

American

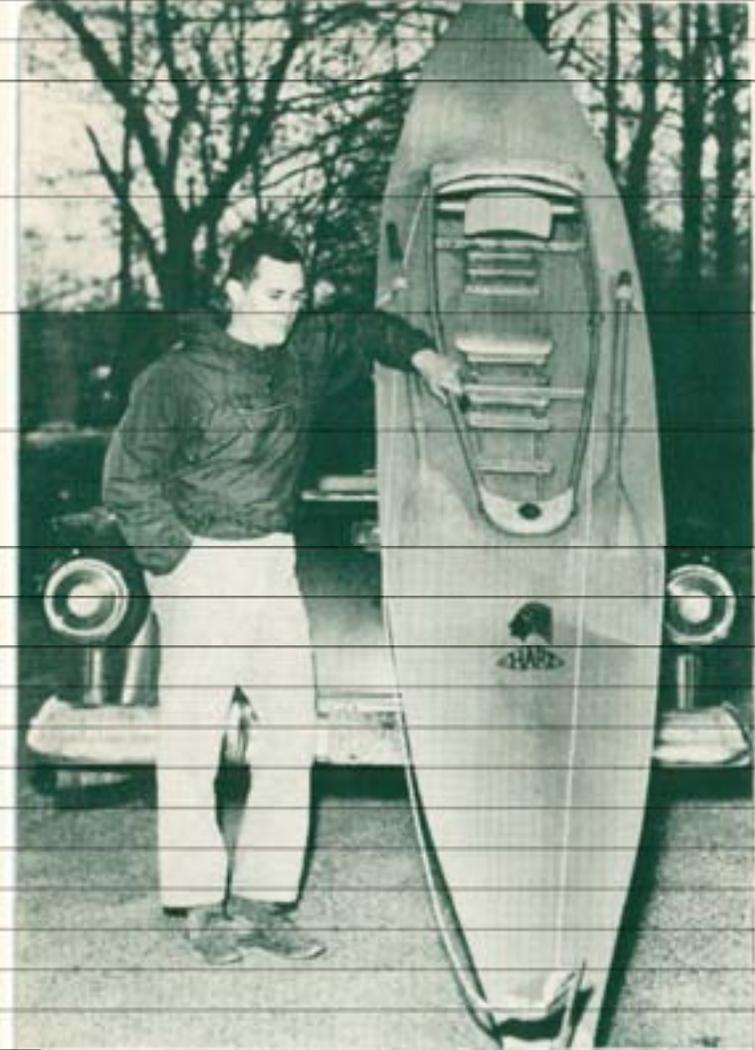
WHITE WATER

the Journal of the American White-Water Affiliation



MAY, 1960

Vol. VI
No. 1



Why I Like, the Hart-Sioux.

I got into selling Hart-Sioux kayaks six years ago out of love for white water and river running. I welcomed the chance to introduce in this country a famous kayak which provided more of what foldboaters demand.

One thing stood out immediately about the Hart-Sioux. This was that the design hadn't "run away" from the paddler. Its construction provides great simplicity consistent with good design principles. No Hart-Sioux has ever taken

more than 15 minutes to assemble after some practice. To take another example, if a minor repair is necessary a temporary one can be made easily without sending a frantic wire to me for parts—even though I stock every part for Hart-Sioux kayaks and I ship within 24 hours after receiving your order.

Hart-Sioux kayaks are comfortable; crossbraces are recessed and backrests and seats are adjustable to several positions. A deck seat is part of the coaming. There is plenty of room to pack what you need for a camping trip.

The Hart-Sioux is an all purpose boat, whether for slalom or for white-water. Our Adventurer single is so maneuverable at the gate that it picks up seconds that "slalom" kayaks have to make up on the straights. For white-water the Hart-Sioux is hard-gunwaled without being excessively beamy and it is a fast riser from the troughs. We have a flat bottom and high rocker.

Our prices are low. Please write me at the address below for answers to questions and for our literature.

John Sibley

FOLDCRAFT KAYAK COMPANY

Phoenixville, Pa.

Wellington 3-3097 or 3-6587
(near Valley Forge exit, Pennsylvania Turnpike)

American WHITE WATER

Sponsored by The American White-Water Affiliation

May, 1960

Volume VI

Number 1



The American White-water Affiliation

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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.

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Cover Photo: Ted Hazlitt on the outrun of the slot on the South Platte River. Photo by Dave Stacey.



Dear Van: Early this year I found myself in London on a business trip. Before leaving I wrote to several British members of the AWA. Bob McNair wrote other letters of introduction. No sooner was I established in my hotel, than I was given a hearty welcome by a number of British canoeists. Readers of the British "White Water" are familiar with the names of Bill Horseman, Olive Cock, Dr. Thelen, Jack Sphuyler, Keith White, Ian Carmichael, and Paul Farrant. I met all of these, and many other of the "bods." They are a fine friendly group, as white-water people are every where. I attended the annual meeting of the British Canoe Union (where I showed some slides of American canoeing); I watched them and joined them in their twice-weekly pool practice; but principally I swapped information with them. Here is a brief account of some of the things I learned:

Slalom is the chief activity of the British white-water people. This is due in part to the fact that many good cruising rivers in Britain are closed or at least unwelcome territory to canoeists because of the riparian rights of fishermen. A slalom, however, may be held on a very short course. Many British white-water people spend a large portion of their boating careers scooting about in the turbulence below weirs (dams). This would be a severe hardship to us, but they have made the best of it. In a little over five years they have built up slalom from a modest beginning to the point where they have produced a world champion (Paul Farrant, F-1 champ at Geneva in '59).

This development of slalom has been accomplished through the efforts of the canoeists who have put out a tremendous amount of work in organization, development of techniques, construction of

boats, and active coaching and training of the younger men. The result is a very impressive team.

As I watched Ian Carmichael and Paul Farrant perform with their boats in the pool, I was astonished at their degree of control. Their technique is interesting. When Ian or Paul does a Duffek turn, or uses a draw stroke, the paddle is nearly vertical, close to the boat, and the blade is very deep. The hands are remarkably close together on the paddle. The boat is often tipped to an extreme angle, but it seems to take little effort to keep it from flipping over. If it does, there is no problem for these boys in rolling up. Ian, in particular, flips up in seconds.

Although the British slalomists are dedicated, they are by no means grim. They try hard to win, but they have a good time doing it. Perhaps this is the place to point out that whereas the not-so-young canoeists have helped to develop a first rate mens' F-1 team, they have scotched the girls' team by marrying the girls. There is a limit to their dedication.

What I've described so far gives the impression that all the emphasis is on the *team*. This isn't true. The overall slalom program is designed to accommodate a large number of people and to help newcomers develop proficiency.

In the interest of handling more people in a slalom, Bill Horseman has constructed an interesting electrical device. It combines the finish line communications station, three stop clocks, and a system for dialing penalties into a totalizer which already has the contestant's time. As all penalties are signaled to the finish line as soon as they occur, it is possible to report a complete score within seconds after a man finishes. This adds to spectator interest,

which in turn induces the BBC to televise a fair number of slaloms. These TV slaloms make the money with which it is possible to construct totalizers.

My final comments are that I hope that we are as hospitable to visitors from overseas as the British white-water people were to me. I hope that AWA members who travel take advantage of the membership list (as I did) to establish contact with white-water people in other areas. The result is both informative and enjoyable.

Eliot DuBois
Sandy Pond Road
Lincoln Mass.

Just as we were going to press we received word that world champion Paul *Farrant*, mentioned in Eliot's letter above, was killed in an automobile accident. His death is a loss not only to the British group, but to white-water people everywhere.

Editor: Being only a one year member to the association and having enjoyed so much the reading of our beautiful magazine I am sending you \$10 for the next 3 years and I also would like to receive all the issues of 1958 if they are still available.

I am looking forward to a wonderful year of White-Water cruising and maybe a few down river races specially around our city of Washington.

Mr. Alfred Marteau
P.O. Box 4933
Washington 8, D.C.

Dear Van: Ontario Voyageurs, Buck Ridge and AMC are planning a joint trip to the Petawawa River this summer. It will cover a distance of about 50 miles through the Algonquin Provincial Park. It will be a true wilderness trip with attractive and unspoiled scenery.

Those who have already run the Petawawa know it for one of the best rivers in Ontario. It is not the easiest river to run, having many Grade 4 rapids, but it is worth the effort.

The trip is planned for the last week in July, ending on Saturday, July 30th. A number of people are planning to combine it with the Peterborough Slalom on July 31st.

George Topol
1557 Main St. W.
Hamilton, Ontario

It was suggested that this be classified as an AWA trip, but due to insufficient time for consideration no decision has been made.

Editor: Here is my subscription for 1960.

Please give me the name and address of the contributor who wrote "Let's Go Upstream." [August, 1959.] His ambition is laudable, but his equipment not suitable. He needs an 18' or 20' guide river model, without heel and a proper pole with iron point. I have poled up the same river, East Branch Penobscot, many times—the best river in the Northeast for quick water.

I deplore the demise of poling—it's just like culture in the Dark Ages—unknown to all but a few old-timers in Maine and salmon fisherman who use guides in the Maritime Provinces. It's an art and a sport—but hard work.

Of course a man with a pole can ascend where paddlers would go backward; he can drop down shallows safely which would ruin canoes and kayaks being paddled.

Ludwig K. Moorehead
Windrow Lane
New Canaan, Connecticut

The article was by Peter Whitney, now *our* Western Editor. His address is listed on the title page of the magazine.

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.

CANOEING ARTICLES

Aloha, Hawaii!, outrigger canoe race. M. L. Chapman. il. Rotarian 96:27, Jan. 1960.

Tips on Canoe Camping. C. B. Colby. il. Outdoor Life 125:124-6, Feb. 1960.

Downriver with Jake's gang. E. W. Smith. il. Field and Stream. 64:43-5, March 1960.

Float the Spring Freshets. F. M. Paulson. il. Field and Stream 64:108-12, March 1960.

Canoe Making; Reprint. *Hobbies*. 65:113, March 1960.

A listing of canoeing and white-water articles in other magazines will be published regularly in American WHITE WATER. If you run across any articles that have not been listed, please notify Gerry L. Schneberger, 1206 Hughes Ave., Flint 3, Michigan. Mr. Schneberger will soon have a complete list of canoeing articles in U. S. magazines from 1950 to date.



Attention Foldboaters

Let's run the Middle Fork of the Salmon. You know this to be an outstanding, challenging stream and the chance of a lifetime. Run with congenial Roger Paris, World Champion, willing to help and give pointers.

**Seven days
Starting July 16th**

**HATCH RIVER EXPEDITIONS
Vernal, Utah**

FROM YOUR EDITOR

I ~~have~~ proof that people read our want-ads. That squib in the last issue asking for artists brought a mailbox full of answers. Louis Boehm, George Disborough, Kerstin Buchner, Maxine Morse, Glade Ross, Nancy Sylvanus, Bob Worrell and Walter Zinsmeister have volunteered and now comprise our art staff.

Are you planning to go on the Clearwater or the Current with the AWA? Get *your* reservations in now! Oz writes that reservations are coming in slowly, which could mean a last-minute rush. These are magnificent trips (I've been on both rivers and can testify to their beauty) and if you like wild water the Clearwater offers some of the best!

Beginning with the next issue of American WHITE WATER, publication date and deadline will be the first of the month. It takes thirty days to put out a magazine. If the printer is a few days late getting it off the press, our overworked circulation manager takes a few days to get it mailed, and then the Post Office drags its heels as it sometimes does, the cumulative result may be that the magazine reaches your hands the month following the date printed on the cover. Moving the publication date up will give us some leeway. THIS MEANS THAT ALL STORIES AND ADVERTISEMENTS FOR AUGUST MUST BE IN MY HANDS BY JULY FIRST.

Two of the enclosures with this issue are river guides compiled by the ACA. We have been hoping to do something of this sort ourselves, and have made an arrangement with the ACA whereby they will supply us with copies of their river guides and, when we have guides printed, we will supply copies to them.

The third enclosure is the AWA safety code. Keep this booklet in your pocket or your boat and use it! For an extra copy just send a stamped envelope to Safety Chairman Red Fancher, 8224 S. Woodlawn Ave., Chicago 19, Illinois. Larger quantities can be purchased for \$3.00 per hundred.

Martin Vanderveen



The Colorado Hook

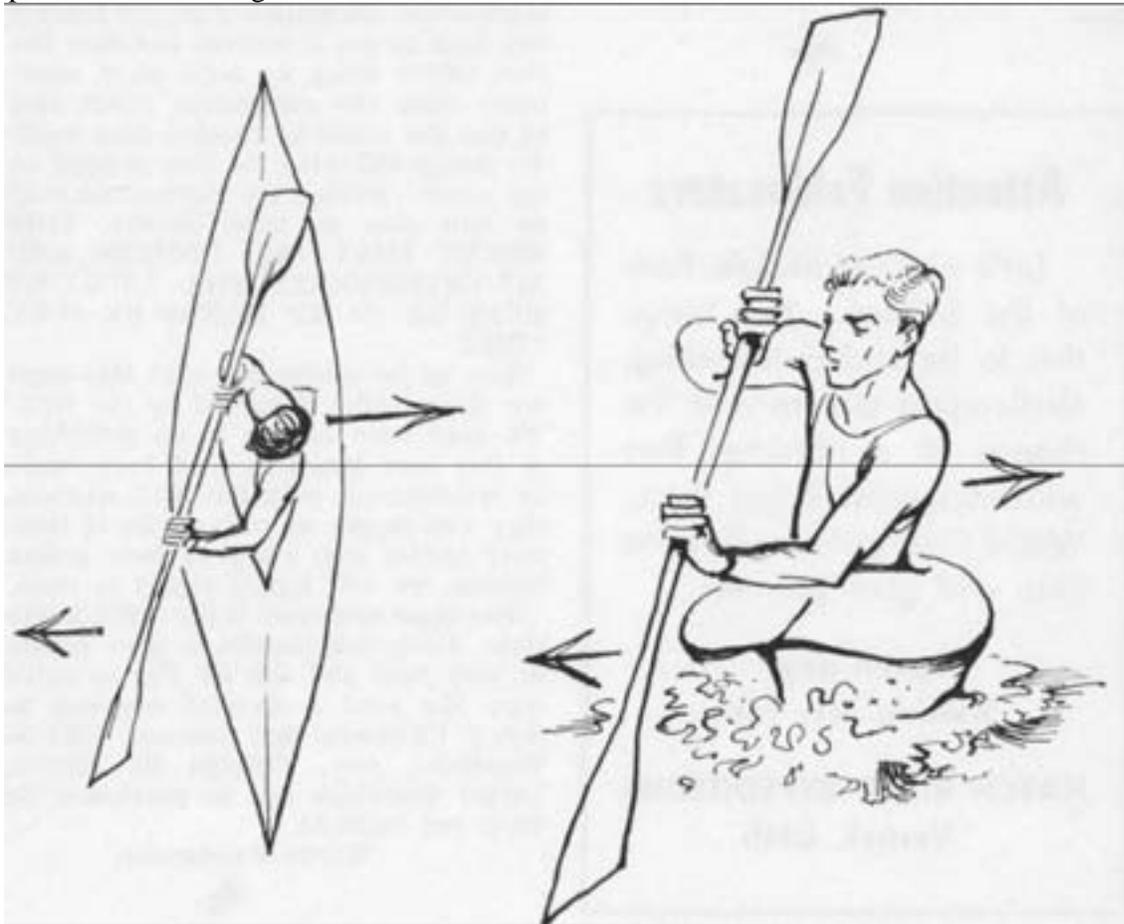
by LEO C. LAKE

The most powerful of all kayak strokes is the new Colorado Hook. So potent that it will either jerk the paddle from the grip of the paddler or else spin him around on his own wave of foam, this new technique will prove its effectiveness for the first time on the slalom courses this summer.

