreover that suits the way your hands and body weight are arranged at that instant.

Real talent in river running, however, goes with being just a move ahead of the game at all times; in having a plan for running the river that arises tactically from the problems you see ahead of you.

And in general, the high braces do go with an aggressive forward-stroking approach to the rapids on a river, while the backward, low brace goes with a back-holding approach.

Now, as we have seen, steering strokes from the low-braced position move the stern of the boat; usually they push it into a ferrying attitude off-current. Contrariwise, when you steer from the high-braced position, you will draw bow, middle or stern, depending on where you apply the paddle.

This is very important. Drawing bow, particularly, in a kayak is not as obvious a recourse as it is in a canoe. That is why it took a canoeist, Milo Duffek, to work out a system of bracing and turning that was related to the draw-stroke.

First, most American kayakers tend to lean backward too much in white water. Lean forward and get your back and torso muscles used to holding this position. In most kayaks this will move your center of gravity forward nearer to the natural pivoting point of the hull, and will increase maneuverability.

If not, experiment with different seat positions.

Then, insert your paddle at forward angles and turn the blade's concave face inward, so as to draw the bow. You will find that this a much safer way to handle bow steering than the "Colorado Hook" advocated by our friend Leo Lake in the May issue.

When you are confident of your control, begin Duffek turns with the bow drawstroke. Hang more and more of your weight out on the shaft, and let the boat turn around that pivot. This is the real Duffek turning stroke, and not the exaggerated version of it, with the upper arm 'way behind the head.

One thing you will find, we think, is that this style of paddling will lend itself more to what we will dare to call an "intellectual" approach to our sport. The back-paddling kayaker, leaning on his back-brace, is an example of the "take-what-comes" artist, while the forward-leaning, forward-stroking, high-bracing paddler is almost forced to plan his way down a rapid.
The Selway, Wilderness Gem

BY OZ HAWKESLEY

During the 1959 Clearwater trip, when we ran the lower Selway, we began to pick up hints that the upper part of the Selway had a great deal to offer as a wilderness river trip. Earlier, Morton R. Brigham of Lewiston, Idaho, had told us that "if you could get through from Magruder, you would see as wild a stretch of country as there is left in the West, catch more fish than you could eat, and the hoot owls and coyotes would sing you to sleep each night." Nobody seemed certain whether we could even get in to Magruder Ranger Station at the time of year the upper Selway would be runnable, let alone run the river, but we decided on a scouting trip in 1960. We knew that the North Fork of the Clearwater would remain unspoiled for only a year or two more and we would have to find better protected wilderness areas for AWA river trips. The upper Selway was inside the Selway-Bitterroot Wilderness Area and sounded like the sort of river we wanted, provided it could be run.

The Forest Service informed us that the road into the area from Connor, Montana would be open in time but also warned that the river near Magruder was very rocky and had a 2 to 3% grade. We were also informed that the "river has been float-boated from Shearer Guard Station and airstrip in the past but has not been boated above that point." Since we had maps of the area, from Whitecap Creek (about 15 miles below Magruder) down, we could readily see that the average gradient of the part of the river we would most likely run was about 27 feet per mile instead of the 2 to 3% grade farther up. This would make it just a bit faster than the Middle Fork of the Salmon but probably not as difficult as parts of the North Fork of the Clearwater. We decided that the week of July 11 would provide the proper water stage. The trip was set up as one of the 1960 AWA sponsored trips but we must have scared boaters with the warning that the trip was for "expert boatmen and experienced wilderness campers.” The final party consisted of only four: Art Midouhas of Buck Ridge Ski Club, Jack Reynolds, John and Oz Hawksley of the Ozark Wilderness Waterways Club. The party was outfitted with a 15 foot, decked Grumman canoe, a 10-man raft, plenty of spare oars, and food for five days.

We first saw the upper Selway a few miles below Magruder after a 50 mile drive over Forest Service roads from Connor. Even though there is a primitive road along the river from this point down to Whitecap Creek, the beauty of the river and the timber is exceptional. No fire or saw has ever scarred the hills. No silt or organic debris tints the crystal water. Here the river was almost too small for a raft but could be run by canoe or kayak in spite of its rockiness and steep gradient.

A gate at the far end of the bridge at Whitecap Creek marked the end of the road downstream. A short distance up Whitecap, near Paradise Guard Station, we inflated the raft, fastened the canoe deck and loaded quickly, anxious to be off. As we slipped under the bridge and into the main stream, we watched the cars disappear up the road with a feeling that this was no ordinary river trip. We would run some parts of the river never run before and would find out whether others could enjoy its beauty and solitude through similar travel.

The Selway was bigger and deeper now. The Little Clearwater, Indian Creek, and Whitecap Creek had added enough to treble its volume. Another difference was also apparent—we had left the road which had prevented
complete feeling of peace and solitude which belongs to true wilderness.

Art and I were in the canoe, the raft a little ahead of us. The first few rapids were easy. Waves were big enough to come over the bow and there were some sudden drops and obstacles but visibility was good and no shore scouting was necessary.

Our first camp was by a short pool below a long, winding rapid which we dubbed Slalom Slide. Clothes were abandoned and placed on the warm rocks to dry. As we busied ourselves making camp and getting a fire ready for steaks, my 13-year old set up his fly rod, selected a dry fly and began casting into the pool. Nearly every cast brought a strike. The pleasure of fishing was doubled by the fact that the fish could be seen as they struck in the clear water. In fifteen minutes, Johnny had an ample supply of cut-throats for breakfast.

Next morning we again started off on unknown river. There were a number of long, constricted rapids with good drops. The first of these, which we had to inspect, we named Galloping Gerty. Although a respectable rapid, Gerty turned out to be mild compared to some we encountered later. There were too many rapids to name but one other that morning was spontaneously named Cougar Bluff. As we clambered among the rocks to inspect it, we found a perfect set of Puma tracks in the wet sand on a small beach. About two miles below Cougar Bluff, we saw one of the few signs of man during the trip. There is a ranch at Running Creek and we could see its airstrip which ran up a hillside at what seemed an impossible angle.

We had been warned about the Goat Creek section of the river below this. It had been reported that there were many large boulders in the river. There were, but there were good channels between the bungalow-sized rocks. We found it a beautiful, "shut-ins" type section with rapids which could be described as fun. Art and Jack did swamp once in the canoe (one of two upsets on the entire trip) but the trouble was caused by lack of maneuverability of the keeled canoe, not by the difficulty of the rapids.

We passed some beautiful campsites and reached Shearer Guard Station. There the river became shallow with constant riffles; and it was easy to see why fishermen put in there with rafts to float a few miles. In this riffle section we encountered a large black bear. He was sitting in the riffle facing shore, just enjoying the cool water. So oblivious was he to our presence that we approached within good camera range before he took alarm and fled up the steep hillside. Not far below Shearer is Selway Lodge, located at a horse trail bridge. The Lodge is the only obvious private holding on the trip but there is no road and it fits into the wilderness landscape. Less than two miles downstream from the Lodge, Bear Creek enters from the right. In midstream at this point, there is a tremendous rock (shown even on the topo map) on which the entire river seems to pile up. It behooves the small boater to keep well away from it.

We had thought that Bear Creek would be an ideal spot to camp, but we could not hear each other talk above the roar of water. Deep, quiet water just below Bear Creek encouraged us to go on a little distance to an island around the bend. There we camped on the level, pine-needle-soft ground amid Ponderosa pines so large that it took three of us to encircle one with our arms.

The third day was to be an easy one. We would camp near Moose Creek, visit the ranger station there and spend the afternoon looking over the Goat Mountain Damsite area which included a number of the roughest rapids on the trip. Indian Creek Rapids, which showed on the profile charts as a very steep drop, proved to be relatively easy. Just above Moose Creek, the river is choked with boulders which cannot be entirely avoided by a raft. We pulled into Moose Creek, which is nearly as big as the Selway, and walked up to the landing field and ranger station. The field had recently been enlarged and improved but bits of once molten aluminum, at the site where a Ford Tri-motor had crashed during the 1959 fire season, reminded us that man may not
Riffle amid tall pines.  
Photo by Oz Hawksley.

Time out to look one over.  
Photos by Oz Hawksley

An easy but wet one.  
Photo by Jack Reynolds.

There's some still water too.
always be content to leave this area roadless. The Ranger told us we might find a small campsite just below Moose Creek, above Goat Mt. Canyon.

We never did find that campsite and soon realized that we were caught in the canyon with no alternative but to keep going until we found a place to camp. With the added volume from Moose Creek, the rapids were heavier and drops were more severe. Some of the drops were actual falls 6-8 feet high. I ran them first with the raft to test the course, then the canoe followed. Heavy cloud banks had shut out the sun and it was getting late. Each new drop seemed more ominous than the last and we breathed a sigh of relief each time the canoe made it through another falls and the bow came bouncing up like a cork.

In our rush to get through this bad section before darkness, the canoe somehow passed the raft. We could see it bounding wildly ahead of us as it entered a long, steep, S-shaped rapids. It was a place I would have preferred to inspect before running but the canoe team apparently thought it was clear. I rowed hard to try to catch up while Johnny bailed to rid us of some of the heavy load of water we had just shipped. Ahead, a mountainous rock loomed up in mid-stream. Water was going over it but there was no telling how bad the hole below it would be. The canoe had managed to go around it but had disappeared. Then I caught a glimpse of something floating in the water and knew we must reach the canoe as soon as possible. Heavy as we were with water, I could not avoid the big rock and we went over it. For an interminable second the raft stood on its stern in the deep and turbulent hole below the rock, then miraculously came down right side up but filled with water. Somehow, both raft and canoe made shore before being swept into the next, even more dangerous rapids. The only loss was the rear spray skirt from the canoe, but this was serious as there was no spare.

All false confidence gone now, we lined the canoe through two rapids which would have been nearly impossible with the missing skirt. They were very rough even in the raft. Fatigue was catching up with us. It always adds to the danger so we were relieved when we finally reached a small campsite at Half-way Creek, at the head of another series of heavy rapids.

Quieter water the next morning was a relief. We ate lunch at a spot we thought would be ideal for a campsite next year. A protected, deep bay with sand beach was ideal for swimming; rapids above and below the site would furnish places for playing with kayaks. Our maps and profile charts showed nothing exciting for the afternoon, but this merely emphasizes the fact that these aids to river travel are not to be trusted, and that the only way to learn to know a river is to run it. We encountered a few tricky drops, then suddenly entered a very still section above Jim's Creek. As we neared the end of this pool, we noted that the cedars near the shore had been "drowned" like trees behind a dam. The rapids ahead did not check with the charts at all. They showed only two or three five-foot contours in this area, which indicated a maximum drop of ten feet in nearly a quarter mile. What we actually found was a drop of about 25 feet in 200 yards of very constricted channel.

We had rigged a method of keeping most of the water out of the stern cockpit of the canoe, but even so, this was no place for a canoe. Several huge holes could not be avoided. If a spill occurred, disaster was almost certain. We waded the canoe down through a protected "rock garden" on the left and then everyone decided to watch me take the raft through alone. "It would make such fine pictures." I'm glad they took those films, though, as I don't remember much about the run except a wildly spinning and lurching sensation as I tried to get an occasional lick in on the oars without having them snapped off. The movies show how fast it really was. One still picture shows nothing but a hat, part of an oar and foam!

Since Jim's Creek Rapids turned out to be the best of the trip, we began to look for the reason that it is not indicated on the charts. Apparently there was relatively recent fire or lumbering
on the upper reaches of Jim's Creek, consequent flooding and washing of heavy boulders down the creek into the main stream, causing a partial damming of the stream and a restricted channel against a bluff on the right. Our last campsite was the best. A big sand beach dropped off into still, deep water for swimming and diving. At one end of the beach, large rocks gave shelter and provided handy natural tables and fireplaces. A group of giant Ponderosas and Red Cedars gave more shelter and shade. Bear, mink, elk and other mammal tracks were the only signs of use on the beach. The view downstream, of alternate pools and riffles, of tall trees on river bends with a backdrop of mountains, had a feeling of depth seldom achieved by any scenic panorama.

The Selway continued to be lovely all the way to our take-out point, just above Selway Falls, the next day. I suppose we all tend to rate each new river discovery as the "best yet," but all four members of the party agreed that they had never seen a more beautiful river nor enjoyed a river trip more. There are only two truly wild rivers in the northwestern U.S. which I have not seen, so I know that not many can surpass this wilderness gem. Whether it will remain as unexploited as it is today, is a sobering question. The Meadow Creek area, tributary to the Selway, is slated by the Forest Service to be subjected to 'dozer and power saw. It may be only a matter of time until the Selway-Bitterroot Wilderness Area itself is attacked unless an effective Wilderness Bill is soon put into operation.

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LIVING OFF THE LAND

By Tim Traill

The first part of this article, covering the identification and preparation of root plants, appeared in the August issue. Herewith additional categories.

STEM AND LEAF PLANTS

COW PARSNIP This colossal plant may reach six feet in height. It has a coarse stem with large leaves and a wide head of white flowers. It is found in rich soil and has an agreeably aromatic smell. Each leaf stem has three umbrella-shaped leaves, each of which may be one foot in length. After blooming the plant has flattened oval seed pods. Flower stems should be gathered before the flowers open. The stems are easily peeled and eaten raw, but towards the latter part of the season they have a woody taste. Leaf stems are also edible and can be roasted over an open fire, but are better boiled. Peel the stems, cut into lengths, and boil until they start to disintegrate. Serve as you would carrots. They make a pleasant addition to a dehydrated diet and are often eaten by Indians, who claim that chewed root of the cow parsnip is a good cure for internal disorders.

FIREWEED Sometimes known as willow herb, this plant is often found growing in burned-over areas. It is straight-stemmed and stands about three to five feet high with long lance-like leaves which give it a willowy appearance. Purple-pink flowers during the summer months give way to seed pods which produce fluffy white seeds. Split the stalk open and scrape the contents out with a knife. It has a sweetish glutinous taste. The tender young shoots may also be cooked as greens in the early spring. It is said that the root may be grated and made into an effective poultice for wounds and sores.

A similar plant, the broad-leaved willow herb, grows only to a foot in height. It is found throughout the North near creek beds or in gravelly soil. The leaves are shorter and broader, quite fleshy, and may be cooked as a pot herb.

MOUNTAIN SORREL A low perennial herb with an erect stem, growing about a foot in height with kidney-shaped leaves about 2" across. The plumelike red or green flowers are small and inconspicuous, leaving small circular seeds. This is primarily an alpine plant liking shady places with a rocky habitat such as ravines. The leaves can be used as salad greens or the stems and leaf stems make a good rhubarb substitute when eaten raw or boiled. The connoisseur will enjoy the juicy stems pulped with fish roe.

WILD RHUBARB Common throughout the North in moist soils such as river banks or recent landslides. Large stands are often found. The young bright red juicy stems are used the same as domestic rhubarb.

FERNS AND

The fiddle-heads of ferns should first be rubbed between the fingers to remove the bitter red hairs and should be given two boilings. They are an excellent substitute for asparagus, but make sure that they are tender when served. Try serving with a white sauce. The root stalks are starchy and may be baked.

Bracken should be selected from rich shady situations where lush vegetation is rank. Roast the largest and most succulent roots over an open fire. Peel back the outside rind before eating. By pounding the stalks between stones you can separate the fibers and make the bracken more palatable.

BURDOCK This common weed has very large leaves with wooly undersides, thick rhubarb-like stems and purple flowers. It can be recognized...
easily by the burrs with catch your trousers and tangle the fur of your dog! In Spring the tender shoots may be eaten raw. The stems should be cut before the flowers open. They are akin to asparagus in flavor and can be boiled or fried in butter, but the tough outside rind must first be removed. The roots can be mashed into a cake and fried like pancakes. One can do a lot with this unappetizing-looking plant.

HORSE-TAILS I mention this plant only because it is so common. The young tender shoots can be eaten in springtime when they first appear. Before eating, strip the stem of its outer scales. The plant lacks flavor because its composition is mostly water.