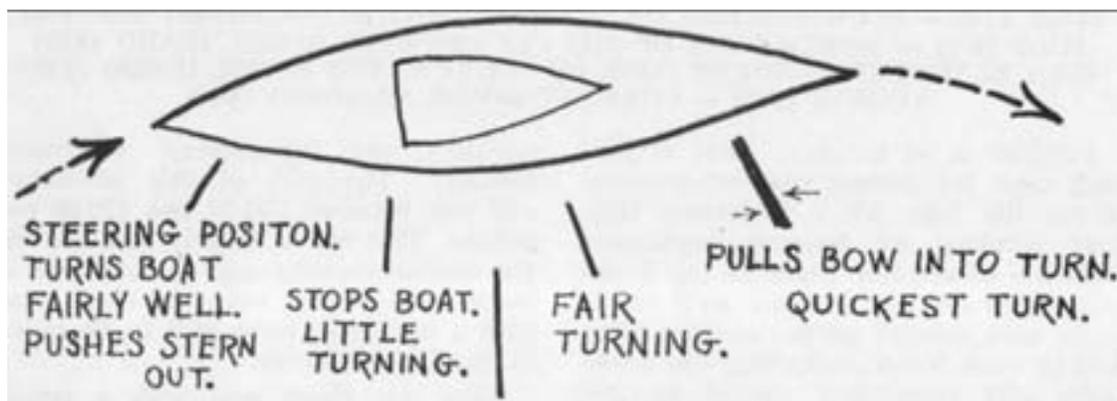
Calling for a new concept of balance and demanding a sharp understanding and appraisal of all currents and forces in the immediate foreground, the Colorado Hook possesses a potency that discourages its use at first. But once the technique is mastered, it will change the direction of travel more quickly than any other stroke while maintaining the speed better. Those who have practiced it through 1959 still stumble

once in a while and take a spill, but the thrill of a correct Colorado Hook is so fascinating that they find it impossible to resist.

The stroke is executed at speed when entering or leaving fast moving water. The greater the velocity differential, the greater the effectiveness of the Hook. The blade from the side of the kayak that will be on the outside of the turn is crossed over to the inside and inserted into the water toward the bow in such a way that it digs in or hooks. Simultaneously the body is leaned toward the outside of the turn. Balance is then maintained by feathering or turning the blade to control the amount of the hook.



POSITIONS OF BLADE



**ACTS AS PIVOT.
GOOD TURNING BUT STOPS BOAT;**

The efficiency to the Hook is due to two factors: 1—the force is applied at a forward point that causes the bow to veer into the direction of the desired turn rather than acting as a brake as it would do if applied to a point amidships; and, 2—the water which piles up onto the blade intensifies the strength of the Hook as the turn progresses.

Let us set up a specific turn to the right, going downstream from a fast current into a motionless eddy. Bring the left blade across and insert (gently at first) into the still water on the right side close to the boat and as far ahead as possible, holding the body relatively vertical. (Do not lean into your turn). The blade should point to the right at about 45 degrees while it also points down into the water. The body should be turned to the right at the hips and the right hand should be just off the right shoulder. Action!

1. As the turn works the bow will be pulled down and the stern will be lifted and flung around. 2. As the turn works the blade and shaft will be pulled strongly to the right into the turn. 3. As the turn works the body will be thrown out to the left. When properly executed, 2 and 3 will counterbalance each other, and the paddler will be hanging on grimly to what seems almost like a quick jerk. As the hook

finishes the paddler is in a perfect position to go directly into a long back sweep on the right or else a long forward sweep on the left.

The Hook as done in a kayak is entirely different from the crossover in a canoe because of the difference in length and rocker of the boats and because of the entirely different balance and lean of each.

There are several fringe benefits of the Colorado Hook. One is that in reaching out ahead of the body the paddler can take advantage of a current before he himself enters it and sooner than he would if he were reaching to the side only. He can reach through a gate or up into a current when smack-dab alongside underbrush or a wall.

The Hook will naturally work better with certain shapes of kayaks, and it will work only under particular circumstances. The inside lean on a turn should be forgotten, and the last forward stroke should be made on the side which will be inside at the turn. It is not easy to get acquainted with, but this thrilling spine-twister will give you a new sensation in kayaking, and will enable you to execute a snappier turn than you ever thought possible.



AWA WILDERNESS TRIPS FOR 1960

JULY 11-16 — SCOUTING TRIP ON UPPER SELWAY RIVER, IDAHO (\$50 - \$70)

JULY 18-24 — NORTH FORK OF THE CLEARWATER RIVER, IDAHO (\$75)

JULY 26-AUGUST 1—NORTH FORK OF CLEARWATER RIVER, IDAHO (\$75)

AUGUST 16-22 — CURRENT RIVER, MISSOURI (\$35)

Summer is on its way. Time is running short for getting your reservations in for the 1960 AWA wilderness trip. Last summer we became acquainted with the Clearwater River in the Idaho wilderness and this summer we'll run it again with smaller parties and the trips will be even better, reflecting the knowledge and experience gained on last year's trip. The fee for the Clearwater trips (July 18-24, and July 26-August 1) will be only \$75.00 to include food, guidance on the river, and car shuttle. All you have to bring is your kayak or decked canoe, clothes and sleeping gear. Non-paddling members of your family can ride the rubber rafts.

For those who are truly adventure-minded, the July 11-16 scouting trip on the Upper Selway offers the challenge of the unknown. The river has a steep gradient and has rapids up to Class IV and V. Participation is limited to expert

paddlers and experienced wilderness campers. The cost of this adventure will run between \$50.00 and \$70.00 per person. This run is largely through virgin timber country and is supposed to be one of the most beautiful river areas with a navigable river still to be found in the United States.

Then, for those who wish a family trip on an easy but lovely river, \$35.00 will get you a full week on the Current River in the Ozarks. Bring your own canoe or kayak; there will be no rafts on this trip. This is a safe river where you can bring the whole family, including the younger children.

Time is running out, so get your reservations in soon. All reservations and inquiries should be directed to Oz Hawksley, Chairman, Trip Planning Committee, Route 5, Warrensburg, Mo.

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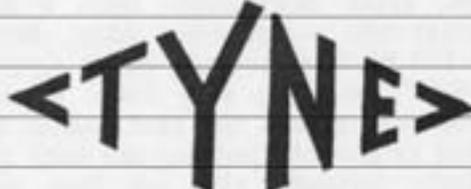
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The Danube at Ottensheim

Austrian

Journey

by WALTER BURMEISTER

During the spring of 1958 I spent two weeks on Austrian rivers. I had selected the Inn, the Drau, the Traun and the Danube because these rivers rarely exceed medium difficulty, have long stretches that are not yet regulated by dams, and flow through some of the most magnificent valleys of the Alps. In addition I had ample opportunity to study portions of the Salzach, and the upper Inn at high water level.

I undertook the journey as part of a visit to Europe. Primarily I looked for pure enjoyment, which after all is the main motivation of this wonderful sport. Secondary reasons for the journey included: an attempt to study the international river rating system as it is applied in Europe and, how the application abroad compares with our interpretation in the USA; further, I wanted to meet key Austrian foldboaters and learn more about their techniques; last but not least, I wanted to see something of the latest Austrian foldboat designs.

I had established a set of ambitious purposes for the journey.

I entered Austria by rail via Feldkirch and followed the historic route along the Rosanna-Trisana to Landeck, Tirol (Tyrol), where the boisterous Inn rushes swiftly between steep mountains toward the junction with its wild tributaries. The scenery is breathtaking and the power and vitality of the white water most impressive. Approaching the gorge of Imst and the difficult rapids at the Oetztaler-Achmuendung (tributary stream) I had an opportunity to see some heavy white water of grade V. A huge breaker, extending across the entire bed, introduces a series of very nasty rapids. The rugged slopes of the northern Kalkalpen rise directly above the turbulent water; a scene of tremendous impact.

I took the train to Moetz where I had planned to begin boating. Moetz is a tiny hamlet on the Inn River, approximately 30 kilometers (18.7 miles) west of Innsbruck. The foldboat, a sporty

single-seater, which was rented beforehand, was already waiting for me at the station, all set up. This convenient system was followed throughout my journey. I shipped the erected boat by rail and never had to take it apart. Any American foldboater who wants to boat in Austria can use this system and can easily arrange everything beforehand by writing to Otto Hruza, Wien 19, Hackhofergasse 5, Austria. However, one must specify the particular type of foldboat desired. The fee is very low. With a limited vacation, where time is essential, one can thus arrive at a given point and find the boat waiting for him.

At Moetz the Inn is but a few hundred feet away from the railroad station. Here the river rushes madly under a bridge and toward steep hills and snow-tipped mountains. Although, from a distance, the river looks easy, initial contact with the velocity and power of the water will surprise most paddlers. Because of the enormous volume compressed between steep slopes, the best course lies along the center of the river; here one avoids the huge waves caused by short regulating dams. These dams, designed to prevent erosion along the shore, are constructed obliquely into the current. They can be a source of real trouble for paddlers who attempt to hug the banks. Every bridge requires attention, for generally the current is not perpendicular to the structure. One of the dangers of Austrian rivers is the very low temperature of the water. At least during high water, I would not recommend the Inn for canoeing (Canadian canoe) but found conditions ideal for foldboating.

The valley of the Inn is famous for its magnificent scenery. Distant views are most spectacular because of snow-covered giants that are everywhere in view. With the excellent Austrian river guide in front of me, on the spray-cover, I was able to orient myself easily and at the same time learn about any historical point or particular building visible from the river.

In the heart of alpine grandeur, I glided swiftly past the majestic Martinswand, speed under the many bridges



Pass Lueg; where the Salzach River exits from the Salzach-Ofen.

of Innsbruck and, after about 7½ hours of paddling, found myself approaching Woerl. Because of a power dam not far below this town I decided to end my run at this point. Most paddlers will prefer to proceed with more leisure and include the run on the famous Ziller, a beautiful tributary of the Inn. I covered 100 kilometers (62½ miles) in one day because the day was raw and cold, the only bad day I had on the rivers in Austria. By paddling continuously I managed to keep warm.

Woerl is a picture postcard town. Here I had my first contact with the Austrian inn (Gasthaus or Gasthof). These inns are an institution. They are all immaculately clean, inexpensive, serve excellent food, and usually cool beer and good wine. If you are interested in good meat, select the inn owned by the village butcher; if you like good wine, select the inn owned by the brewer or wine shop. I am so enthused about these inns that I would revisit

Austria simply for these practical facilities.

From Woergl I shipped the foldboat to Lienz, eastern Tyrol, and followed by train.

Lienz is a jewel of a town; immaculate, picturesque, and ideally located among the peaks of the Lienzer Unholden. This is a climber's paradise. The Drau is narrow and turbulent to a point at the end of town where it is joined by the Isel. The first mile of the Drau is exciting and very swift. A turbulent course over small haystacks brings the paddler to a broader, more sedate bed beyond the junction. The speed of the current is very high all the way to Jugoslavia. A prepared campsite is visible on the right hand shore, and beyond the majestic Lienzer Dolomites lift their challenging pinnacles about pine clad slopes.

From Lienz to Spittal, Carinthia, a distance of 72 kilometers, the valley through which the river flows is simply referred to as the Drautal. The course is graded I to II. While the water is lively and interesting, there are no real rapids. The velocity of the water permits a paddler to cover considerable distances without any great effort. But there is more than a swift current to delight the paddler. The valley is of great beauty. Many Austrians feel that this is one of their loveliest valleys. Considering that one can paddle from Lienz to Stein, Kaernten, a distance of 183 kilometers (114 miles), without encountering any dam or major obstacle requiring a portage, the Drau is the ideal touring river of Austria.

Beyond the bridge at Spittal and above the right hand shore stands an inn within the shade of steep slopes. A campsite offers free facilities and the inn provides low cost room and board. I spent a pleasant afternoon here.

While I was enjoying a huge Wiener Schnitzel and tasting the local beer, two Volkswagens pulled up loaded with foldboat gear. In the shade of the inn these happy people set up two double-seaters and one single-seater. I walked over and found that they were Bav-

arians who had come to do the Drau a second time. Naturally I joined the group and found them full of fun and dedicated foldboaters. En route, I was surprised that I did not meet larger numbers of foldboats. On the Inn I saw no other foldboat; on the Drau I saw only the Bavarians and another group of Germans from Essen. Of course touring is not as popular during spring as later in the summer. However, I found May and June to be ideal; there was no rain, the air was dry and invigorating, and the rivers had more than enough water.

The following day we paddled as far as Rossegg at the foot of the Karawanken. These magnificent mountains form the Austrian border with Jugoslavia. From Villach to a point beyond Glainach, the Drau flows through the Rosental (valley of roses). It is a fertile land steeped in history and blessed with picturesque scenery. Below Spittal the architecture of the towns gradually begins to show some slavic influence. Beyond the Rosental, near Stein, many of the natives speak both German and slavic tongue.

The third and final day of the Drau was the most impressive and exciting. The guidebook states that a reading of 1.90 meters of the gauge at Rossberg means a thrilling run, and the gauge indicated 2.50 meters. We could look forward to heavy white water. Of the numerous rapids along this section those at Ludmannsdorf and Glainach are the most exciting. The Drau is broad and powerful here and rapids extend across the entire bed. Up to this point rapids are easy and have only low haystacks. The larger rapids, below Rossegg, have miles of high haystacks, breakers, and immense whirlpools.

It is difficult to divide the various rapids into separate parts, for the first heavy white-water is the beginning of miles of rough going connected by short stretches of very swift water. The Feistritz rapids are a sort of prelude and lead the paddler directly into the famous Ludmannsdorfer rapids. The powerful river suddenly races mad-

ly around a bend and, with high water, completely covers the shallow and rocky left half of the bed. With a deafening roar the turbulent water breaks up into a multitude of haystacks and breakers complicated by treacherous eddies. The exceptionally high water level we enjoyed gave added impetus to the rapids and I had another opportunity to give thought to the European interpretation of the international rating system. What is considered grade **III** on the Drau might easily have been considered grade **IV** by most American canoeists. Some of the waves completely buried the boat; many required real attention because their angle and direction were deceiving and often followed by strong whirlpools. These rapids are not only exceptionally thrilling but the scenery along both shores is most impressive.

The rapids at Ludmannsdorf are followed by several short but steep drops, all of which have high waves. The last big rapid, and in my opinion the most spectacular, is at Glainach. Rated grade **III** to **IV**, it would be considered by many in the USA at least grade **V**. Approaching the rapid from the center, one is initially deceived because the first waves are no more than symmetrical swells. The current is fast, and before one realizes the transformation the boat climbs huge haystacks and rises from the spray of vicious breakers. We dashed through the white water on a warm and dry afternoon; the sun was bright and an azure sky rose above the colorful rock formations of the **Sattnitz** mountains. A truly memorable climax to a wonderful three days on the Drau.

Below the Glainach rapids the current continues swift; there are several smaller rapids but the anticipation of heavy white water is gone and the remaining miles to Stein are anticlimactic. At Stein my Bavarian companions were most helpful in getting my boat to the railroad station. This is the last practicable point where one can reach the Austrian rail system. Below Stein the river is very impressive; however, power dams have made the re-

maining miles to the border impractical. The trip below Stein is advisable only for those who desire to follow the Drau to **Marburg** in Jugoslavia.

After an interesting interlude at the inn of Stein, a long scenic train ride brought me to Bad Ischl, Land Salzburg. The route passes through a lake region and along parts of the Drau valley. It continues along the lovely Moell valley, tunnels through the **Hohen Tauern** mountains and enters fabulous Bad Gastein. From this famous spa to the valley of the Salzach river the train follows the slopes of the picturesque Gasteiner Ache; a lively little stream offering miles of interesting white-water boating. Having reached the Salzach river, I kept my eyes literally glued to the swift water to study its temperamental course. Although, between Schwarzach - St. Veit and the entrance to Pall Lueg it is generally of grade **III**, there are several tricky spots such as the turn at Werfen (**IV**). The entrance into the gorge of Pass Cueg also has difficult white-water, terminating in the suicidal Salzach Oefen, caverns formed by the river cutting directly through solid rock. The exit from this underrock passage is a furious white water hell of spectacular beauty and terrible reputation. About 30 foldboaters have lost their lives in an effort to conquer this section of the river. Of course some have succeeded; a few have done it several times. The rocky exit from the mountain gate is as picturesque as it is dangerous. In a broader valley, lined by snow covered mountains, the Salzach continues its swift course toward Salzburg. I changed trains and sped toward the Traunsee and Bad Ischl in the heart of the lovely Salzkammergut. This is a region of mountains, lakes and small rivers all arranged by nature to form a sort of paradise.

Bad Ischl is a spa of renown and a most attractive town. The Traun river flows through the center of town. This is Austria at its best. The swift Traun is unbelievably clear and deep green, broken by the white of an occasional



The village of Kuchl in the valley of the Salzach.

The Traun River above Traunsee

rapid. From Bad Ischl to the Traunsee, the river is swift and flows through a steep valley. There are no dams or obstacles; attention at the bridges is all that is necessary. Because of the velocity of the water, the 18½ kilometers can be easily done in an hour or two. I did not run the section from Hallstaedter See to Bad Ischl because of several very difficult weirs with rough and dangerous white-water. Since I carried clothing, money, and passport with me I did not want to risk a swim and decided to run only the unobstructed section. A worthy climax to the river run is the trip along the east shore of the Traunsee. High, steep cliffs give the lake the appearance of a fjord. The transition from mountain to foothills is of striking harmony.

From the Salzkammergut I travelled to Schaerding on the Inn river. The launching site on the Pram, a small and quiet tributary, is convenient. Immediately beyond the still water of the Pram one enters the raging expanse of the Inn. While there are no rapids here, the turbulence of the powerful river results in enormous eddies and whirlpools that are constantly attempting to get the boat off course. For 16 kilometers the Inn courses through a

striking valley. Particularly at the **Vornbach** narrows, a rocky island and rugged slopes dramatically add to the majestic panorama. Dominating promontories and strategic heights are churches, cloisters, and castles. Short diagonal regulating dams extending into the river form interesting **chutes** and high standing waves. However, all of these can easily be avoided.

The velocity of the Inn is astonishing, and the **colorful** spires of Passau quickly appear. Passau is the personification of picturesqueness. The old city, built on the peninsula formed by the Danube and the Inn, has an architecture of Italian influence. Everything is dominated by the cathedral which houses the largest organ in Europe. At the tip of the peninsula one can see three rivers joining their vari-colored waters; the Ilz with its brown water, the Danube with its yellow-green water, and the Inn with its greyish glacial water.

The city of Pasau is in Germany and when I left Schaerding I had inquired about border procedures but was told not to worry since I carried no new goods. Matters worked out exactly as I been told; upon reaching Austrian territory again, I stopped at a designated

point above Kasten; my baggage and documents were inspected and I was ready to continue the trip on the Danube.

The Danube is a large and powerful river but unfortunately has been blocked by two huge power dams. However, both dams are equipped with locks to facilitate shipping; foldboats also use these facilities. At Jochenstein another foldboat entered the lock while I was waiting to pass through. Total waiting time was around one hour and then both boats were through. At Persenbeug I found myself all alone in the huge basin of the lock and within 10 minutes was passed through. I was amazed at this service which must be quite expensive; yet the paddler does not pay a penny for passage through the locks.

Below Passau the current is swift but gradually one notices the lessening of the velocity and several miles before reaching the dam at Jochenstein the Danube resembles a mountain lake. However, the scenery is impressive along the entire distance. Small towns and mighty castles dominate the steep slopes and dense evergreen forests cover the hills.

I had initially planned to stay at Engelhartzell overnight because it is a picturesque town and the monastery at the edge of town produces a well known liqueur of rare flavor. But river regulating work along the entire shore adjacent to the town made landing difficult; accordingly, I made a quick visit to the monastery, bought a small bottle of the liqueur, and continued down stream to the village of Niederanna. In this area the current is particularly swift and the paddler enters the most scenic region of the Danube. Niederanna, on the left bank, is located in the district known as the Muehlviertel. It is a wonderful region of dense forests, old mills, and numerous castles. There are few main roads in this region and the wanderer will be delighted with the qualities of the land.

My story would be incomplete without a reference to the inn at Nieder-

anna. Today it seems utterly fantastic to speak of low prices, excellent accommodations, very good and reasonable food and attentive service. Since I had all this in the heart of a scenic fairyland, I remained an extra day and hiked over 25 miles to visit castles in the area. The ascent through lofty pine forests, vistas of distant castles, the view of the Schloegen Schlinge of the Danube far below, and so many other memorable sights are impressions I will never forget.

Following this pleasant interlude, I continued my journey on the Danube and paddled through the renowned Schloegen Schlinge. This is a sort of oxbow bend which the Danube has formed by leaving its southeast course and carving a path through the plateau. Suitable campsites are everywhere in sight and nature is almost voluptuous in its rich green fields and woods along the shores. Narrows and steep valleys follow in rapid succession and at Neuhaus castle the hills gradually recede from the rivers to rise to greater heights in the distance. The slopes are divided into neat mosaics of fields and woods. The town of Aschach with its colorful old houses is passed and the Kachlet appears. This is the steepest portion of the river within Austria. Following a swift course through the Fferding basin, the paddler approaches the city of Linz.

The Danube, between Linz and Wien is not as interesting and swift as it is above. A primary reason is the dam at Persenbeug which backs up the water for many miles and has turned the Strudengau stretch into a lake-like expanse complicated only by the prevailing winds that seem to oppose the paddler and cause high waves. However, the Wachau, about which so many Austrian songs have been written, and which is a wine growers center, is very attractive. The steep slopes with their castellated cliffs near Aggstein, where the ruins of the great castle mount the rugged rocks at the edge of a dizzy precipice, the castle at Spitz, and the walled city of Duernstein where King Richard the Lionhearted

was imprisoned in the castle for twenty years, these are sights of impressive grandeur. At the very entrance to the Wachau the paddler will be amazed by the unexpected splendor of the great Stift Melk overlooking an arm and island of the mighty river. But beyond the wine clad hills of the Wachau the Danube enters a wider basin, again the hills recede and only occasionally crowd the river as in the Vienna Woods above the city of Wien. Every mile has something of interest, historical or scenic.

At Nussdorf, a northern district of Wien, I landed and returned the boat to Mr. Otto Hruza. Everything was simple and orderly, making it a pleasure to complete even this final phase of the journey. All in all, the journey was an unforgettable experience I can recommend to all who seek the unusual.

In Wien I had the opportunity to meet Rudolph Pillwein, the great Austrian foldboater who won the white water race at Salida, Colorado, several years ago and who designs some of the most magnificent foldboats I have seen. I also visited the little plant of the GESA Faltbootbau, J. Gerhartl und R. Schmalzer, Wien VI., Mittelgasse 23, in Wien. Here foldboats are made to order; each craft an individual product and no mass production. The workmanship, the unique designs, and the quality of these boats is truly remarkable. This firm also produces the boat Mr. Pillwein designed and uses, a slim, long, racy craft with unusual dimensions. In discussing the differences between the broader and the narrow boat, Rudolph Pillwein made the following very appropriate comment: in a wide boat you are merely a passenger, but in a narrow boat the boat is an appendage supporting your body. I think that this sums up the difference between the two systems of foldboating. Mrs. Pillwein, a former world champion in white water slalom unfortunately had a broken leg, the result of a skiing accident, and Mr. Pillwein unfortunately was professionally occupied and too busy to join me on one of the really rough rivers of Austria. However, I have their promise that during my next visit to Austria both will set aside a full week to join

me on a white water circuit of the most outstanding streams. Rudolf Pillwein is also a member of the AWA.

I would like to say a few words about the variations in applying the international rating system. While the European is constantly guided by large groups of experts who periodically and often in unison adjust and grade or regrade certain rivers or sections of rivers, in the USA we often depend upon one individual to arrive at what he feels is an appropriate rating for a given river. For an example; in preparing the manuscript for my river guide of rivers of the eastern USA, I employed my own system initially, and then, for the sake of uniformity conformed to the international system. However, it was still a matter of personal impressions at a particular period of the year. I tried to adjust my impressions and rather underestimate than overestimate the difficulty of the rivers. My trip to Austria has confirmed the soundness of my approach and I can now feel that my interpretation is close to European standards. Originally my interpretations were too high.

Today many American white-water enthusiasts still grade rivers too high. One reason for this situation is the fact that some of them have not had experience on a great enough variety of difficult white water streams, and accordingly, give the rivers of their choice too much weight. Sound judgment in these matters must be based on a relative value. All facets must be considered and while the rocky, blocked streams of the Appalachians offer one type of difficulty, the Rocky Mountains and the Alps, with high water, offer completely different but equally difficult problems. While it is true that any river with given conditions will provide similar difficulties regardless of geographical location, we seldom, if ever, find an exact duplication of conditions in more than one locale. The number of factors and their variance are so great that we are forever faced with something new and different. Perhaps it is best that way.



The Evolution of Canoeing Styles

by Bob McNair

My own club has been taking its canoeing more or less seriously for ten years now. These have been years of rapid progress in techniques. Such a period of rapid change is exciting but watch out! It is easy to fall behind.

Until about **1950** our Buck Ridge "style" was limited to picking the right filament of water and dodging the last minute rocks. We knew that flat water techniques (and paddlers) were inadequate and that our sideways skidding was effective on many rivers. This technique was not quite adequate for the Lehigh Gorge and each year Buck Ridge approached this trip with some trepidation. Then the Appalachian Mountain Club taught us about back paddling and setting. We built the back paddling reflex into our canoeists and put great emphasis on discretion. The cross draw made hand shifting unnecessary in the bow, but **sternmen** were encouraged to shift sides in setting so the powerful reverse quarter sweep (pried off the canoe) could get the stern over in **initia-**ting the set maneuver.

Now the eastern clubs face a new revolution in canoeing technique. We have always been on the lookout for new ideas and for two years our spies have brought back hints of a new technique. The rumors have become a roar that can no longer be ignored by those who would maintain their "expert" status. The first clue came when we studied movies of ourselves in action, and **saw** how much time was wasted shifting the paddles from side to side. In Colorado we found that the splash covered canoe had to be driven forward to get through monstrous waves or souse holes. From the Northwest we learned to "play the river." From Roger Paris of France we learned of the paddle braces and

the related technique **developed** in European slalom. All these things added up to a new technique, a new chapter of fun in the evolution of canoeing.

Perhaps the characteristic of the new technique is the rapport between a paddler and his canoe. The old school said you kneel to **lower** the center of gravity. We said the purpose was to get the point of contact with the canoe down to the waterline. Now the purpose is to hold the canoe with the knees so you can force it to bank in some maneuvers. It appears that knee sockets or straps will be needed to do this with most canoes. With a firm hold on the canoe our whole body can swing into action.

Another characteristic of the new style is driving the canoe forward in many maneuvers. Actually the ability to shift back and forth from forward technique to backward technique instantaneously is essential, the ability to do an eddy turn, then a set in quick succession.

The new maneuvers depend on some new paddle strokes. A new hand-hold increases our backing power for setting; the paddle brace (borrowed from **fold-**boating) adds stability to our eddy turns; the **pryaway** replaces the cross draw in heavy water and slalom; the sculling strokes come into white water because they keep the paddle in the water when sudden corrective action or bracing may be needed. Most important is a ban on shifting hands on the paddle. It has become taboo.

Some paddlers may question this emphatic ban on shifting hands. It is essential because in class IV and V rapids you should not be without a possible paddle brace on either side.

You have got to know that while you are busy on one side, your bowman is guarding the other side.

Of course this ban is the first hurdle for many in adopting the new technique. It is partly a matter of breaking old habits, partly a matter of developing an effective pryaway and of learning to set in either direction from the same paddling side. Why can't we relax and let well enough alone? It was the setting technique that made the Lehigh safe and enjoyable. When we add this new technique, a new class of streams comes within our ability range. Those who aspire to such rivers as the Cheat, the Hudson, or the Arkansas will need these new techniques. When we discover a convert with a gleam in his eye

we should not limit his advancement by teaching habits that must be broken later. So all beginners must start as though headed for the top.

Of course the real reason for the new technique is that it is more fun. "Playing the river" is an inseparable part of the new technique. By playing in the rapids we develop the skill for tougher rivers and we also have more fun with the same rapids than ever before. The old side slipping technique made our intermediate streams safe; the setting technique tames the class III and IV rivers; the new technique opens the way to new rivers of even greater excitement and beauty.





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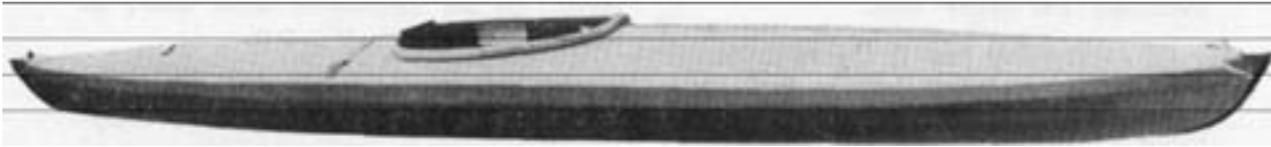


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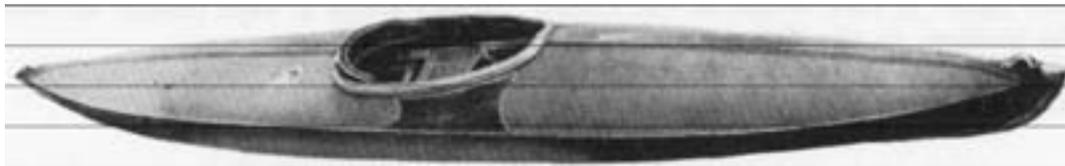
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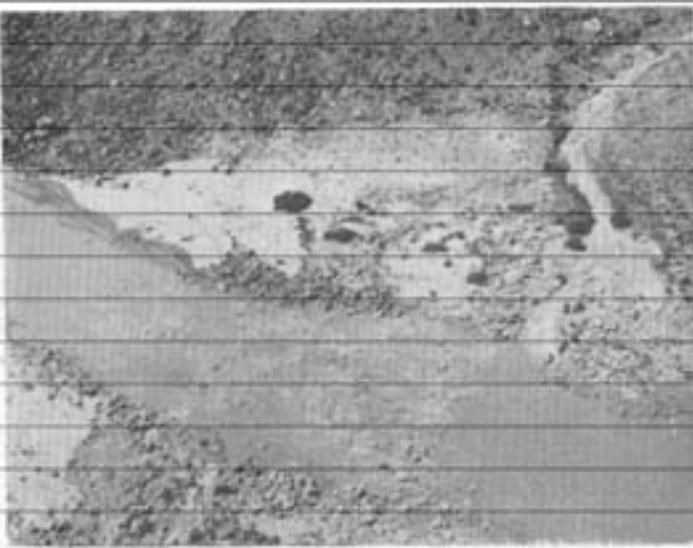
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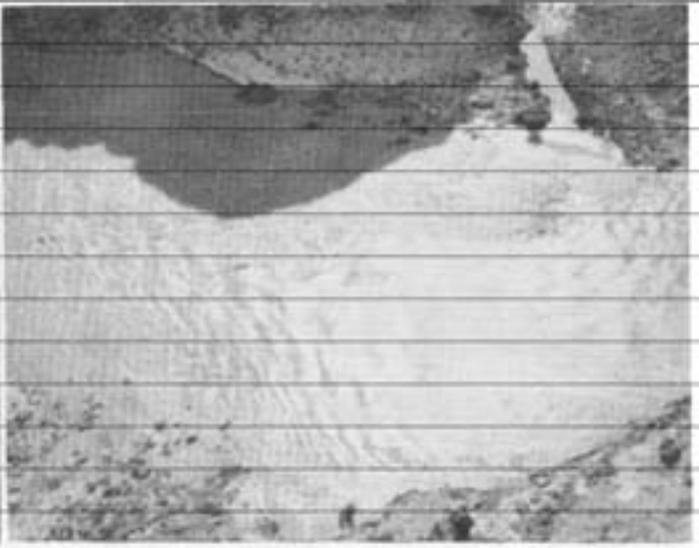


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Badger Creek Rapid September 13, 1955.
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Same rapid June 1, 1959;
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The navigational problems vary widely with the different rates of flow.