WATER-CRESS This water plant is fairly common in the east, occurring in cold streams and brooks. It has branching stems with smooth dark green almost round leaves and white flowers. Because it is eaten raw make sure that the stream where you pick it is unpolluted. The sharp taste goes well in sandwiches.

MILKWEED Grows in stout clusters, two to four feet high, with fleshy leaves about 6" long. Stems and leaves have fine hairs. The purple flowers are bunched in heads which may be several inches across. In Fall this turns into a purple seed pod which releases thousands of silky parachutes. The young shoots make good greens in Spring, but require several boilings to remove all the milky juices. When well cooked it isn't unlike spinach; however the older stem are too acid to cook. The blossoms, when boiled, produce a sweet syrup which may be condensed into a good brown sugar substitute.

MINERS The name originated in gold-rush days, but the speculators undoubtedly learned of the plant from the Indians. It grows from 5" to 18" tall and likes moist open woods. It is easily recognized by the saucer-shaped upper leaves through which the straight stem protrudes. Small white flowers rise from the center of the leaf disc. Leaves and stems may be eaten raw or cooked, and will prevent scurvy. There are many varieties of this plant, all good eating.

SKUNK The name derives from its sickly sweetish smell. It is found in swamps and low ground. The leaves are large and the green flowers which later turn red are protected by a club-shaped cape. The young tender shoots should be boiled—a couple of changes of water will remove the odor. Served with butter and seasoning it is not at all unpleasant. A preferred food of the black bear.

DANDELION Everyone knows this one! The young leaves should be boiled briefly to eliminate the bitterness, and then reboiled. This plant contains about fifty times as much vitamin A as asparagus.

SEAWeed All seaweeds are high in vitamins and minerals, particularly iodine. They are all good laxatives, so eat them in small quantities only. Some seaweeds are covered with slime and others have high carbonate composition which makes them unpalatable. Best eating are the green and purple laver found clinging to rocks at low water. They can be eaten fresh, or they keep well when dried into compact cakes.

FRUITS

Bird-cherry, strawberry, crab-apple, blackberry, blueberry, elderberry—one could go on forever, but here are a few I have selected as being of more interest than most.

HAWTHORN The seeds are enormous and are either black or red in color. Very tasty.

CHOKE CHERRY These are best left until they are thoroughly matured before being eaten.

ROSE HIPS Eat only the fleshy portion of this fruit.

CRANBERRY Commonly found in swamps. Boil with sugar.
Top row left to right:
- camas
- wild tiger lily
- mountain lily
- wild onion

Below silverweed

Above left: butter-root
Above right: arrowhead
Left: liquorice root
Right: cat-tails

Below left: cowparsnip
Below right: fireweed

Right horse (wild carrot)
Below: cut of a water hemlock root showing air holes

Deadly poison

Plants are not drawn to scale.
RED AND BLACK Found on the margins of rivers and streams. Large succulent berries, covered with a white bloom.

PRICKLY This is usually eaten raw, but some time try leaving the skin on and roasting it in the hot ashes of your campfire.

PEAR Some time try leaving the skin on and roasting it in the hot ashes of your campfire.

SALMON AND THIMBLEBERRY Members of the raspberry family—in addition to eating the fruits you can also peel and eat the young shoots in Spring.

KINNIKINNICK or BEAR BERRY You will find that the seeds are very dry but the flesh is mealy and sweet. In the North it is also the poor man's tobacco. Mixed with dogwood and other shavings the dried inner green bark of young shoots make a fair substitute.

GOOSEBERRY Before eating raw it is advisable to first remove the silky skin. You will find that they have a very sweet taste.

SASKATOON Known in Province Quebec as the Poire berry. Like the choke cherry, it is used in making pemmican.

SEEDS

GRASSES Wild rice is perhaps the best example. It is found in ponds, streams, lakes and swamps, and grows to about three feet tall. It belongs to the same family as commercial rice and has long black seeds which should be collected before they are completely ripe. Seeds are best collected manually. The seeds are dried in the sun or by a fire and then pounded to free them from their husks. Remember that rice swells with cooking, so a little will go a long way. Ever tried wild rice in a soup with blueberries?

Almost as good as wild rice is common Barnyard grass which is a kind of millet. Treat it the same as rice.

There are many other types of grasses which may be used but they are of inferior quality. Most grasses can be pounded and mixed with a little water and baked into nutritious cakes with pleasant flavors.

WATER LILIES Found in ponds and slow moving streams, the lilies float cuplike flowers and have heart or oval shaped leaves with their stems extending to the bottom of the lake. The seeds should be collected and steeped in water to extract the kernels before roasting or boiling. Some lilies such as the yoncopin have edible root stalks which, when boiled or cooked in the fire, taste like sweet potatoes. Muskrats store these stalks for their winter use. The most common water lily is the chinguapin, a lotus characterized by long round leaves and pale yellow flowers.

SUNFLOWERS The dwarf sunflower is found on open ground and on mountain slopes. It is easily recognized by its single yellow flower and the group of green leaves which dry up during the summer and lie decaying at the foot of the plant's stem. The young shoots may be eaten raw in the Spring. Roots when roasted are also edible.

The seeds may be pounded with pine cone seeds and made into a kind of bread or used with flour made from cat tail root. There are many types of sunflowers and all of their seeds are eatable. Their oil is considered a good substitute for olive oil.

NUTS AND BARK

Chestnut, beechnut, hazelnut, walnut — again there are so many more you can compile your own lists. Here are a few worthy of special mention.

HICKORY NUTS Crush the shells and kernels and place both in boiling water. Soon an oily milk will rise to the surface. This may be used as a sort of cream when your powdered supply runs out.

ACorns Never eat them raw because of their high tannin content. Try roasting them or grind them into a flour which is well dried and sifted he-
fore being placed in a cloth filter set over gravel. They are then very thoroughly washed before being boiled into a breakfast cereal or baked into cakes.

PICT CONES Shake the seeds out and roast them in a pan over a slow fire. They can also be crushed with sunflower seeds for a bread substitute.

LARCH Known as tamarack down East. The surface resin may be used as chewing gum—a habit we inherited from the Indians. The thicker flow of sap from a wounded tree is good for treating ulcerated wounds and sores, as is also Balsam gum.

MAPLE Collect the sap overnight, using a spout in the angle of a V-shaped gash made in the tree. Sap from sycamore and hickory can also be collected for use as sweetening. Remember to keep the sap from direct sunlight as it sours readily.

LONGPOLE The spring sap of this tree in its fresh taste is not unlike that of an orange. It may also be dried in the sun.

ASPEN The sap can be collected from this tree, but is not as palatable as that from the longpole and others listed above.

In emergencies most barks can be used as a survival food on account of their sugar content.

FLAVORING.

MINT A leafy plant which grows erect in damp places and bears purple-pink flowers. It may be identified by the unmistakable mint odor. Use the leaves as seasoning in stews, soups, etc., or when you are storing dried meat in crocks pack mint leaves between the layers.

RAY LEAVES The long and pointed evergreen leaves from a smallish red-barked tree. Pick them in early summer and dry them before using.

STINGING. Watch for an irritant rash NETTLES when you pick this plant's leaves. Boil the leaves in the same pot as your greens to add flavor to them.

VIOLETS This plant not only helps to season soups and stews, but will also help to thicken them.

WILD GINGER A creeping type plant with heart-shaped leaves which, like the stem, are covered with fine hairs. It has curious purplish-brown bell-shaped flowers which grow near the root and a characteristic smell of ginger. Use the roots as flavoring.

SUMAC A beautiful shrub found in the eastern part of the continent. steep the seed husks in hot water, strain, sweeten and leave to cool. Presto! Indian lemonade!

LABRADOR TEA A low branching strongly aromatic shrub with canoe-shaped evergreen leaves covered with a thick rusty brown felt on their undersides. In summer the shrub bears star-like white blossoms, and is quite common in muskeg. The dried husks make an excellent tea substitute.

OTHER FOODS

ANTISCORBUTIC Not entirely unpleasant drinking, and one which will ward off scurvy, is an infusion of spruce, hemlock, balsam and pine needles, etc.