Grand Canyon [REDACTED] Wafer

by OTIS "DOCK" MARSTON
photos by the author

The poverty of the English language bars the writing of the story of cruising the Grand Canyon. The thesaurus has been exhausted on other water courses. Hellgate, Death Rapids, Impassable Canyon, Disaster Rapid, Hells Half Mile, Satans Gut, Government Rapid spelling the tragedy to two government surveyors, are words painfully designed to stimulate terror.

On the San Juan River, Ernie Pyle punted through splashy Gypsum Creek Rapid. None of the Grand Canyon's water products equal the violence of the verbal flood inspired by his venture nor are there pilots who could navigate them if they did exist.

In this magazine, Kenny Ross painted Cataract Canyon with such rapturous beauty no word picture of the Grand Canyon can compete.

Names of rapids in the Grand Canyon hardly trigger fear unless it be John Wesley Powell's Sockdolager of the World. Lava Creek Rapid, Lava Falls and Lava Cliff Rapid could be pictured as mere ripples.

The commercial operators of the various craft on the waters of the Grand Canyon claim their units provide perfect

safety if instructions are followed to the letter. Failure invites dunkings, thrills, hilarious and bibulous laughter punctuating the tranquility of relief from business worries.

Clumsy round-bottom boats; flat-bottom skiffs of wood and glass; inflated craft of all sizes and rigs; wood, aluminum and glass motorboats; a kayak without dunnage; rubber bags; two inner tubes have served for flotation. A sweep-scow cruised 237 of the Canyon's 279 miles but the occupants did not arrive with it.

The flow in the River is important for navigation. Gauges frequently show less than a thousand cubic feet per second and flood marks are the basis for estimates of two hundred and twenty thousand in 1921 and over three hundred thousand in 1884. The earlier navigators, using oar-powered rigid hulls, set twenty-five thousand cubic feet per second as a safe maximum and most trips were made on less. In recent years, various inflated craft have ridden on less than ten thousand cubic feet and on as high as one hundred and twenty five thousand but not without difficulty. Adequately powered rigid units experienced



Two skiffs operated by A. K. Reynolds. These two boats have made a water traverse of the Grand Canyon. They are similar to those designed by Nevills in 1938.



The three pontoons used by Georgie White about to depart at Paria Riffle, June 3, 1958 .



A large boulder of Soap Creek Rapid August 3, 1923. This was one of the Galloway-Stone type boats used by USGS in their traverse of the Canyon to make the present-day "Profile Maps." Portage of this rapid was traditional. It was first run in 1927 by error. LaRue photo.

no serious handicap on the high stages but the rock hazards of low water have proved annoying.

If much of the written and spoken word can be accepted as gospel, the water journey from Lees Ferry to the Grand Wash Cliffs will provide a pleasant diversion for several days during a summer vacation. The story hardly belongs to American WHITE WATER as the water is usually too muddy to be white. The pages of this magazine also appear to eschew the fumes and noise of gasoline. In 1949, the hundredth person made a complete traverse of the Grand Canyon course. By 1954, the number of persons to have had this experience passed two hundred, and currently the tally is less than a half thousand. Deaths have been few. Narrow escapes have been too numerous. A cinematographer found interests in the Grand Canyon less than on the Green River and in Glen Canyon. Another river man sees a lifetime of experiences if he extends his field of operations to the entire Canyon and beyond the limits of Grand Canyon National Park.

Eight miles after the start of the journey, the legends begin to unwrap. Moderate Badger Creek Rapid has capsized at least two craft and waits for the unwary. In June of 1958, a boat ran up Soap Creek Rapid but average study of the tumbling mass is likely to classify this report as just another legend. A mile below Soap Creek, Frank Mason Brown drowned July 10, 1889 and his name cut on the cliff marks the point where his life was sacrificed to the wearing of heavy leather boots. At the head of 24½ Mile Rapid, aged Bert Loper's heart failed in 1949 and fifteen miles downstream his boat goes to ruin on the talus. Near Mile 25 is the cliff that pushed Richards and Hanbrough under the River and latter's grave is sequestered beside a rapid eighteen miles below. Their deaths warn against the use of flimsy skiffs. Above Vaseys Paradise lies the skeleton which served as unpaid actor in the film *Danger River* in which it played the role of the boatman who didn't make it. The bones are not the remains of a boatman. Just beyond

President Harding Rapid, Willie Taylor's heart stopped in 1956 and the Canyon's mighty walls now guard his sleep. He would have died of the same cause had he been at home.

Nankoweap, Kwagunt, Chuar and Unkar are picturesque Indian names accenting the fast water down to Hance Rapid. In this major rapid rock exposure at low water and fancy patterns at high amply support the suggestion that the spelling be changed to Ha'nts.

The narrow course in the pre-Cambrian section of the next eleven miles to Bright Angel Creek awes a few, notably The One-Armed Knight whose government report recorded the drop in his Sockdolager to be seventy five to eighty feet in a third of a mile, and Frederick Samuel Dellenbaugh who insisted the waves were thirty feet, but when questioned admitted this figure added in "the toss of the spray." Both figures involve high "Zaggeration factors."

The comfort and protection of Fred Harvey's Phantom Ranch at Bright Angel Creek permits phoning for assurance that home and business are safe. The supplies brought down the trail dispel the stock horror of the Canyon course that there is no escape from a trip once started and the navigator must get to the Grand Wash Cliffs or die in the attempt. Several other trails reach the river and can be used in emergencies.

Below this point is Horn Creek Rapid where an inadequate folding boat needlessly sacrificed the lives of two Park Rangers in 1929; Monument Creek which smashed a motor boat in 1951; Hermit Rapid where legend inflates the waves to thirty five feet; Dubendorff Rapid named for the young man who capsized there in 1909 only to die of a tick bite in 1912; the trap at Granite Narrows where, in flood, the cliffs claw inadequately powered units and dunk passengers and crews; the half-way point at Kanab Creek where Powell abandoned his survey in 1872; Upset Rapid which has tallied three upsets; and Vulcan Rapid shown on the maps as Lava Falls.

First run in 1896, this fancy bit of water remains a barrier where the majority of oarsmen prefer to portage.

Mile 217 Rapid is the last classed as major but the water below this can be tricky as many boatmen have learned. The lake back of Hoover Dam drowned the major rapids at Separation and Lava Cliff. A low lake level may present miles of shallow current and sand waves in dropping down the silt delta.

The Grand Canyon offers wide choice. If small water is desired the low stages of fall, winter and early spring will provide it along with low temperatures. Eig water can be expected in the June months remaining before the Glen Canyon silt trap is closed. The time is short for this handsome running.

Riverman "Dock" Marston recently served as technical consultant in charge of boating with the making of the Walt Disney picture of the Colorado last year. The picture tells the story of the Powell expedition in 1869. and should be released some *time* this year.



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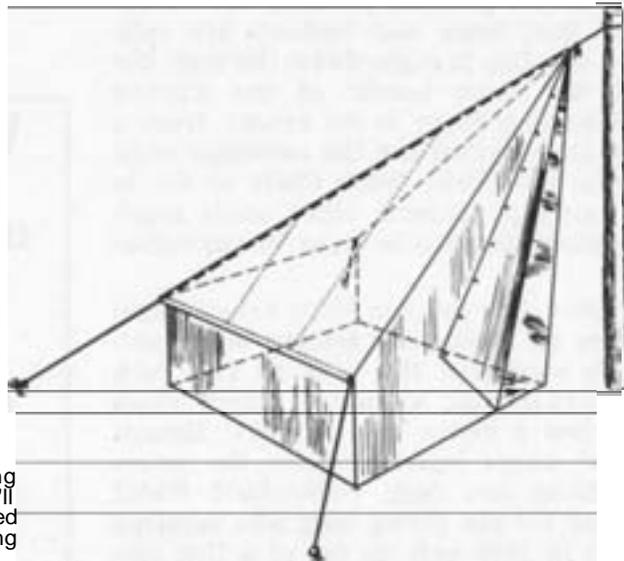
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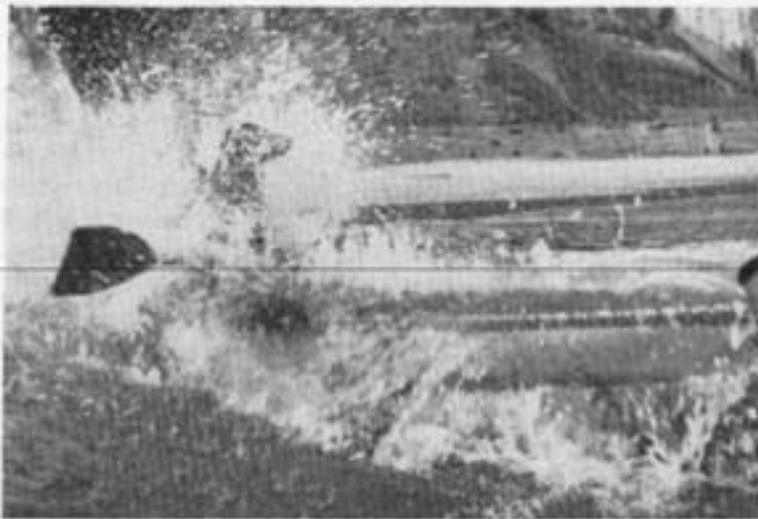


Dog of the River

Bryce Whitmore, the Sierra Club's slalom champion, takes his year-old pup, Charlie Brown, along on all but the toughest river trips. Charlie went over with his master in an Eskimo roll the other day, and when Bryce emerged dripping on the other side, believe it or not, there was Charlie still on the deck.

Bryce made a neoprene foam wet suit for his friend and companion. It helps keep Charlie warm, and just as important for Bryce, it cuts down on the spray that Charlie throws out when he shakes himself off after a ducking.

Sierra Clubbers believe Charlie Brown is just about as close to a "Dog of the River" as our sport has yet developed.



More About River Navigation

by WOLF BAUER

In the Introduction to River Navigation in a previous issue we classified river sections into some typical, oft-repeated types. We came up with the ten "Classic Problem Passages." Before taking up the navigational problems most often associated with each, we will have to acquire another habit for our navigational tool kit. While the two-way forward look is applied at all times, the problem passage will require more concentrated efforts in terms of rapid or prolonged evaluation, and we might differentiate between four points of interest: 1. Route, 2. Wash-out, 3. Technique, 4. Approach.

These four evaluations may mentally register almost simultaneous and subconscious solutions in the case of the expert approaching a recognizable simple problem spot, allowing him to enter the passage with no noticeable physical hesitation. The less experienced paddler approaching the same passage will need more time for evaluating and solving these four points in his mind. Thus his downstream travel may be momentarily interrupted by the slower process of inspection from eddy or shore anchor, or from the shore itself, rather than the in-motion, back-ferry, or **perhaps** momentary raise-up forward look of the faster-reading expert. Irrespective of the evaluation time and techniques used, each must consider these four basic points. Let us then define them.

1. ROUTE EVALUATION — Upon recognizing a problem passage ahead, **whether** "classic," commoned, or partly camouflaged, it is first necessary to determine whether there exists a **navigable** passage within the range of the paddler's ability. For instance, the passage may not be entirely blocked; there may be intermediate anchor mints for stepping-stone type descent; or there

may be smooth areas within which over-size hydraulics can be by-passed. The first look, therefore, establishes the route.

2. WASH-OUT EVALUATION — While the route search or evaluation is a natural enough first procedure, this wash-out evaluation is more like the "far-look" we discussed in an earlier issue. It must be cultivated and consciously adopted, for here we realistically appraise our problem in case of a **tipover** during the passage. Are there relatively smooth or quiet waters at the lower end of the problem spot, catch-all eddies, flat banks, or shallows in all of which to make a self-arrest or self-rescue? Will it require team support?

3. TECHNIQUE EVALUATION — Having grasped the route solution and weighed the relative hazard in case of a wash-out at the lower end, whether in a flash from the boat or upon considerate study from shore, the next navigational decision involves the paddling technique to be employed. Part of this decision is influenced by the hull design of the boat, and we will have more to say on that in a later article. The paddler may decide, for instance, to back-paddle the whole passage to gain time for further close-look decisions, or to achieve greater lateral shifting and side-stepping mobility, even though at the cost of extra physical effort. This may be in a tight graveyard section. He may, on the other hand, decide to float at current speed to save energy for one or two **maximum-effort** spots located within the passage, such as in partially obstructed bends. Or he may have decided to keep moving at more or less constant forward speed in order to maintain steerage and momentum needed in piercing certain types of repeated hydraulic jumps or



Photo 1. Back-Ferrying Narrow, Tight, Cluttered Bend

rollers as found in many types of drops. In later discussions on the subject of party management we will learn that this navigational aspect of boat-handling technique will become even more important.

4. APPROACH EVALUATION — Normally one might suppose that the approach considerations come first, unless we recall our earlier emphasis on the “far-look”. This last check-point made before tackling the problem passage deals with the correct entry as to starting location, how to reach the entry point, as well as line-up point and aiming point recognitions. Getting into a satisfactory approach position may itself be a major problem, especially if the paddler has lost the necessary upstream position in evaluating the passage in terms of the first three points. The best approach location is that which will eventually lead him into the strongest and most favorable position for tackling the most difficult spot in the passage, even though the approach may be a minor problem in itself.

THE NARROW, TIGHT, CLUTTERED BEND

This is one of our most typical classic problem passages, often more so on the smaller streams than on the large. In the August, 1959. issue under the sub-heading of “The channel Changes Direction” we examined the current action under various conditions in a bend. In defining this bend we make note, first of all, that the channel is narrow, and the obvious problem will be one of maneuvering and perhaps lack of pivoting space. The bend is tight, and so the problem is one of meeting violent current changes, reading and fixing the locations of the junction lines and current reversals in time to counteract forces and maneuver at the same time. Thus both narrowness and tightness pose problems in timing.

Fast rivers not only have a tendency to pile floating debris against the outside bank, but because the outside bank is generally steeper and higher, and more exposed to constant water excavation and erosion, it is also frequently covered with leaning trees or over-

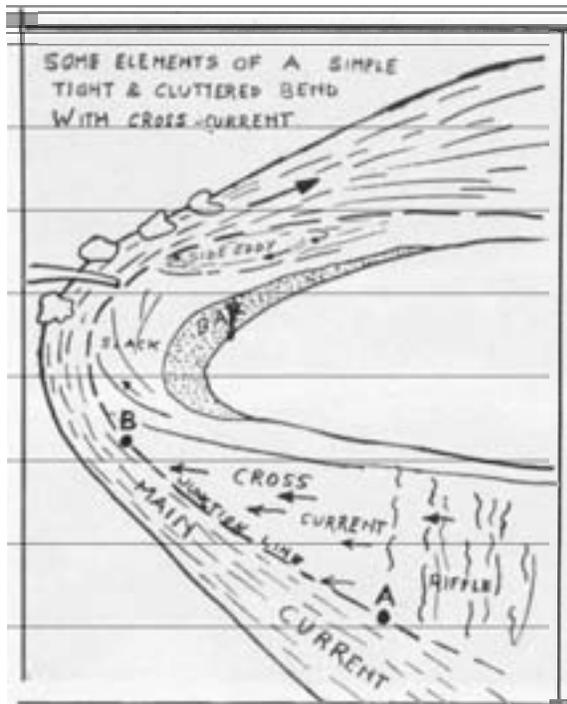


Figure 1.

hanging branches and bushes. I use the term "cluttered" to describe the rule rather than the exception. Cluttering, however, may also be man-made in cases where rip-rap and rocks have been dumped over the banks of tight river bends for erosion control. To the paddler, the problem of such debris and projecting vegetation, logs, and snags is often the most serious in this type of bend, since the current is not necessarily deflected in front of such obstructions but more often runs under and thru such objects. Thus the appearance of the available "space-time" is misleading, at least to the beginner who does not yet read, let alone anticipate, current directions in the bend.

TECHNIQUES OF TURNING THE BEND

Figure 1 illustrates some of the aspects of the tight and cluttered bend. While not always in this form, this particular bend is shown with a side-slip riffle at its entry in order to point up some of the associated problems the paddler may have to contend with. Figures 2 to 5 inclusive illustrate four common methods of navigation.

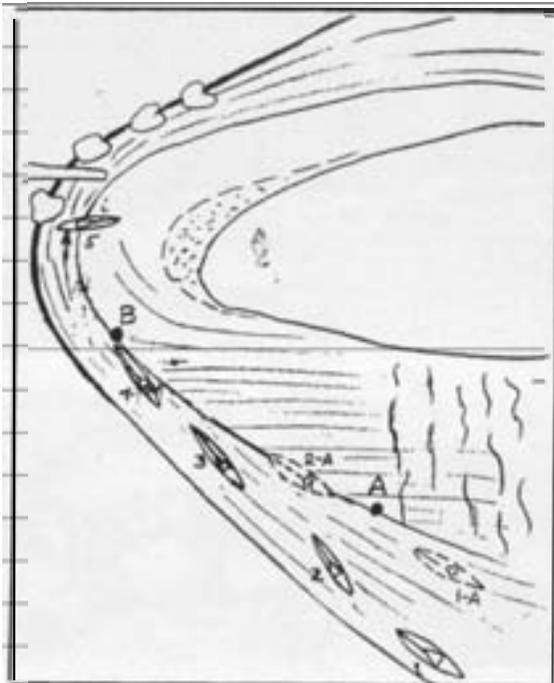


Figure 2.

THE DRIVE-IN TURN (Figure 2)

Here the paddler enters the bend at forward, paddling speed, whether on purpose or by chance, cutting down significantly on "space-time" for maneuvering. Paddling forward obliquely to reach position 4 from a poor approach position will cost him pivot time at position 5. While both racer and expert might use the drive-in approach, and run close to the junction-line between jet and slack below B to miss the projecting snag by inches, the beginner will try to pivot too late at the last moment, catching his stern. Positions 1-A and 2-A are alternate poor positions of drive-in entry for the beginner, as the junction-line A - B will trap him with pressure from both sides, and prevent him from pivoting out ahead of B.

THE DRIFT-IN PIVOT (Figure 3)

To stay out of the cross current between A and B, the cautious paddler can drift in "controlled orientation" as shown, bringing off his pivot below

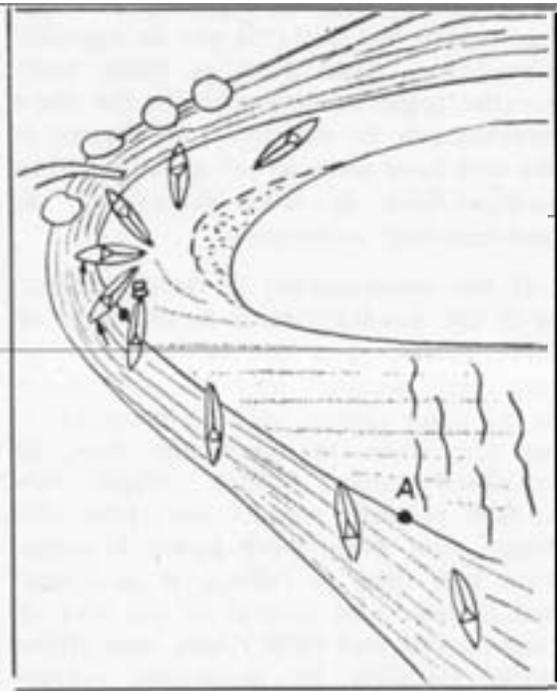


Figure 3

point B where the inside current is slack. This oblique drift position, while not recommended for shallow water or heavy hydraulics, nevertheless offers more space-time, less pivot angle, and less effort to overcome momentum forces than the drive-in situation.

TAILING THE BEND
(Figure 4)

This method was one of our early standbys for parties of varying experience, and boats which were predominantly keel or finstern type singles, as well as any type of double-seater kayaks. Trained in up-ferrying, this method gained the necessary space-time for the beginner, focused his attention and maximum power on properly crossing the junction-line with a bow that would skid for the pivot, and which would put him into an up-ferry in the crosscurrent or slack water to reach the inside bank if necessary. The route shown in Fig 4 shows the full escape from the sweep of the jet, and the highest upstream position A is usually the best. It is important to remember that this maneuver requires enough initial pivot or angle to cross the junction-line to immediately start

the ferrying action in the cross-current, as otherwise the boat can be trapped by swinging parallel as shown in position 2-A of Figure 2. Heavy hydraulics or channel obstructions make tailing difficult with over-the-shoulder observations, and thus limit this method. It is, however, one of the most efficient in smooth and fast water. Certainly it is not necessary to cross the junction-line between cross-current and slack water at any time while rounding the bend, since it is primarily a matter of maintaining the orientation shown, keeping the bow close to this line for instant and powerful dig-out when needed.

BACK-FERRYING THE BEND
(Figure 5)

With the advent of our modern back-ferrying technique made possible by skid-stern and slalom type single seater kayaks, this is probably the safest method for the expert to enlarge upon time-space in the problem passage. What has been said under tailing applies here also. The junction-trap must be avoided by projecting the stern into the cross-current at a courageous back-ferry angle (Note: more so,

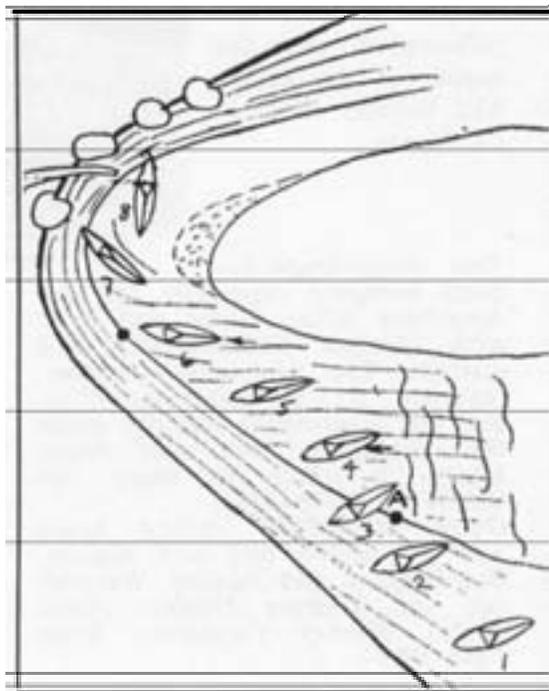


Figure 4.



Figure 5.

in making an eddy-turn across the eddy-line where the currents are in opposite directions, rather than at some near-parallel angle to each other in the same direction, as in position 4 of Figure 5. We will have more to say about crossing junction-lines in later discussions on boat-handling techniques.

If the cross-current is rather strong, or if the junction-line is in the form of fence waves, then the oblique-oriented back-ferry position may be maintained in the main current without quite allowing the stern to reach the line, as explained under tailing. While this method requires correct boat trim and design, and while ferry power is somewhat less than in tailing, it nevertheless is basic and natural to our way of running fast and tight rivers, and offers better visibility for space-time evaluation. See also Photo 1.



for instance, than would be in the case

The "Marlboro Man" in the HAMMER "Champion" runs the rapids of the turbulent Feather River in California.



The "Marlboro Man" Courtesy Universal Pictures

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SAFETY NOTES

by LEONARD "RED" FANCHER
AWA SAFETY CHAIRMAN

As new chairman of the Safety Committee I feel that I am off to a good start in having so many of the members of last year's committee remaining aboard. Our new committee members also appear to be a pretty sound-thinking lot.

Our prime problem at the present is the ideal life jacket or life vest. Judging from preliminary letters exchanged among the committee we are pretty much in accord on the problems and necessity of such a vest. But we don't think any device can entirely eliminate the danger of white-water—and furthermore, we don't think it should.

Our thinking on this problem is not just local. Mr. W. Hess, writing in last November's issue of the Swiss magazine "Touring" makes several pertinent points: 1. A spectator watching from shore cannot readily appreciate the hazards encountered by the paddler; thus a beginner may be trapped into trying courses beyond his skill and ability. [Here is an area in which the proposed Water Patrol would have much important work to do]. 2. As our craft and equipment have been improved over the years we have also increased our skill and acquired the ability to handle much more dangerous waters than were ever

attempted in the early years. 3. In the early days no thought was given to life preservers, and perhaps they were not needed. Then as we progressed to more dangerous waters we adopted standard life preservers and trusted that we would never meet the situation where our lives depended on them. 4. It is important that we act now to promote our own safety and prevent accidents before laws are passed by misunderstanding people who have become aroused by casualties in white-water.

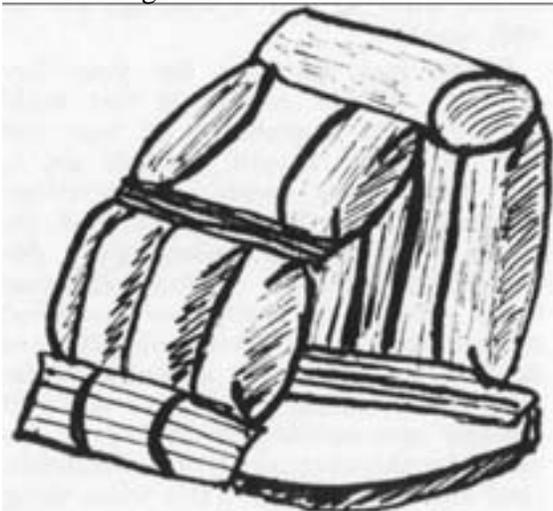
Mr. Hess also gave figures on the V.H.S. swim vest, and we present a tabulation comparing it with the U.S. Coast Guard approved life vests:

VFS SWIM VEST	U. S. COAST GUARD LIFE VEST
Synthetic foam buoyancy agent	Unicellular plastic buoyancy agent
26 pounds buoyancy	Minimum 15 pounds buoyancy
Wide belt, no crotch strop	Narrow belt, no crotch strop
Good coverage, front and back for protection from cold	Lower portion of back no protection

Information and comments from all members of the AWA are invited and will be most appreciated. It will be a great help if when telling of incidents or accidents you will go into as much factual detail as you can possibly gather. We cannot form opinions or develop programs based upon guesses, presumptions or hearsay.

From accident reports I have on hand I can only determine that in each case **THE VICTIM WAS NOT WEARING A LIFE JACKET OR VEST.** Could they swim? What caused them to get into their unfortunate predicament? Did they have any boating experience or training? Did they own the craft? Did they borrow it or rent it?

Please address your letters to "Red" Fancher, 8224 S. Woodlawn Ave., Chicago 19, Illinois.



BUSHED ON A BUDGET

by TIM TRAILL

I do not intend to write a manual for survival but I hope to give a few pointers which would mean the difference between dependence and independence in the bush if the need arises. Of course it would never happen to us we say but I heard of a group who made a trip into the Canadian interior last summer without taking any insect repellent with them, which to my way of thinking shows lack of forethought. All woodcraft is basically common sense, so here are some pointers directed to the north temperate region in which we live.

Before entering the bush let a friend on the "outside" know where you are going and also carry; knife, compass, matches (in water-proof container) pencil and candle stub on your person. In this way when canoe, provisions and all are lost under that log jam (accidents of this nature are always an accumulation of events; that is why you are by yourself and the canoe is where it is!) one isn't completely unequipped.

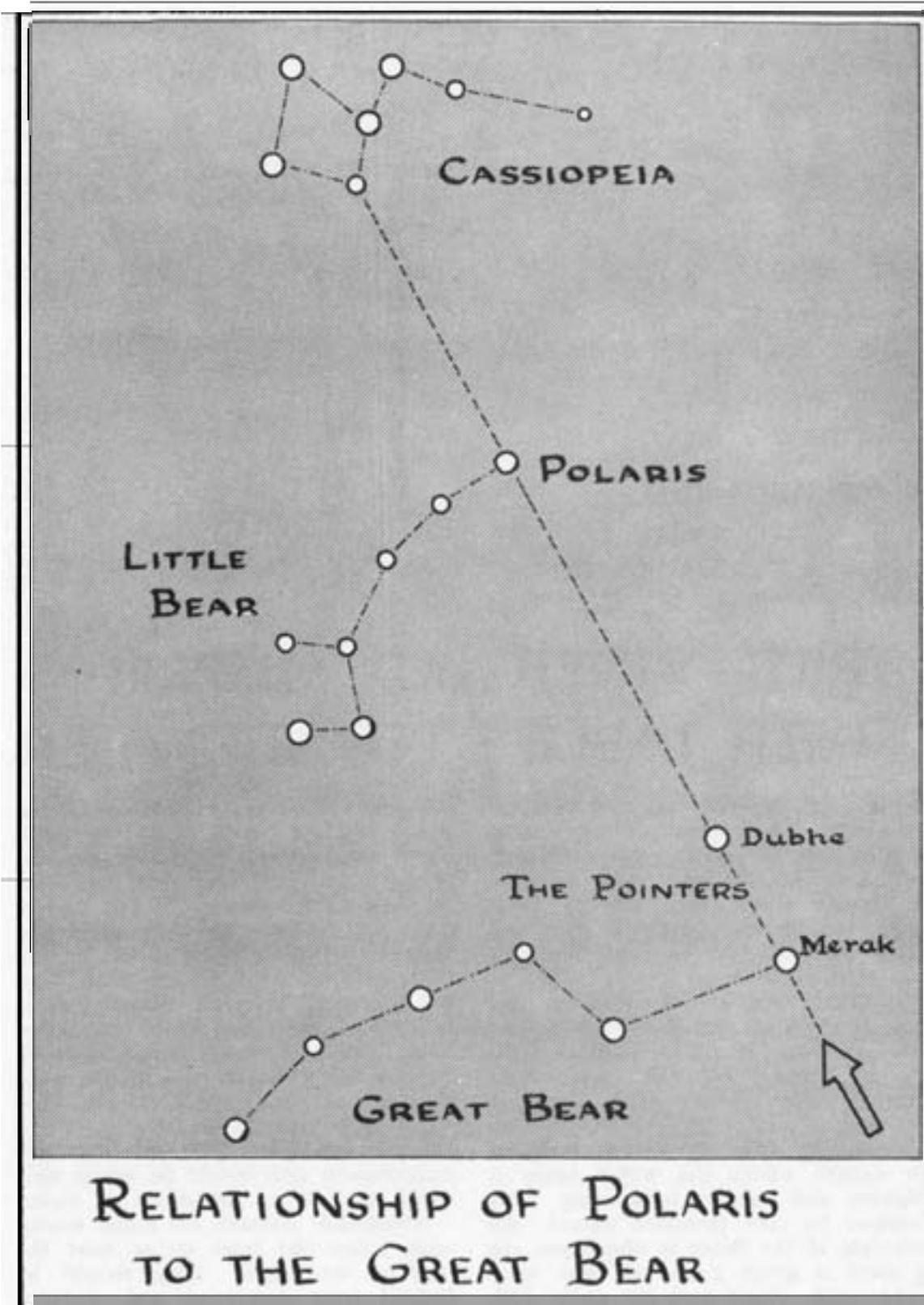
Now comes the first decision; to walk out, or to wait until rescue comes. I will not dwell on this subject as one cannot lay down hard and fast rules as so much depends on the circumstances; but with the use of common sense the decision will be made. For the sake of this article we will decide to hike it.