PEMMICAN The traveling food of the plains Indians and the voyageurs. Mix dried flesh (preferably buffalo!) with choke or poire berries, and consolidate the mass with the addition of melted fat—heat and pour into a rawhide container for keeping. Eat cold or heat into a porridge.

FUNGI There are many mushrooms and other fungi which are tasty and healthful, but a fungus authority advises that a perfectly safe mushroom found in one part of the country may have an identical-appearing but deadly twin growing in other localities. The only
safe rule for mushrooms is to know the edible ones in the locality in which you pick them.

LICHENS Caribou moss, etc. These are not very palatable, but they will keep you alive in a case of starvation. Anyway I trust that this article will keep you from this point of starvation.

Plants are not drawn to scale.
One of the paddlers’ most common mistakes is made when crossing the eddy fence or borderline between current and countercurrent. The paddler going with the current wants to land and notices an eddy behind a rock near the shore. He enters the eddy with his bow—and the next moment he is swimming. All because he forgets that his boat is moving fast with the current and the bow will be stopped dead when it hits the standing water or eddy; since the stern keeps moving the boat will turn and the centrifugal force will dump the paddler to the outside of the turn. Only a little thing is needed to prevent this—to lean towards the inside of the turn, so the bottom of the boat will face the countercurrent. All necessary strokes and paddle-bracing should be done on the inside of the turn (the side opposite the impact of the water). When a double canoe turns toward the side of the bow-man the bow-man braces on the inside of the turn and maintains stability. The stern-man merely helps by leaning, crouching low, and waiting for the impact to pass. If the turn is towards the stern-man’s side, the bow-man waits while the stern-man uses the paddle-brace.

The same principle applies when proceeding from quiet water into the current. We lean downstream and again turn the bottom of the boat against the current and place the impact point underneath the boat. If we were to enter the current without a lean the running water could not all slip underneath the bow; part of it would pile up on deck with a probable capsize as the result. The faster the current the faster we move and the wider the angle at which we enter the opposing current—and the more we must lean to counteract the impact.

This is the technique with which a good slalom paddler crosses the current below the sluice gate from one side to the other; to prepare the boat in the Countercurrent next to the tongue of the sluice gate, to get up speed, and at the right time to turn the boat’s bottom against the current. Water will hit the bow, bringing the boat back to an erect position, and if the boat enters the current at a sharp angle it will cross easily to the other side of the tongue. Two forces meet—the upstream side of the boat and the downstream speed of the current. The result is the motion of the boat across the waves, perpendicular to the direction of the current, towards the other side of the chute. Here again we must not forget to turn the bottom of the boat towards the current into which we are moving by leaning away from the new current.

Mistakes most commonly occur not while entering the current of the chute but rather when leaving it after finishing the crossing. When entering the chute the boat maintains its motion. When the boat enters the countercurrent on the opposite side it is suddenly stopped. For this reason it is necessary to perform the lean properly and to take care that the boat will not remain trapped in the dangerous borderline between current and countercurrent.

The same principle governs running down a chute and avoiding the waves by using the so-called telemark. Aim the boat to the side into the eddy behind the wall of the chute. Be prepared for a strong impact; and you cannot go wrong if you use a strong lean. The fast running boat will stop in the quiet
water if the lean is correct. If there is no lean or too little lean the boat will capsize.

Most difficult of all is to go from the eddy below the chute into the current, to turn downstream in this current and to run down through the waves. If we choose too sharp an angle between the boat and the current we will cross to the other side. If we choose too wide an angle the current will pull the bow downstream sooner than desired and throw the boat into the turbulence on the side of the chute. For correct execution a certain speed is necessary and a correct angle which will permit the boat to enter the current and at the same time let the current turn it downstream. The lean must be strong and towards the inside, and should be broken after the boat has entered the current. Bow-men frequently make the mistake of breaking the lean too soon, when the stern man is still entering the current and must overcome the impact of the water.

A single canoeist when crossing the current from one side to the other can easily lean to the right if he is paddling right-handed and crosses to the right. This crossing is not difficult, but in the second eddy he must lean to the left while the paddle remains on the right side either in the air or slightly pressing against the water.

The single who has to cross the current on the "wrong" hand must get up enough speed in the eddy and lean away from the side of paddling. He waits until the first impact has passed and only then paddles cautiously away from the boat. The direction of the current is parallel with the direction of paddling and it could easily push the paddle against the side of the boat. On the other hand, when ending the crossing and entering the countercurrent he secures a safe position by paddle-bracing and leaning to his paddling side.

To enter the chute and turn downstream is easy for a single if it is a turn toward the paddling side. If the turn is to the opposite side then it is a most difficult maneuver. The paddler must gain enough speed at the correct angle, lean to the side opposite his paddling, and then wait with the paddle; only after the current turns the boat downstream can he level out his lean and resume paddling.

If we want to get from one shore to the other without being swept downstream we must start with the bow pointing upstream. We often see one
The first picture shows upstream entry from quiet water into the current; the second shows the boat leaving the current for the countercurrent. In one case the bow-man paddles left-handed, and in the other right-handed. In both situations the boat is turned with the bottom against the anticipated impact of water. The canoeist paddling on the inside with the hanging stroke. The other paddler waits and is ready to start paddling as soon as the boat crosses the borderline.
Instead of the paddle brace it is possible to use a stroke far from the boat which then changes to the hanging stroke. Photo is from 1952, in the days when paddlers were still seated relatively high.

Paddler crossing the river as if following a straight line while another is taken far downstream by the current. This depends not only on the angle, but also on the place where the current is entered if there are large waves. If we enter with bow in the peak of the wave, with the bow up and the stern down we are on the downstream slope of the wave, and will be carried downstream from this slope. It is necessary to enter the upstream slope of the wave; in this case the boat also slips along the wave, but this time in an upstream direction and with enough force that it can stay on the wave even in the fastest current. If it is parallel with the current it will stay in one place, or, with a slight angle, it will cross the river. While the speed and force of the water dwarfs human power it takes only human ingenuity to keep the boat as if anchored in the middle of the fastest current or to bring it from one shore to the other.

American WHITE WATER

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The Affiliation is definitely functioning as a cruise-sponsoring organization, and its trips are in many ways the most desirable the river-lover could find in the country and perhaps the world. That is the primary conclusion to be drawn from the second summer of AWA river trips on the Clearwater and Current rivers.

The prices are low, the food superb, the river management expert, the company prime. With Oz Hawksley and Jack Reynolds, both the individual paddler and the raft passenger enjoy a host of extras that are difficult to define but are clear enough to those who have enjoyed them—such as the nature lore that both the leaders are able to dispense between oar-strokes, adding greatly to the meaning of the voyage.

The kayaker or canoeist gets one big benefit from a trip such as this that is not usually possible on club weekends—his family, if they are not expert paddlers with their own craft, can ride on the rafts. This keeps the family together, solving the problem of the "canoe widow" and introducing the youngsters to the joys of white water in a natural way.

I went again on the Clearwater with Oz and Jack. After a year, I had let my memory of the river's rock gardens and its awesome staircases grow a bit mossy, and I even had the illusion that some of the rivers I had run meanwhile—the Feather, the Eel and the Merced—were just as tough. No such thing. As I desperately braced and slalomed down those pell-mell cascades, I made a mental note to tell you that this is one of the great white-water experiences a boater can have.

Ernest Svaton of the Kayak & Canoe Club of New York and the Sierra Club narrowly missed a "first" by tipping over after running the final fall of Irish Railroad, the worst rapid on the North Fork of the Clearwater. But in doing so, he proved that Irish Railroad can be run, as it certainly will be one day soon. Though Ernie may not get his name attached to that final chute, he will live in white-water history as the man who demoted it from class VI to V. Hitherto, nobody had been willing to try because the main current split on the lip of the fall, and the alternative chute was studded with boat-breaking teeth.
RACING REPORT

BY GEORGE SIPPOS

Rio Grande White Water Race. Something new in white water racing is underway along the Rio Grande in New Mexico. Here among the cactus and yucca plants of a semi-arid region the spring snow run-off from the mountains is utilized for an exciting white water race. This race always takes place on the last Sunday of May, before the Memorial Day weekend. Unlike many of the white water races in northern waters, there is a rubber raft class, as it seems there are more rafts within New Mexico than kayaks and canoes combined.