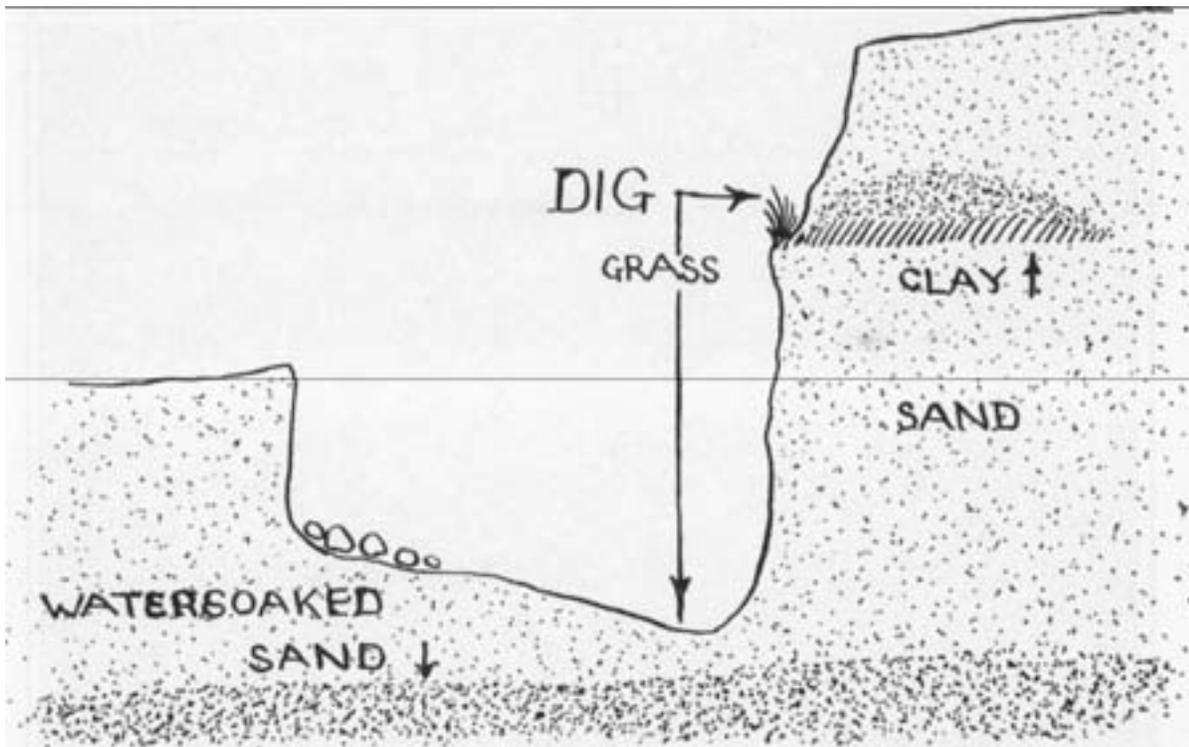
TRAVEL. Before commencing the hike take your knife and blaze the most conspicuous tree, leaving written in pencil on the fresh wood, an account of the accident and the route that you plan to take out. Sap from the tree will cover and preserve the message for those who come to look for you. Such blazes have been discovered and read almost twenty years after they were written, so remember to date it! It is good practice to leave many of them along your route. Always take the easiest route when you

travel, along tracks, or ridges where the vegetation is thinnest and the flies fewest. Carry a pole to support yourself. Sunglasses may be made from birch bark, to protect your eyes. When travelling by day directions may be found by pointing the hour hand of your watch towards the sun — bisecting the angle between it and 12 noon on the watch will point to south. At night of course one would use Polaris in the north. In case one has to backtrack it is wise to make a map of the conspicuous landmarks you pass on route. If you are caught in a storm or fog stop and make camp.

CAMP. When you stop to make camp first mark your direction of travel on the ground. You may laugh at something so obvious but believe me it is easy to get turned around when the fog lifts! If you were travelling along an animal track build the camp off to one side in case the traffic becomes heavy during the night. Pick a site if possible sheltered from the wind and in a spot likely to be free of floods and rock falls. Build a shelter of branches and a mattress of evergreen tips to sleep on; a reflector behind the fire will throw the heat into your shelter but build the shelter on a diagonal to the wind so that it will not fill up with smoke.

FIRE. Pick the site for your fire carefully—if the ground is wet build your fire on a platform of logs and you may have to split wood to get at the drier wood inside for kindling. Remember that the inside bark of the silver birch always makes good dry tinder even if it is raining; also that wood when it is shaved or feathered catches fire as this will possibly save catches fire easier. It is advisable to use your candle to start a fire as this will possibly save matches. Animal fat is also useful for this purpose. Without matches, steel and flint will light a fire when using





DRIED RIVER-BED SHOWING WATER TABLE & PERCHED WATER

dried moss, lichens, or bird feathers as kindling, but have patience. It is a good idea to practice this while you still have a good supply of matches. A clothes drying rack can be made near the fire but don't put your wet boots too close to the heat, for they will stiffen and crack.

WATER. We are fortunate in this part of the continent that water causes few problems. It can be obtained from streams, lakes, rain or snow, from ground water (seepage from limestone or porous lavas) and by digging on the outside edge of stream beds or in valleys where the water table is highest and where water has been trapped by clay (perched water). An example of the latter is where you see a shelf of green grass half way up a sandy cliff. Don't look for water with a forked twig! Remember, warm water is probably stale, so strain it through a cloth and if possible boil it.

FOOD. The most important factor concerning wild food is to overcome one's supermarket prejudices and to learn what most natives take for granted. Carbohydrates: Sugar, starch, fruits etc. Obtained mostly from plants. This is the kind of food to eat in preference to proteins if your water supply is limited. Proteins: Obtained mostly from animals i.e. meat, fish, eggs. Fats: Obtained partly from animals. Fats are not essential to your diet even though they supply more calories than either carbohydrates or proteins. When eaten in excess fats will cause digestive disturbances and should be taken only when there is an abundance of water.

ANIMALS. Animals are found mostly near water and least on or near the tops of mountains. They should be stalked from downwind and, because most animals are curious they can be attracted quite close to you if you walk towards them on all fours. Other

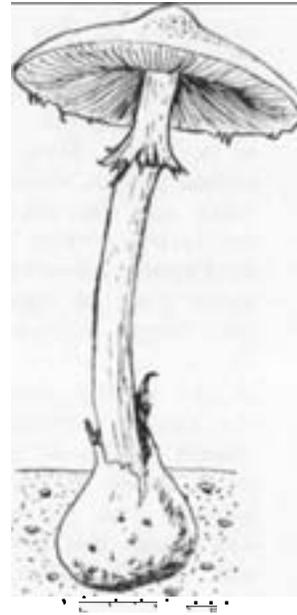
animals can be teased from burrows with a stick providing you block all entrances except the one you are watching. Sometimes cached animal food can be retrieved from the burrows, as in the case of mice, muskrats and lemmings. Rabbits when scared will run in a circle and can be caught by clubbing them with a stick on their second time around. Watch for signs of porcupines as these animals are easily caught and rendered unconscious by a blow on the nose, and they make good eating. Fish are easiest caught at night using a flaming branch and improvised spear. Snakes are caught with a forked stick and birds with a rod with a noose on the end of it. Some birds can be caught with a hook and bait — the hook is made from wood which can be whittled from any branch. Don't overlook the use of snares and deadfalls for catching game. All manner of grubs, insects and grasshoppers are nourishing and tasty when roasted. The hind quarters of lizards and frog legs make good eating in the best of restaurants. Caution—do not eat toads and for those of you who kayak with the eskimos to only eat polar bear meat after it has been very well cooked as almost all polar bears have **trichinosis**; and never eat polar bear liver for it contains enough vitamin A to be poisonous. In all hunting one must have patience. The best method for a beginner is just to hide downwind of an animal trail and wait absolute motionless for the game to come within range; which is easier said than done.

PLANTS. There are something like 300,000 edible plants in this world. If you are unsure of a plant's edibility keep a small portion in your mouth for five minutes. A bitter or sour taste in itself does not necessarily mean poison, whereas a burning nauseating taste is a warning. A small quantity of any poisonous food will not be fatal whereas a larger quantity may be. To find food watch the eating habits of birds and small mammals.

Starch foods may be obtained from tubers, rootstalks and bulbs — all starch **food** must be boiled before being eaten.



Mushroom
(may be safe)



Amanita
(poisonous)



Water Hemlock (deadly)

Cattails, water-lilies and lousewort are examples of this kind of food. Almost all berries and fruits may be eaten and the seeds of wildgrass and rye etc. which are best roasted or prepared in a sort of porridge. Many of these grasses have edible pollen which can also be roasted. Nuts may be taken from the cones of coniferous trees; there are hazelnuts, beechnuts, chestnuts and acorns. The inner bark of such trees as poplar, aspen, birch, willow, spruce may be eaten raw or cooked and is most palatable in the spring time, but watch out for the brown cambian layer that contains tannin which is a good laxative. Sap from pines is high in sugar content. Lichens can be used to make a jelly-like broth. For greenery use plants with soft broad leaves; cook by boiling or eat raw — examples, dandelion and mountain sorrel. Eat the fleshy stems of wild rhubarb and silver weed. The fiddle heads of ferns taste like asparagus when young but they are covered with red hairs which makes them bitter — remove the hairs first by rubbing. It may take two boilings to remove the bitterness. Tea may be made from labrador tea (that plant with the canoe shaped leaves) or from pine needles. An infusion of fir, pine, balsam or spruce needles when boiled and drunk as tea will be of great value in preventing scurvy. Now a mention of the cattail which is abundant in our climate and is a very good source of food. The rootstalks may be eaten raw, boiled, or powdered into a sort of white flour. The young cattail shoots when boiled make good greens and when the plant is in flower the yellow pollen may be eaten roasted or mixed with water to be steamed into cakes as a bread substitute. Lastly a warning about mushrooms and water hemlock. Mushrooms are a good meat substitute except when confused with amanitas. Know your mushrooms before you eat them! A piece of water hemlock root the size of a walnut contains enough poison to kill a cow—this plant is a member of the parsnip family; it occurs in marshy places and is fairly common. It is characterised by thick spindle-shaped rootstalks which when split

lengthwise reveal several air chambers. The leaves of the plant are alternately spaced and the plant has a peculiar odor caused by yellowish drops of liquid on the stem.

PREPARATION. All animals should be bled and gutted as soon as possible after killing—small amounts of blood can be drunk and hunters will know that care should be exercised in removing gall and urine bladders and the musk glands of badgers, skunks, deer etc. Bleed and draw all **birds—shellfish** will clean themselves if left in water overnight. Fish should be cleaned immediately and scaled.

COOKING. Roasting: on the coals of a fire or with the food coated with mud and placed directly in the flames. Best method for fish and potatoes. Steaming: place the food in a hole lined with leaves and cover with soil. Build the fire directly on top of this. Best method for shellfish, snails and eggs. Heated stones: clambake style for shellfish.

To preserve food for later use it should be dried. Meat is best dried over a slow fire. Fungi can be dried successfully beside the fire while wind and sun alone will dry plants and fruit. Remember to cover the meat when drying it to prevent blow-fly infestation.

There is much that I have not covered in this article. For the most part I have assumed that you already have a basic knowledge of woodcraft and so I have just attempted to add a bit more to that knowledge, which, with a bit of thought may be carried on from where I have left off; for example did you know that the sap from a balsam tree is a good antiseptic and healer for cuts and open wounds or that **indians** use juniper berries to cure toothache? Maybe next time I will get around to describing the plants and animals mentioned in greater detail. I will finish by saying that if you ever find yourself in such a situation through any reason, your knife will become your greatest friend. Look after it and use a flat stone, preferably sandstone, to keep in sharp at all times.





Conservation Comment

by DAN BRADLEY

AWA CONSERVATION CHAIRMAN

Yellowstone Lake. The problem of regulating powerboats on Yellowstone Lake, discussed in the February issue of AWW, is taking on new dimensions. As pointed out in previous comment, the National Park Service is charged with the responsibility to conserve the scenery and natural environment and the wildlife therein in such manner as will leave them unimpaired for the enjoyment of future generations. The core of this issue is basically whether the Park Service shall have the authority to issue regulations in pursuance of these ends, or whether it is to be stymied by groups who apparently have little understanding of why a national park has been set aside, and who care only for the indulgence of their own pleasures. NPS Director Conrad Wirth and his staff in Washington understand the situation quite clearly, and they are firmly supporting Yellowstone Supt. Garrison in his attempt to preserve the wilderness values of the more remote arms of the Lake.

On February 3 Sen. Gale McGee of Wyoming held a hearing on the matter in Cody, acting as a one-man sub-committee of the U.S. Senate Appropriations Committee, apparently to air public sentiment on the proposed regulations. Conservationists, however, were given very little time to marshal their slim and scattered forces, and the local outboard clubs, with their dealer friends and chambers of commerce, overran the hearing. A pretty sample of their vituperative arguments has come to hand, and it is worth quoting:

WHEREAS, in 1872 Yellowstone Park was set aside as a public park or pleasuring ground for the benefit and enjoyment of the people, and

WHEREAS, contrary to the expressed purpose of the act creating the Park, the National Park Service has throughout the years steadfastly hindered efforts to make available...the natural beauties and wonders of the area...

WHEREAS, the National Park Service has proposed to restrict even further

the use of the Park...by closing to boats powered by motors the southern portion of Yellowstone Lake based upon spurious allegations that (1) the wake of such boats causes erosion (2) the wildlife is disturbed and (3) the "wilderness" atmosphere is destroyed, and

WHEREAS, such allegations are wholly without substance and constitute a defiance and disregard of the express purpose of the Act...and a further attempt to favor special interests to the detriment of all the rest of the American people;

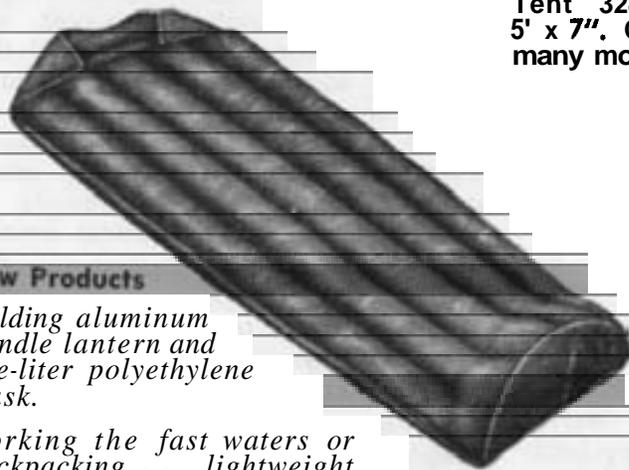
NOW THEREFORE, BE IT RESOLVED by the Cody Club, The Chamber of Commerce of the City of Cody, Wyoming, that the proposed action by the National Park Service...be condemned as a bureaucratic attempt to deprive the American people of privileges and free-

dom that is rightfully theirs..."

Well now, there you have the devil in his true colors, and he does not hesitate to use misrepresentation, distortion and plain falsehood. Nothing could better illuminate the insensitivity of powerboatmen to national park values and purposes. The phrase "pleasuring ground" may well occur in the designation of our first national park, but in the age of horseback and stagecoach it meant values very different from the unrestricted recreational area the CC would have us suppose. When the Park Service has been spending hundreds of thousands of dollars each year to improve visitor and educational facilities, to accuse it of steadfastly hindering the use and enjoyment of these areas seems hardly in accord with the facts. Sure, the Park Service doesn't permit fancy hotels, sk

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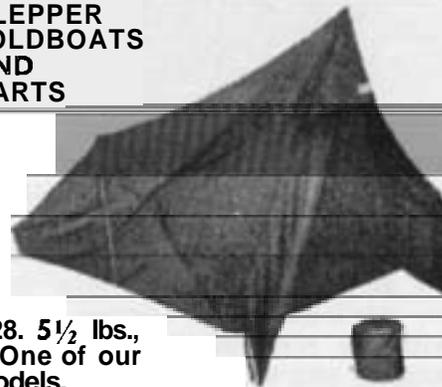
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resorts, and noisy "entertainment," nor does it roll out cement carpets all over the hinterlands of our national parks, for such things would be clearly contrary to the intent of Congress expressed in the National Parks Act.

Any of us who have been on a lake with powerboats know well enough that allegations (1), (2), and (3) are far from "spurious." I have read some reports of the Yellowstone staff which give them very considerable substance in specific detail. And the resolution makes no reference to the irresponsible camping all over the lake and the repulsive littering of shores and waters with all manner of trash and garbage. To carry out its responsibilities, the Park Service must of necessity impose certain regulations, in the interests of the majority of park visitors. If it cannot make these regulations stick, what will happen to fundamental park values in Yellowstone and elsewhere?

The plain fact is that because of the virulent opposition the Yellowstone Park management cannot put the proposed restrictions into effect this year, pending a further hearing to be held by Congressman Keith Thomson of Wyoming after adjournment. The AWA intends to make itself heard at that hearing: our statement will be prepared in consultation with our Advisory Committee and other leaders. Comments from readers will be most welcome—now!

Allagash River. Our Appalachian Mountain Club affiliate has informed us of hearing being held April 22 in Calais, Me., by the International Joint Commission, which is concerned with developing the tidal power generating plant at Passamaquoddy Bay on the boundary line between Maine and New Brunswick. For this to be successful, "firming power" is required, and our Army Engineers have selected Rankin Rapids on the upper St. John River as the most suitable site for a high dam. The reservoir behind the dam at this point would flood out virtually the entire Allagash River, one of the most famous wilderness canoe trips in the Northeast. For many decades this has

been the high-point of the New England canoeist's career, the test of whether he was a he-man wilderness paddler or just a smooth-lake dilettante. Even today hundreds of canoeists make the run every summer, including many boys camp trips, and it remains the outstanding canoe wilderness east of the Quetico-Superior area in Minnesota.

The AWA sent a statement to the hearing strenuously opposing the Rankin Rapids project. "There are some things that cannot be measured in dollars, and a wilderness waterway is one of them," it **concluded.** "The physical and mental

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sewed, with zippers, cement
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39"x3"x1/8".....\$.50

Thermal socks, pair.....\$2.95

Navy waterproof bags,

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challenge of wilderness adventure, the psychological satisfaction of achievement, the spiritual peace of a camp by living waters—these are what our over-urbanized people need so much today, especially our young people. And now, just when we are on the eve of developing a variety of other sources of power, to destroy the Allagash canoeing wilderness forever would be an act of outrageous political irresponsibility."

Other Legislation. The Wilderness Bill has been stymied in the Senate Interior Committee by Senators Allott (Colo.) and O'Mahoney (Wyo.), who have raised legal technicalities by the yard. The latest Committee Print No. 3 has been carefully prepared by the members of the Interior Committee in consultation with legal experts, and it is obvious that the efforts of Sens. Allott and O'Mahoney are directed only at forestalling action by this Congress.

The C&O Canal Park Bill, H.R.2331, has at last been reported out of the Rules Committee, but it faces some difficulties on the House floor from a variety

of reasons peculiar to local politics. Action in the Senate will then be necessary—and time is running short.

* ■ *

Water Conservation Stamp. Water is a vital and limiting natural resource. No other resource so directly affects the welfare, comfort, and happiness of all the people. Our national and personal need for water for domestic use, for sanitation, for manufacture, and for agriculture is multiplied each year by our expanding population. Without water, soil cannot produce the food and fiber needed to nourish and clothe our rapidly increasing population. More and more people each year are turning to water and water sports for leisure-time enjoyment.

But there is just so much water. The earth's water supply remains constant. We can meet these vital and rising demands for water only by better use of what we have—by reducing needless waste and pollution, by protecting the watershed upon which our water falls

(continued on page 47)

Announcing the fastest stock canoe "alive"



The **GUIDE SPECIAL** Length 18 1/2' beam 33". wt. 65 lbs.; bow depth 16"; center depth 12"

The Guide Special holds all records in Michigan and also in the 139 mile North West Brigade marathon on the Stuart, Nechako and Fraser Rivers in northern British Columbia.

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Hitcher-Mott Gate 2
Credit River Slalom.



Goza Boray in Maturity Rapids
Credit River Derby.

RACING REPORT

BY GEORGE SIPOSS

The Second Annual Credit River Whitewater Derby and Slalom. The only white-water race in Ontario has been run off successfully. After unseasonably cold weather the ice finally cleared away ten days before the race. On the week-end previous to the race the boys ran the river to make sure all obstacles were cleared. The Toronto newspapers gave us good publicity, stressing that safety was the first consideration. Even the society pages mentioned that "canoe-race-watching-parties" were organized in the plush homes all along the river. On Saturday a two-inch snowfall in the morning almost stopped our hearts. It cleared up in the afternoon and the slalom course was quickly set up.

On race day the sun came out to celebrate with us. Water conditions were perfect, and the first of the 32 boats started the down-river run at 10:00 AM. Spectators lined the banks four-deep at the rapids. Upsets were less frequent than last year even though "Maturity" rapids (so-called because going through them makes a man of you) were as ferocious as ever. Boy Scouts provided safety patrols. It is noteworthy that more than half the boats beat last year's winning time.

In the afternoon the slalom race was held on a very fast course. The gates were placed to provide a challenge for the contestants and to allow them full play for their skill. Kurt Vonesch, one of the youngest OVKC members de-

monstrated superb technique and cool, highly efficient style as he walked away with the hotly-contested F-1 class. Hans Rosteck and his plucky wife placed very well in both events in F-2, proving that competition is not reserved solely for supermen. The club promotes F-2 racing to attract other boaters in their area. Many people with double-seaters join the club and then, seeing the greater maneuverability of singles, they acquire the smaller craft and develop the skills for slalom racing. It was encouraging to see more Canadian canoes this year; however there is still a notable lack of decked canoes. Perhaps next year more U.S. canoeists will compete.

Downriver - 4.5 miles

F-1

George Siposs	24.07
Kurt Vonesch	24.13
Bob Field	24.35

F-2

Gut & Grabner	24.49
Lorinc & Zob	25.21
Mr. & Mrs. Rosteck	26.12

C-1

J. Collins	31.25
John Somjen	31.40
M. Schlitt	35.21

C-2

Hitchon & Reville	31.28
Armour & Case	34.45
Smith & Silcox	42.07

Slalom - 15 gates, 350 yards

F-1

Kurt Vonesch	226
George Siposs	301
George Topol - Geza Boray (dead heat)	309

F-2

Gut & Grabner	369
Mr. & Mrs. Rosteck	1011

C-1

John Somjen	1057
J. Collins	1378

C-2

Mocking & Nellis	697
------------------	-----

Aubrey Ireland, Vice-Commodore of ACA and several times Canadian paddling champion was on hand to present the trophies. The team trophy was awarded for the second consecutive year to the Ontario Voyageurs. For the best times of the day Kurt Vonesch and George Siposs received trophies. Other winners received gold-embossed certificates, and all competitors and gate judges received certificates in appreciation of their efforts. The crowd dispersed with the racers promising to come back next year to renew their friendships and conquer the Credit River.



The sixth annual Brandywine Canoe Slalom was staged in the rapids at Wilmington, Delaware, April 9th and 10th. Buck Ridge Ski Club was the principal sponsor and organizer. A field of about eighty entries came from as far away as Washington, New York and Piltsburgh. High water made the course difficult and some fifteen boats capsized. Results were as follows:

F-1

Paul Bruhin	KCCNY	247
Eddy Schlesinger	KCCNY	346
Paul Kenworthy		
Wissahickok Ski Club		396

C-1

Bill Bickham	PSOC	373
Bob Harrigan	CCA	401
John Berry	CCA	407

Pontoons

John Burkam	BRSC	320
Dick Shipley	BRSC	380

C-2

Bill Bickham & David Kurtz	PSOC	324
Bob Harrigan & John Berry	CCA	352
Frank Havens & Dan Sullivan	WCC	392

C-2 Mixed

Bob and Edie McNair	BRSC	330
Charles & Margie McKhan	CCA	411
Dick Albright & Jane McKenrick	BRSC	447
* * *		

Additional race schedule. Second Annual Slalom and Whitewater Race of Glenwood Springs, Colorado. July 2, 3, 4. Send entries to Ron Bohlander, 814 5th Street, Greeley, Colorado.



Was your club's race announcement left out of the last issue of AWW? Looking for the results of other races in this issue? We can't print 'em if we don't have 'em. All race announcements and stories must be in the hands of Racing Editor George Siposs in time for him to compile them and forward them to your editor before deadline.



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How To Make Your Own Paddle

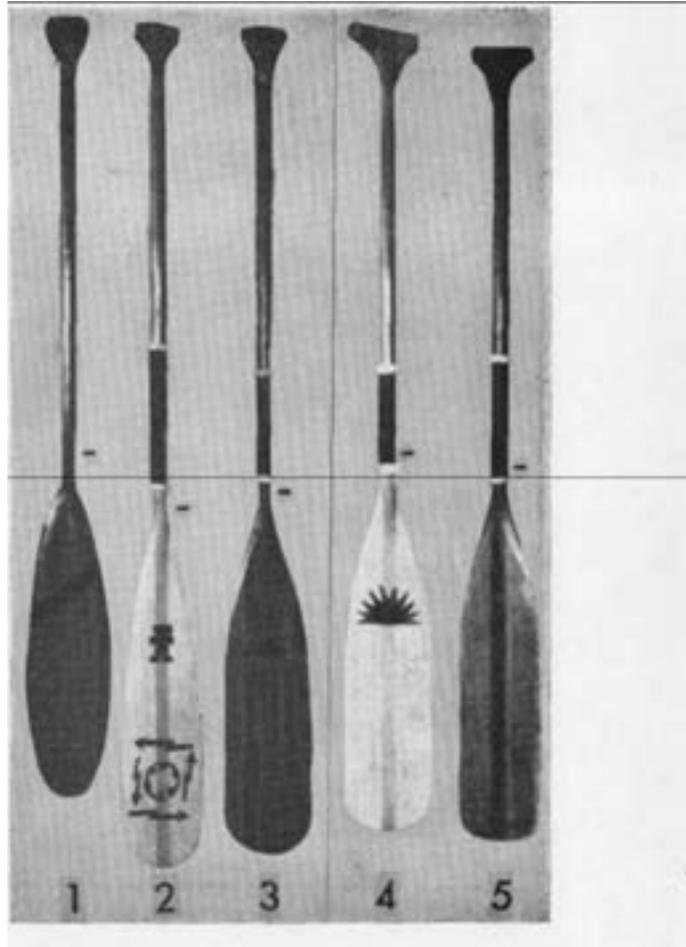
by LEONARD "RED" FANCHER

History repeats itself and we are in the phase where making your own paddle is the best answer for any discerning canoeist preferring the finest tools of his trade. Modern tools and techniques permit results superior to those possible back in the days when better materials were available. Double blade construction and repairs may be treated in a later story, but this article will concern itself only with the single-blade ash paddle.

Modern commercial paddles usually weigh 30 to 45 ounces, but to the writer they feel clumsy due to improper balance. Note the weights of the spruce featherweight "ladies" paddles in figures 1 and 2. Figure 3 is an ash paddle, very strong and resistant to wear around the edges. Figures 4 and 5 are heavy duty spruce paddles and do not spring or bend in their entire length.

"American Lumber Standards," lists four kinds of spruces, but to the average lumberman they are better known as western or northern with no certainty of species. Only the Sitka and Red spruces have adequate tensile, rupture and crushing strengths to make satisfactory paddles. The Ashes are more consistent in their qualities, so ask the lumberman for White Ash and he will understand your needs. Rough sawn lumber is preferable to dressed lumber, as it will be full-dimensioned and will give you greater thickness in some critical points of the shaft.

The wood grain is important. You prefer a piece with "vertical grain" but don't expect to find it. Our second choice is "flat grain" and the flat side of the board will show elongated V's and U's as in figure 6. Only straight lines of graining should show on the edge of the board if you want a strong shaft in your paddle. Get a full-dimensioned 1x6" board the length you want your paddle to be.



Saw off a full 1 $\frac{1}{4}$ x1" strip for the shaft. The wings of the blade will be glued to the wider side of the shaft. This will allow the straight grain lines to fall into the proper place for greatest strength as in figure 8. Next, decide the size and shape of your finished paddle. For shafts under 5' a 24" blade shaped about like figure 1 seems best. Shafts over 5'6" can use a 27" blade in any of the shapes in figures 2, 3, 4 and 5. A wetted surface of about 110 square inches seems to be adequate for most uses, and the larger blade areas in figures 3, 4 and 5 are an advantage only when working in shallow or "thin" waters.

Before cutting the pieces for the

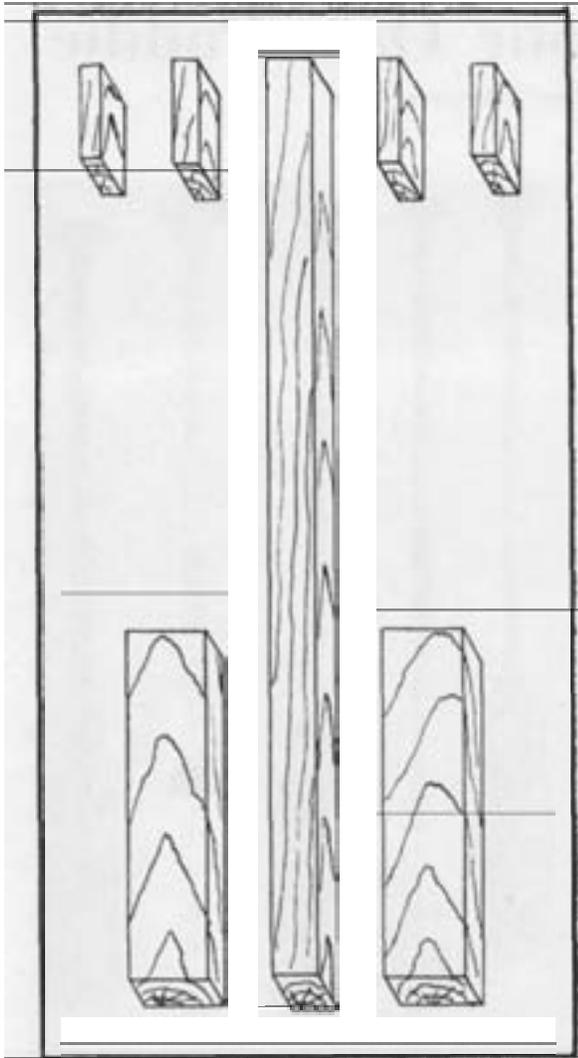


Figure 6.

wings mark the wood so you will not reverse the grains in assembly. The V's of both wings should point in the same direction to avoid complications when planing the blade to thin and shape it.

Use waterproof glue to join the pieces. Rub glue into both faces of each joint and clamp tightly together. A good glue joint requires that the faces be planed smooth and true so no light can be seen between them when held in place by hand. The pieces for the grip should be cut at least 5" long. For a full fat grip cut four pieces as thick as the shaft and glue them in place. For a thinner grip only two pieces need be used.

After allowing a generous time for the

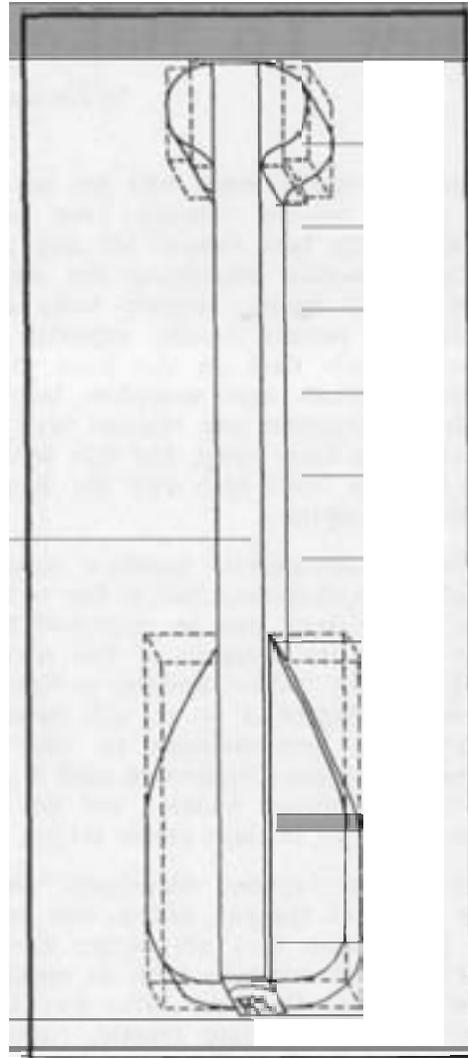


Figure 7.

glue to cure remove the clamps, outline the shape on the blank, and cut away the excess wood. At this time a center line should be drawn all around the edges of the blank.