The Third Annual Rio Grande White Water race was held on Sunday, May 22, 1960, over a short 4.4 mile course within the Rio Grande Box Canyon near Pilar, New Mexico. In the raft class a team of Boyd, Berry, Poe, and Stapleton took first place with a time of 53 minutes, 58 seconds. This was a slower time than usual due to poor snow run-off. In 1958, a good water year, the winning raft time was 32 minutes, 42 seconds. The best kayak time was 36 minutes 49 seconds by Walter Kirschbaum in 1959, when raft times were approximately twice as slow.

Indian Summer Slalom, Peterboro, Ontario. For the first time in the history of Eastern Canadian slalom racing the Americans have really come up to the land of the original Canadian canoe. Ironically, they were the only competitors in the canoe class. The foldboat class was dominated entirely by the host club’s members. The 14 foot spillway, which is gate #1 of the slalom course made most of the competitors think twice before taking "the plunge." Upsets were very rare though, and even the uncovered canoe came through the flying spray and foam. The course was fairly short as the bird flies, most of the gates being set up in the giant eddy below the dam. It was possible to use two judges for each gate, and since they were connected by a telephone hook-up, results were announced almost instantaneously. In the summertime a tough slalom course can be real fun, because the water is warm; the occasional dunking comes as a welcome relief. Eidie and Bob McNair demonstrated their superb style in hand-
ling their slick fiberglass canoe, Berry and Harrigan again took first place in the C-2 Class. The surprise of the day was Heinz Poenn's performance in winning the F-1 in record time. Heinz started practicing last year, and during winter swimming pool sessions he really learned the tricks of the trade.

Every effort is made by the organizers to make this an even more successful event next year, with participants from Canada as well as the Eastern and Mid-Western States.

International Whitewater Races, Salida, Colorado. The results of this race were given in the last issue, but I would like to give a little more information about this famous race, the biggest event in the U.S.

The Arkansas River was fairly high making the down-river race quite difficult. In this race one is disqualified only if he accepts help from outsiders. Consequently the husky lifeguards were given strict instructions not to help competitors unless they appeared to be in danger. Many competitors upset, but successfully came up with an Eskimo Roll. Four racers tipped in Cottonwood Rapids; here four vicious rollers have to be taken by the paddlers exhausted after 23 miles of all out stroking. Edward Kahl of Vienna, Austria, whose specialty is downriver racing, took first place closely followed by Paul Bruhin. Laurence Campton of Fib-Ark was third. The first time in the history of these races representatives of Canada appeared. Kurt Vonesch did a creditable fourth in the slalom race.

As usual, the races were excellently organized by the Fib-Ark Club in Salida. Safety crews were well trained. During the pre-race parade through the town one could sense that the people make this annual event really their own in every way.

Kahl (the winner) in cottonwood

This, the toughest white water endurance race in the world, is 12 years old. It annually attracts galaxies of European kayaker stars, as well as 10,000 spectators along the bank's of the turbulent Arkansas River.

The first heat of the slaloms saw Paul Bruhin, the Swiss watchmaker, take a long lead with an invulnerable looking 250 second run. Then Bryce Whitmore came to the starting line and responded with a brilliant 277.5 points. The next day during the second heat, Paul came back with renewed vigor. Digging the water as if it were gold dust, he never touched any poles and lowered his previous time by an incredible 40 seconds. Thus Bruhin and Whitmore finished one-two in the final standing as nobody could do better than these two young champions.
**Race Results**

Blue River Slalom  
May 28, 1960  
K-1  
Erich Seidel ........................................ 4:21.2  
Ron Bohlender .................................... 5:04.8  
Ted Young .......................................... 5:13.2  
C-2  
Kidder-Kerswill .................................. 6:10.0  
Zuk-Boyd ........................................... 9:25.2  
Worrell-Prideaux ................................. 10:05.0  
Team Slalom  
Seidel-Xavier-Campton ........................... 10:18.4  
Young-Warren-Bohlender ........................... 13:28.4  
Lake-Brailsford-Thompson .......................... 16:37.3  
Blue River Downriver Race  
May 29, 1960  
K-1  
Ted Young ........................................... 30:39  
Larry Campton .................................... 30:49  
Ted Makris ......................................... 31:10  
C-2  
Zuk-Boyd ........................................... 32:19  
Worrell-Kidder .................................... 32:54  
Schultz-Monninger ................................. 33:41  
High Rockies Slalom  
Glenwood Springs, Colorado  
July 2, 1960  
K-1  
Young, CWWA .................................... 353.9  
Burk, Fib-Ark .................................... 371.2  
McGowen, CWWA ................................ 437.7  
C-2  
Zuk-Boyd, CWWA...................... 633.4  
Swenson-Worrell, CWWA........ 634.3  
Waind-Warren, CWWA........... 914.4  
Team Slalom  
Campton-Seidel-Burke, Fib-Arlr.............. 715.9  
Worrell-Young-Boyd, CWWA........... 844.6  
Brailsford-Thompson-Morrisey  
CWWA ............................................. 938.9  
High Rockies Wild Water Downriver Race  
Glenwood Springs, Colorado  
July 2, 1960  
K-1  
Ted Young, CWWA.............. 2:24.21  
Ted Makris, Fib-Ark.............. 2:24.50  
Larry Campton, Fib-Ark........ 2:25.30  
Indian Summer Slalom Race  
Trent Canal, Peterboro, Ontario  
July 31, 1960  
F-1  
Heinz Poenn, OVKC.................. 240  
George Siposs, OVKC............... 249  
George Topol, OVKC............. 275  
F-1 Ladies  
Hilda Duplitzza, OVKKC........ 400  
C-2  
Berry-Harrigan, CCA ........................ 287  
McNair-McNair, BRSC............. 295  
Heizerling-Bender, KCCNY....... 435  

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**WHITE WATER**

*BY JOSEPHINE WEAVER*

At first it is only as the wind blowing through the leaves on the trees. Then, as you draw closer and closer, it becomes a deafening roar, drowning out voices and making your heart suddenly quicken its beat. As you round the bend, you see it hungrily snarling, lashing out at you with wet claws, seemingly pulling you to it with uncanny speed. And then you are in it, fighting, praying, getting sprayed by waves which seem at least six feet high. A rock flies past, narrowly missing the port side of your canoe. You paddle frantically to avoid the big half submerged boulder approaching fast to starboard. This rock hits anyway and sends your craft reeling. Then the suspense is ended. You right yourself, tingling all over, let out a long breath, and smile triumphantly at the paddle. Yells from behind tell you that the canoe following was not quite as successful as you were. Later you sit around the campfire, drying out and reminiscing, and talk about your past experiences with the white water gang. A happy thrill goes through you as you think of coming canoe trips; those in the freshness of spring; those welcome ones in the heat of summer; those in the rustic beauty of autumn. You smile as you anticipate these future pleasures, these canoe trips with the white water gang.

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American WHITE WATER
The Eskimo Roll Pays Big Dividends
Most paddleboaters learn the Eskimo roll just for the sake of adding it to their accomplishments. While true that competitors often find it keeps them in a race otherwise lost due to an upset, its importance as a safety factor is recognized to the point where cruisers learn and practice its use.

Dave Morrissey of Denver and some friends were running the Royal Gorge of the Arkansas. At the foot of a rapids and still in very fast water Dave's kayak struck solid and capsized. The craft remained stationary and collapsed around Dave's legs so that he was unable to escape. Quick thinking Dave used the Eskimo roll to right his craft to where the breathing was much easier. He then found that the hull had released the grip on his legs and he was able to free himself and complete a self rescue.

The craft, of fiberglass and reinforced with metal conduit was a complete wreck from the impact. Investigation disclosed that Dave had struck a railroad rail that had been driven into the bottom about two feet from the bank and never previously noticed as an obstruction. The end of the rail protruded just above the surface of the water.

Two theories have been advanced as to why his legs were caught, one being that the craft was wedged by the current between the rail and either the bottom or the bank and then broken by the weight of the water. Another theory says that the craft was impaled on the rail and in turning over twisted the conduit to where Dave's legs were virtually in a vise. In either case the righting of the kayak did release the legs.

Of greater importance is the fact that Dave's quick thinking and use of the Eskimo roll would have given ample time for rescuers to reach him even if his legs had still been trapped in the hull.

We are happy you are still with us Dave and hope others will learn from your experience.
Young Conservationists at Work. Following the lead of the Sierra Club which last year brought enormous quantities of cans and litter out of the high Sierras in California, the Ozark Wilderness Waterways Club organized two cleanup operations on the three-day weekends this past summer on their favorite cruising stream, the Current River in Missouri.

By the simple device of stirring up competition between teams of teenagers, who used everything from nets to magnets, some 500 cans were shagged over the July 4th weekend. With a larger turnout over Labor Day, four times that number were gathered and dumped into boats for proper disposal. "As of noon on Labor Day," the OWWC says, "the Current was relatively clean from Cedargrove to Round Spring. But if it is to stay that way, it is up to everyone to do his part."

It will take more than pious words, I reckon. How about a sprinkling of signs, tacked onto trees "This river has been cleaned up by the Ozark Wilderness Waterways Club. Help keep it clean and beautiful: take your empty cans and refuse back with you!" I'm sure many fishermen would be shocked speechless at the very idea—and some might pick it up.

In any case, the kids of the OWWC deserve a rousing cheer from the rest of us for their initiative and vigor. Our other affiliates would do well, in planning trips in next summer's hot weather, to arrange similar cleanup projects on their favorite wild streams. Is it not even more fun to splash around in the cool water for a good cause? And good publicity, too—the OWWC's effort made the Kansas City Star among other papers.

* * * *

From France, via Peter Whitney, comes an interesting sequel to Marc Favarger's sad plaint on the fate of river tourism in Switzerland, and his plea for state preservation of outstanding wild rivers. Mr. L. N. Soudois brought this idea to the attention of French tourism authorities, who "definitely did show surprise, but did not reject it." They were disposed to study the proposal on the same basis that certain famous mountains have been preserved for sport for all time.

We hope that members of the Outdoor Recreation Resources Review Commission will likewise "definitely show surprise" at a report recently filed by the AWA on the organized river cruising activities of its affiliated clubs, with the implication that this is but a small part of total recreational use of
wild rivers. After describing the activities of the AWA and its affiliates, and the increasing restrictions we have encountered, the report made a strong plea for preservation of our remaining wild rivers as wilderness preserves:

"Our nation has long since recognized the recreational and scientific value of wilderness areas, in addition to watershed protection. . . . We believe the time has come to extend this concept specifically to our wild rivers, in order to preserve them in their natural state for the enjoyment of future generations. The American White-water Affiliation therefore urges the implementation of the following points:

1. The protection of all rivers, in settled areas as well as in wilderness, against pollution and damage, by industrial wastes, by private dumps in rural areas, and by the intrusion of improvements.

2. The extension, by legal processes, of the tradition prevalent in many parts of this country and Canada that rivers are public highways, not to be barred by riparian landowners.

3. The extension of the concept of wilderness preservation to include protection for our remaining wild rivers against the destructive ravages of civilization."

Yellowstone Zoning Hearings. Further hearings were held in August by the Department of the Interior on this all-important issue (see Conservation Comment, February and May issues, *AWW*), at which Conservationists made a much better showing than at the hastily called hearings last February. Of those appearing in person at Cody on August 23, powerboaters outnumbered Conservationists 14 to 3, but at Lake village in the Park, Conservationists led by 23 to 6. The score was about even—14 to 12—at Idaho Falls. The record was held open until September 30 for additional comments, and some dozen letters that I know of were sent in by AWA affiliates and members, probably twice that number from others due to members' activities. Clyde Jones, in particular, duplicated a 6-page abstract of the more outrageous comments at the February hearings and sent them out to all his boating and outdoor friends. At time of writing there has been no indication of the Department's decision, but a last-minute communication from Clyde indicates that there has been heavy support for the zoning proposal, and we have every hope that next year will see it put into effect. It is just possible that the Outboard Motorboat Assn. has overplayed its hand in overwhelming the hearing last February, which was called on such short notice that the conservationists were unable to organize their scattered forces, and now their strong-arm tactics are beginning to backfire. For a number of letters from our members, and no doubt from others as well, have pointedly raised the question of whether this mass outboard recreation is compatible with the principles set forth in the National Parks Act of 1916. It would seem obvious that it is not, but if it is to be tolerated on very large lakes like Yellowstone, it should be on an "as is" basis. When the Park Service proposes to spend a sizable chunk of its very limited funds on the construction of an elaborate marina for powerboats on Yellowstone Lake, then we as taxpayers should protest this misuse of funds for pampering illegitimate activity.

* Are any of you still wondering why this unending battle to preserve our wild areas is necessary? Well, take a look at just the rivers on which the AWA has sponsored river trips or considered it. Our primary objective, the North Fork of the Clearwater, has been abandoned as a wilderness trip because of construction of a road by the Forestry Service and subsequent logging operations. (A power saw is not the most pleasant accompaniment to quiet river cruising!) The Clearwater main stem is muddy with silt from upstream erosion, and has a highway along one shore. Likewise for the Lochsa, once followed by Lewis and Clarke. The Selway at present is an unspoiled wilderness river, with challenging rapids, ideal for our purposes. "But what the Forestry Service and the lumber companies propose for this area," commented one noted resident, "is a crime against humanity." The main Salmon has a highway and is becoming settled, and the
famous "River of No Return," the Salmon Middle Fork, is acquiring a few ranches. There remains the Middle Fork of the Flathead, so eloquently described a while back by John Craighead in a strong plea for saving our wilderness rivers while we still have them. This will take more than strong words: it will take legislation, backed by the visible support of all of us who cherish wilderness values. Let's start with each of us working on our respective senators to get the Wilderness Bill favorably reported out of the Interior Committee and onto the floor of the Senate, in the next session of Congress. The 86th Congress, Conservation-wise, was almost a complete bust.

CANOEING ARTICLES

They Paddle Their Own, N. L. Mallison. Il. Recreation, 53:262-3 (June, 1960). Mr. Mallison, Commodore of the ACA, presents a concise description of canoeing activity in various parts of the country. He deals with canoe racing, cruising, sailing, and organization of clubs.

Our magazine researcher, Gerry Schneberger, is endeavoring to list all canoeing articles in other publications. Why not help out—when you run across an article of interest, clip it and send it on to G. L. Schneberger, 324 Stewart St., Morgantown, W. Va.

This is a book to celebrate. Old hands as well as new, foldboaters and canoeists, can give thanks for this first all-round account of white-water sport to be published in the U.S.

For all, here's a full and rounded introduction to European techniques which have proved themselves in international competition, but of which, up until now, most of us had heard or seen only bits and pieces here and there.

For newcomers to white water, whose crying need for information has been felt and left unsatisfied for many years, there are chapters on how to choose white-water kayaks, canoes, paddles, equipment, and clothing; on what causes rapids and how water behaves in them; on the dangers that white water presents and how to avoid or meet them safely; on how to paddle and maneuver canoes and foldboats in typical situations of shallow and deep water; and also on how to find and meet other white-water enthusiasts.

For older hands, one of the surprises of the new techniques is how much the foldboater and canoeist can learn from each other. Previously more aware of the differences in their boats, they can now share more fully the resources of a common blade.

The foldboater, in turn, may learn from the canoeist how he can draw to good purpose and how the Duffek is an adaption of the stationary draw away from the gunwale.

Besides what they have exchanged, the European foldboater and canoeist have each developed the specialties of their own craft. Take the canoe first.

Some of our canoeists familiar with a large repertory of strokes (44 by one collector's count) may not be impressed to discover that this touted European technique doesn't have many new strokes—if any, some might argue; but the few novel strokes are only a small part of the new technique. The larger part—besides the borrowings from the foldboat and equipment such as spray decks, kneeling bags, and knee harnesses—consists of the choice of strokes, the way they are used and combined, and the maneuvers performed. The old pry-away, for example, its leverage now extended, has a bigger role; underwater recoveries abound, to save time and provide instantaneous bracing; and eddies are reached from rushing jets by spinning the canoe around, stern towards the downstream rapids, with the poise of a bullfighter twisting from a rush and presenting his back to the bull.

To many foldboaters the extent of the "hanging" strokes will come as a revelation—When the paddler leans so far to the side that his main support seems to be his paddle, his boat hardly more than a floating bag attached to his seat and legs.

Then, of course, there's the eskimo roll. The complicated job of describing and illustrating it, with step-by-step suggestions on how to learn it, is skillfully done.

White-water safety, with an unusual section on its psychology, comes last in the book, to leave in the mind, effectively, the freshest impression. It deserves special attention. Good swimmers who first approach white water are
apt to feel offended in their athletic pride when urged to wear lifejackets. On such a serious and touchy matter the book might well give more of the reason— which have little to do with swimming ability—why they are needed in white water. Among them are the rapid loss of strength in cold water and risk from shock from prolonged cold immersion (which the author does mention in another context); the buoyancy that frees the feet to find a footing, and the hands to cope with boat, paddle, and lines; the possibility of injury to, or sinking of the head or neck in the event of an accidental blow or loss of strength or consciousness; and the dragging weight of water-logged clothing, especially canoeists' cold-weather clothing. Even if the ideal white-water lifejacket has yet to be designed, it's good to post these reasons in an introduction to safety.

"When a paddler spills in cold water, unless the sun is warm and the day young, it should be an absolute rule to stop, build a fire, and help him to change into dry clothes," the author advises. The fire seems more ideal than practical, especially on a trip with several spills, because of the time it takes. When a wet paddler has no dry clothes left, it's sensible for him to stop, wring out his wet ones, then push on. Exercise warms a body and moist clothing on it more quickly and effectively than a brief fire or a hot drink. When a person is exhausted or in shock, of course, the recommended fire, blanket or sleeping bag, hot drinks and compresses became necessary.

We've inspected in detail; how's the general appearance? It's strikingly animated by seventy-five large illustrations. The diagrams, by David W. Moore, are clear, bold dynamic. The photographs are well chosen to illustrate the text. These many pictures give the book life and do what words can't. They show what many of us haven't seen yet, what can be done with canoes and kayaks.

Especially well written by a professional writer—compact, clear, and graphic—the book conveys more information than one would expect to find in 117 pages of text. In addition to the topics already mentioned, it covers slalom and down-river racing; and, from his varied experiences as founding chairman of the Kayak and Canoe Club of New York and member of the Appalachian Mountain and Sierra Clubs, the author deals knowledgeably with the problems of organizing trips and forming white-water clubs. The difficult task of writing about all aspects of white water and describing its complex physical situations has been accomplished by Peter Whitney with precision and elegance.

Now, that the book has passed in review, let us salute this first, full, and splendidly assembled parade of our white-water sport.

Reviewed by Maurice Posada

Editor's note: The original review questioned the manner of presentation of several points in the book and challenged one or two of the recommended techniques; however, lack of space made it necessary to abridge the review.

You can order your copy of White Water Sport through AWA

The Ronald Press Company has agreed to have AWA serve as its agent in accepting orders for Peter Whitney's book. The usual bookseller's profit goes to the AWA general fund to further the Affiliation's work.

send your orders to

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East Brunswick, New Jersey

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Books will be mailed postpaid.
Make Your Plans NOW for an AWA River Vacation in 1961

Make or more AWA sponsored river trips are planned for the 1961 season. In order to give members as much time as possible to plan on participation in the trips, the preliminary announcement of the western trips is made at this early date. The trips will continue, as in the past, as non-profit trips but costs will be up compared to the past two years because of the transportation problems involved in running rivers in true wilderness.

The trips are open to all rafters or small boaters who are members of the Affiliation or of its affiliated clubs. A limit of approximately 12-15 persons has been set for each trip. This is in accordance with the wishes of members who prefer small parties, but each trip must be filled in order to operate the trips without financial loss. Children under 12 will be accommodated at half price provided parent or guardian is in the party.

SELWAY No. 1. July 4-10. This will be the first group trip in a pristine wilderness. Parts of the river were run for the first time by an AWA scouting party in the summer of 1960 but it is safe, though very exciting. A 50 mile trip from Paradise Guard Station in Montana to Selway Falls, Idaho. Western passengers meet at Falls, eastern at Connor, Montana. One day extra in land transportation and camping. Cost $120.

SELWAY No. 2, July 12-18. Same except two days spent in land transportation and camping to avoid 600 miles extra travel and expense for the Affiliation. Cost $125.

MIDDLE FORK OF THE SALMON, July 20-27. A trip of about 107 miles from Bear Valley to Salmon River. This is a "scouting trip" for passengers or boaters who have had some experience at this sort of trip. The pace will be a bit faster. Campsites and daily distances are not pre-established so that those who have not been on the Middle Fork will have a real feeling of "exploring" it. This is one of the white-water classics and a trip often requested. Meet at Stanley, Idaho. First day will be land travel and camping. Cost $135.

MAIN SALMON No. 1, July 28-August 4. Start and meeting place will be at the end of Middle Fork trip. This is the "River of No Return" and is another Idaho wilderness trip which has plenty of water even fairly late in the season. Cost $120. Those who would like to combine this trip with the Middle Fork trip may obtain a special rate. One day of transportation included.

MAIN SALMON No. 2, August 6-13. Same as above trip except passengers may be met in Riggins (Aug. 3) if they wish. Cost $125.

There will be no extra charges for passenger shuttles on any of the above trips. Days of land travel will vary according to where passengers are picked up. The reservation deposit will be $10 and will hold the reservation until June 15 when balance on all trips will be due.

There may be a share-the-expense scouting trip for a small party on the Flathead in Montana in mid-August if there is sufficient interest. For more details and/or early reservations address inquiry to: Oz Hawksley, Chairman, Trip Planning Committee, Route 5, Warrensburg, Mo.

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THE SKI HUT
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American WHITE WATER
Now that the boating season is over for most of us and we have been skiing for several weeks, we have already started looking at the wall map and thinking about next year’s boating season. (Maybe the season’s over in Colorado, but here in the Midwest many of us plan to keep boating throughout the year—Ed.) Looking over the schedule for the affiliate clubs we see a lot of trips we would like to take next year: Ozark Wilderness Waterways Club New Year’s weekend trip, Ontario Voyageur’s Third Annual Credit River Derby in April, B.C. Kayak & Canoe Chilliwack River Race in May, Appalachian Mountain Club’s June Lehigh River trip, Canoe Cruiser’s July Cheat River Canyon, Buck Ridge’s Fall Colors trip in October, Prairie Club’s Fall Jamboree in November, and others.

These and other trips are already starting to make your Secretary and many members look forward to next season. If you plan to travel next year be sure to look up the nearest Affiliate and go on a trip or two with them. It is one of the best ways to see the country and meet interesting boaters.

The Yellowstone Lake problem seems to be resolved in favor of preserving the wilderness area as the Park Service asked, and as our members hoped. The AWA has been thanked by the Park Service for our help. With this precedent set let us hope other areas can be preserved as easily. May the Park Service realize that this is a mandate, that the public does not want inappropriate power gear cluttering our parks and rivers.

The AWA is interested in investigating liability insurance, and equipment insurance. This would be from both an individual viewpoint, local club and for AWA organization. The Secretary would appreciate hearing from members on this subject.

The AWA now plans to incorporate. If you know any advantage to incorporating in some particular state please write the Secretary.

A detailed report on the AWA Summer Wilderness trips by Oz Hawksley is available. Any member desiring a copy may contact the Secretary.

The proposed Constitution (Fall 1959) along with the proposed changes (May 1960) will be voted on this month by the General Committee, and it is hoped that it will be official by the next issue of AWW.

Our magazine staff headed by Martin and Pat Vanderveen and Harold Kiehm have earned and requested a rest. They have built our magazine into a nearly self-supporting function. Their many hours of work have been evident in the magazine we have enjoyed. We must all now help our new staff headed by Peter Whitney to keep up the good work. Let us all look through our pictures and send the good ones in, and think if there are any articles we could write which the other members would enjoy.
The long awaited report by Special Investigator on Racing (Vern Rupp) has been finished. It is naturally controversial. The full report can be obtained from the Secretary upon request, but I will quote a section of the conclusion and recommendations as they appear to have a new approach to old problems:

AMERICAN CANOE UNION. Formed by the ACA & AWA and governed by committee members of both. This is to be the IFC representing body. The function would be to:

- Sanction and sponsor flat water, white water, slalom events and annual touring events.
- Set rules for all types of racing.
- Information center for all canoeing activities and problems.
- Supply materials for racing events (stationery, racing numbers, stop watches, etc.)
- Collect affiliation dues (from AWA & ACA).
- Publish a monthly (or weekly) magazine containing all paddling activities, camping, etc."

'This report on racing was most interesting, and one can see that this racing problem is going to be with us for a long time before all the boaters are happy.

Dick Bridge, 8A Ridge Road, Greenbelt, Md., is our Movie Film Committee Chairman. He would like to make a listing of all the boating and related movie films in the country. If you take movies please let him know. He would like to know what subjects you have, lengths, dates of films, rivers covered, 8 or 16 mm., would you show these movies, would you loan these movies, etc. This is an inventory so please help Dick make it a complete job.

The Editor would like to start printing up a river map and description in each issue, but he cannot do so until the Guidebook Chairman sends him the finished maps. The Guidebook Chairman (Walter Kirschbaum, 3650 S. Field, Morrison, Colo.) cannot send the Editor the finished maps until you, the members, have sent them to him. So will you pick out one of your better rivers, write and draw it up and send it to Walter, who will put it into standard international form and send it to the Editor.

To continue our discussion on the AWA organization that we started in the last issue let us consider the Affiliate Clubs and their representatives, who are really the steering committee and voting members of the AWA. Each club that wants to affiliate indicates its desire to the Executive Secretary, the club elects or appoints one of its members as a representative to the General Committee and then pays five dollars dues to support the office of Executive Secretary. Look at the August 1960 issue and the proposed Constitution (Fall 1959) and you can see what an important function these Affiliates serve. Each Affiliate receives a monthly report from the Secretary on AWA activities along with American WHITE WATER. Here is a list of our Affiliates. Examine the list and make sure your club is included; if it is not, bring this to the attention of your club and seriously consider becoming an Affiliate. It will benefit both your local club and the national sport.

Tell your friends to join AWA

Every paddleboater should be a member

Tell them to write for a sample copy of American White Water

American WHITE WATER
AWA Affiliates

R. C. Kayak & Canoe Club
Tim Traill, Rep.
3500 W. 49th
Vancouver, E. C.

Ruck Ridge Ski Club
John Burkam, Rep.
Box 71, 1 Sylven Ave.
Rutledge, Pennsylvania

Canoe Cruisers Association
John Berry, Rep.
4600 Harling Lane
Bethesda, Md.

Central Missouri State College Outing Club
Barbara Edwards, Rep.
16 Todd Hall
Warrensburg, Mo.

Colorado White Water Association
Leo Lake, Rep.
6225 S. Clarkson
Lakewood, Colorado

Cornell Outing Club
Jack Smith, Rep.
Chemistry Department
Cornell University
Ithaca, New York

Detroit Sportsmen's Congress
Louis Wartikoff, Rep.
7165 Tuxedo
Detroit, Michigan

Foldboat Club of Southern California
E. E. Simmons, Rep.
455 S. Oakland Avenue
Pasadena 5, California

Kayak and Canoe Club of New York
Maurice Posada, Rep.
417 Riverside Drive
New York 25, N. Y.

Murray Hill Canoe Club
James Raleigh, Rep.
119 LaParelle Ave.
Chatham, N. J.

Ontario Voyageurs
Kayak Club
Eric Wilkins, Rep.
19 Ashfield Drive
Islington, Ontario

Ozark Wilderness Waterways Club
Mrs. Margaret Hedges, Rep.
Rt. 2, Lake Quivira
Kansas City 6, Kansas

Pennsylvania State Outing Club
Dr. Thomas Smyth, Rep.
Treat Lab
Pennsylvania State University
University Park, Pennsylvania

Prairie Club Canoeists
Russell Ollrich, Rep.
2657 Scott St.
Des Plaines, Ill.

Sierra Club
Great Lakes Chapter
Roger Hildebrand, Rep.
572 S. Kimberly Ave.
Chicago, Illinois

River Touring Section
Lou Elliott, Rep.
1957 Gasper Drive
Oakland 11, Calif.

Washington Foldboat Club
Wolf Eauer, Rep.
5622 Segview Avenue
Seattle 7, Washington

Wisconsin Hoofers
Richard Field, Rep.
1214 Wellesley Drive
Madison 5, Wis.

WALT DISNEY FILMS “TEN WHO DARED”

One of man's mightiest adventures—the conquest of the roaring Colorado River through the Grand Canyon—has been filmed by Walt Disney as a full length Technicolor screen production.

Titled "Ten Who Dared," it is the saga of Major John Wesley Powell, one-armed scientist and fearless explorer, who guided an expedition down the uncharted Colorado in 1869.

John Beal plays Powell, the man who led nine others on a mission tense with danger, mystery and excitement.

His companions in the drama are Brian Keith, James Drury, Ben Johnson, R. G. Armstrong, David Stollery, L. Q. Jones, David Frankham, Stan Jones and Dan Sheridan. AWA-ers "Dock" Marsden and Kenny Ross took part in the production of the film, "Dock" as technical adviser and Kenny running the rapids as John Beal's double.

The authentic journey was filmed along a 370-mile stretch of the Colorado from Utah to Lake Mead. Six years of planning went into it. A picked crew headed by associate producer James Algar fought the raging river through the Grand Canyon. Their cameras captured some of the most awesome, inspiring scenery ever filmed.

Powell's original exploit earned him Congressional honors. Of the ten who dared the unknown, three vanished in a mystery that is still unsolved.
From your Editor

I have edited our magazine for two years, and hope that I have contributed at least a little to the growth of our journal and of our sport. I know that I've gotten an inexpressible amount of satisfaction out of working on the magazine and working with the grand team that has helped me put it out.

This is my last issue. I am resigning the editorship because of a sincere belief that there should be a change of administration every two or three years. A new editor inevitably brings a fresh viewpoint and a fresh approach to the job—and this should produce an even better journal than we have had in the past. Each of my predecessors has contributed a great deal to the form and substance of *American White Water*, and I am looking forward eagerly to reading the fine magazines to be put out by my successor.

Our new Managing Editor is to be Peter Whitney, who for the last year has served as Western Editor, and prior to that had contributed regularly and frequently to the magazine. Peter is a professional journalist and brings a great deal of talent and ability to the job.

Some of you may raise an eyebrow over the fact that Peter's name has appeared on our advertising pages as distributor of Chauveau foldboats. Thereby hangs a tale. It all started when Peter as an AWA enthusiast wrote to M. Chauveau asking him to advertise in AWW. Chauveau agreed to advertise, and at the same time, since he then had no distributor in the U.S., asked Peter if he would consider taking orders for his boats. There's the story. Those of us who know Peter have not the slightest fear that the connection he has had with Chauveau foldboats will result in any bias in either the editorial or the advertising department of *American White Water*.

As our new editor takes up the reins (or the paddle?) there will be other staff changes. A few of the old team had asked some months ago for replacement, and their successors are currently in process of being selected. The names of the new staff members will be announced in the next issue. In the meantime, all correspondence should be addressed to the same staff members who are listed on the masthead, with the exception of correspondence for the Managing Editor, which should be addressed to Peter Whitney, 2633 Hillegass Avenue, Berkeley 4, California.

Martin Vanderveen

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The Slalom '59, like all other Klepper boats, folds up and packs like luggage. It can be assembled in less than 16 minutes — without tools — without screws, nuts or bolts. As a proof of Klepper quality and construction it was in a stock Klepper Aerial that Dr. Lindeman achieved his world-acclaimed Atlantic trip. The Slalom '59 is a boat worthy of the true sportsman. See it at your Klepper dealer now!

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