The first plane cuts to shape the blade should be made near the center lines. From these cuts work back to the center of the shaft to get the cross-sections shown in figure 9. Note that the shaft tapers very rapidly from D to C but is kept full dimension from C up to the start of the grip. A six inch wood plane does most of the work, but a spokeshave will help in some of the tight spots. Work a little on one side and then on the other in order to keep things symmetrical.

As you approach the finished dimensions try flexing the paddle to check its strength and noting that the flexing point is at or near cross-section C. Notice the proportions at cross-section D. The tapering shown between sections E and F is only for large spruce shafts $1\frac{3}{8}$ " in diameter. For the Ash shaft it is better to keep the shaft full at this point.

I like my grips to be full and fat for hand comfort. The additional bulk also helps to get the proper balance of the paddle. The deep round indenture in 9G is first made with a half-round wood rasp. Locate it so that the heel of the hand will fit into it when the grip is finished. On all my paddles this groove averages about $1\frac{3}{4}$ " from the top of the grip. If you already have a favorite grip on an old paddle use it for a pattern.

The shaft is finished in a semi-oval. First draw lines on all sides of the shaft $\frac{1}{4}$ " from each edge and then plane the corners down to these marks. To round off the shaft use a sanding belt such as used on a portable belt sander. Cut it open at the splice and attach broomstick handles to each end. Use it like a shoe-shine boy uses his cloth. Work on two corners at a time and turn the shaft over frequently to maintain symmetry.

All surfaces of the finished paddle are made very smooth by sandpaper. The edges of the blade are about $\frac{1}{8}$ " thick and rounded, and you will like the way they cut through the water on underwater retrieves and recoveries.

Unvarnished grips are easier on the hands, and the best preservative is several coats of linseed oil. For the rest of the paddle use the best grade of spar varnish. Allow each coat to dry hard before applying the next. Every second coat should be sanded smooth, using

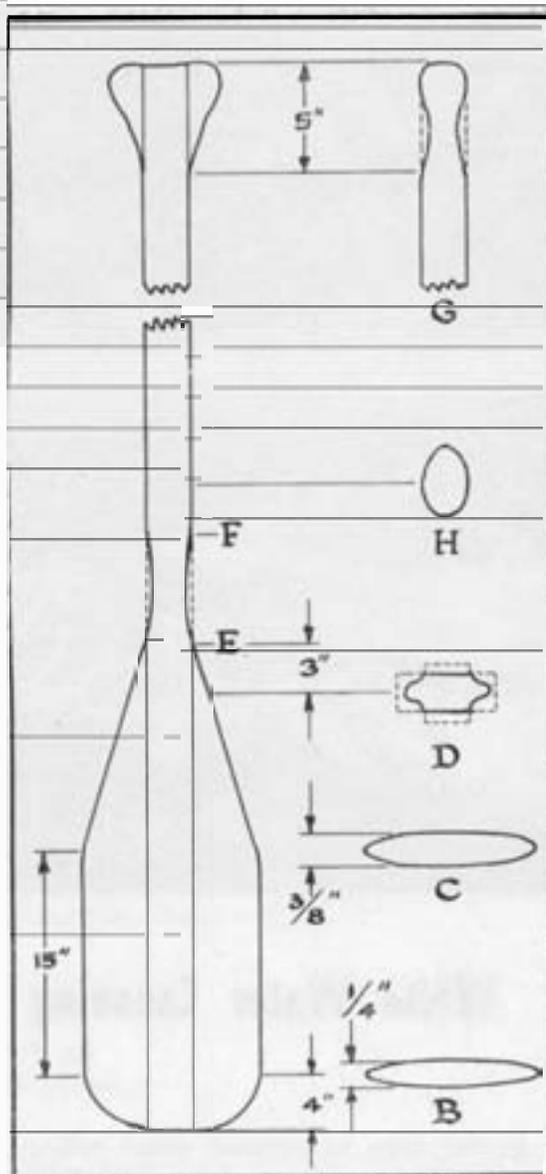


Figure 9.

fine sandpaper lightly. The last coat is not sanded. Six or eight coats should give you a nice finish.

On old paddles with worn edges the wearing can be slowed down by first cutting off the loose shreds and then rubbing Weldwood glue into the remaining stubble. On new blades I place masking tape all around the edge of the blade, leaving exposed about $\frac{1}{4}$ " of wood into which I rub the Weldwood before varnishing. This gives a decorative effect and helps retard wear.

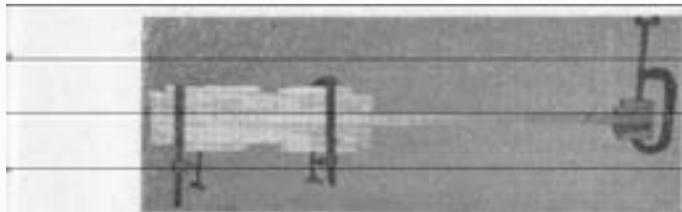


Figure 8.



Tom Newell and Dove Kurtz on Loyalsock Creek

White Water Canoeing in a College Outing Club

by TOM SMYTH

(photos by the author)

In the hope of helping other college groups, I am setting down something of the general organization, policies and program of the Canoe Division of the Penn State Outing Club. The group had its formal beginnings with a white-water instruction program in the spring of 1957, although several of us had been running local rivers in previous years. A year and a half later the canoe group became a full division of the PSOC, a club with upwards of a thousand members (some of whom are not members of the University community). The Division has its own officers and equipment and runs its own program, subject to the stabilizing oversight of the parent club. Activities in-

clude both fast and slow water trips and instruction. Some weekends two or more groups are out on different rivers. A week-long Canadian trip in early September highlights the program.

Gradually the club is acquiring canoes, 17 or 15 foot Grumman's being preferred as the best durable all-purpose compromise choices. Life preservers, first aid kits, paddles, car-top carriers, throwing lines and rubberized packs have also been purchased. To help pay for wear and tear and minor losses we charge \$1 per day per canoe for flat water use and \$2 for fast water. "Qualified" members may rent club canoes for use on flat water; the canoes are used on white water only on club-sponsored trips. If

damage is incurred, those responsible are expected to make or arrange for repairs and to stand 50% of the costs up to a maximum of \$20 per person. Damages due to negligence or resulting from disobeying the trip leader will be charged in full. Members borrowing private canoes make their own arrangements.

Participation on white water trips is subject to stipulations as to good health, ability to swim, and agreement to abide by any decisions of the trip leader. In organizing trips we make the usual effort to match abilities to difficulties; we also select river parties with an eye to the future. It takes time to develop skill and sound judgement about rivers. A college group has to cope with a rapid turnover in membership. Therefore, we are rather "unfair" in giving priority to repeaters rather than newcomers, and to freshmen rather than upper classmen when newcomers can be accommodated. I think these practices pay off in developing an enthusiastic, skilled and knowledgeable white water group.

Typically, a newcomer attends some Division meetings and participates in flat water trips. After he has developed a "feel" for canoeing he may attend a river running instruction trip. Usually this employs a slalom course set easily with anchored gallon jugs rather than the more laboriously strung poles. Then a small, easy but interesting stream is run. At about this time a mimeographed summary of information on procedure, equipment, safety and technique is distributed.

Records are kept of all trips and include the stretch run, water level (by actual measurement, if possible), participants and partners, difficulties and damages. Canoeists are continually re-evaluated and classified: I (novice), II (intermediate), III (skilled), IV (expert). The last category has been achieved only by Kurtz, Bickham and Newell to date. Rivers are rated roughly in accordance with the formula given by Wilhoite in A.W.W. 2(4): 28. Thus our streams are classed appreciably lower than in Burmeister's White Water Boating, but probably high by European standards. A list of most of the streams



Bill Bickham on Kishaccuillas Creek.

we run, arranged approximately in order of difficulty, follows:

Class I: Juniata River, West Branch Susquehanna, Bald Eagle Creek, Little Juniata River, Spring Creek. Class II: Penns Creek, Pine Creek. Class III: Red Moshannon Creek, Fishing Creek, Beech Creek. Class IV: Loyalsock Creek, *Lehigh River*. Class V: Black Moshannon Creek, Youghiogheny River. Rivers shown in italics are run only by private groups in privately-owned canoes as the club prefers not to risk its property on these streams.

Naturally, difficulty depends on water conditions: the lovely Loyalsock can rise and fall during the day like a glacial stream when the snow melts in early spring; the (Red) Moshannon is strikingly different according to water stage; and Black Moshannon which plunges 880 feet in 16 wilderness miles can only be run on high-high water.

Last spring we ran 32 trips, mostly one day affairs. Our busiest day saw 15 canoes on the water. We got as far afield as the Potomac headwaters, but most of our running was on water within an hour's drive of State College. In addition, some of our members have canoed with the N.Y. AMC, Buck Ridge, and Canoe Cruisers. There is a growing interest in organized slalom competition with other groups. As faculty advisor I am glad to see this, as it exposes our members to divergent views and excites an interest in techniques that leads to rapid acquisition of skill. And greater skill leads to greater enjoyment, which is our objective.



SECRETARY'S SOAP BOX

by CLYDE JONES; EXECUTIVE SECRETARY, AWA

Things have been hopping since the first of the year. Our live wire committee chairmen and special investigators have been sending letters across the continent at such a rapid pace that your Secretary has hardly had time to file them and report to the General Committee.

Your General Committee has balloted on several proposed amendments to the constitution. The initials of the organization are to remain AWA. The official spelling of our name will be either American White-water Affiliation or American Whitewater Affiliation; only the final tabulation will tell us which. The membership roster is to be continued. A vote was taken to consider the following changes in the constitution (see your club representative for fuller details):

1. The yearly audit to be made annually in either December or April as well as upon the retirement of a Business Manager. Results of the audit to be reported to the General Committee.
2. The election system to be changed so the Chairman of the Advisory Committee will hold elections for the post of Executive Secretary. (This would prevent an Executive Secretary from perpetuating himself in office by not holding elections).
3. "Will" to be changed to "shall" where it occurs in the constitution.
4. The next clause is controversial and is stated in full: "Any member, person, club or Affiliate may be dropped or refused membership or Affiliation upon notice, by a vote of the Advisory Committee, after holding a hearing to determine any conflict with AWA principles and policies. The right of appeal of the Advisory Committee ruling to the General Committee through the

Executive Secretary is hereby acknowledged."

It has further been expressed by ballot that the AWA should formulate a set of POLICIES that will aid in the functioning of the organization and yet not be a part of the constitution. Here are the first group of policies to be voted on:

SPECIAL EVENTS. If the AWA is to co-sponsor any event the AWA should exercise some control with respect to safety, fair play, etc.

INVESTIGATORS. The Executive Secretary can appoint special investigators to help in compiling data and reports.

EDITORIAL POLICY. It is understood that our publications are open to all members and that for any organization to thrive it is necessary to have some controversy. It is therefore recognized that our editorial staff is urged to publish representative views in controversies. This does not mean that the organization favors all views expressed by its members in print or elsewhere.

RESIGNATION. Upon notice any member or affiliate may resign.

We have added three new affiliates this year. The National Boy Scout Council, Ontario Voyageurs Kayak Club, and the Great Lakes Chapter of the Sierra Club have affiliated. Several of the affiliate clubs have distributed copies of their cruising schedules. If you plan to travel this summer why not contact your club representative and see if he has a schedule for the area you are visiting.

Do you feel that you want to know more about what is going on in the AWA (between issues of the magazine)? The easiest way is to see your club representative each month and read the monthly report. Better yet, write to

me and offer some of your time. I will be glad to put you to work and then you will receive your own copies of the monthly report.

Sigurd Olson and Ernie Schmidt were elected as members at large of the Advisory Committee.

The Ontario Voyageurs, the Buck Ridge Ski Club and the Appalachian Mountain Club are planning a combined trip on the Petewawa River in Algonquin Province Park this summer. At last report it appears that it will be designated an AWA-sponsored trip. Interested members not belonging to the sponsoring clubs should contact George Topol, 1557 Main St. W., **Hamilton**, Ontario.

Our new Safety Chairman, Leonard Fancher, 8224 S. **Woodlawn Ave.**, Chicago, is studying designs for the "perfect white-water lifejacket." He is anxious to hear from interested members.

Newly appointed Guidebook Chairman, Walter Kirschbaum, Morrison, Colorado, is interested in trying to help members produce guidebooks that will use a standard system. Those of you now in the process of making guidebooks would do all of us boaters a favor if you got in touch with Walter.

The Library Committee is in the process of gathering all publications referring to canoeing in the U. S. and Canada. Gerry Schneberger's first report (on current magazines) is in this issue. Ed Plummer's report of government publications will appear soon.

The KCCNY is making plans for a system for its members to do vacation boating together. The plan includes a base camp, etc. Might be an interesting idea for other clubs.

Do you have any ideas on how to improve racing? Send them in to Special Racing Investigator Vern Rupp, 2748 Prince Albert Street., Vancouver, B.C. There are many questions to be ironed out. Are today's boats perfect? It might seem so in view of the dimensional restrictions placed by race offi-

cial. Is a folding boat the only kind of kayak? Again, such would seem to be the case since rigid kayaks are virtually outlawed. If you take a boating picture and sell it to a newspaper for \$5.00 does this make you a professional athlete? It sure does, according to present rules and interpretations. After many queries (and complaints) about rules it was decided to investigate the situation. If you have any ideas — good bad or indifferent, let Vern know so he can get a good background before he makes his report.

Clyde Jones
5525 E. Bails Drive
Denver 22, Colorado



MORE RIVER GUIDES

The following names were omitted from the list of river guides published in the last issue:

Harry Aleson, Hotel Johnston, Richfield, Utah.

Gaylord Stavely, Mexican Hat, Utah.

If you know of any other guides whose names have been omitted, please let us know so we can bring our listing up to date.



CONSERVATION COMMENT

(continued from page 38)

as rain and snow, by finding more efficient ways for its use. Most problems of water shortage, poor water, or floods, trace back directly to the land. Whether or not the land in each watershed is eroded or is mantled by protective cover of grass and trees, whether there are small dams and other flood-preventing structures along the channels, whether steps have been taken to reduce pollution—these determine in large measure whether water supplies are ample and reliable.

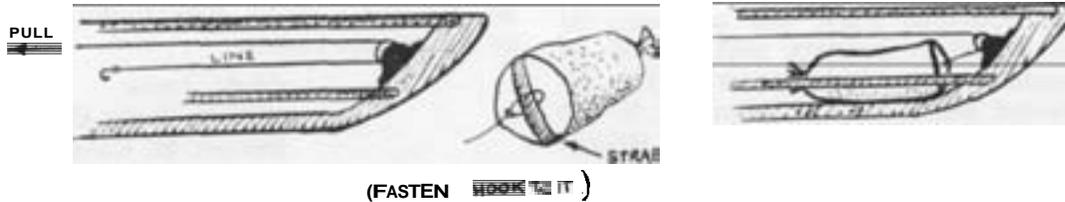


IDEAS

Cold feet. Two KCCNY boaters tested foam rubber boots of the type worn by skindivers. They were tested by submerging the feet with the boots on for over half an hour in extremely icy river water without any discomfort to the wearers. The boots are available at

about \$3.00 per pair from any sport shop selling skin diving supplies. They are also comfortable while walking on snow and were worn continuously for six hours with excellent results.

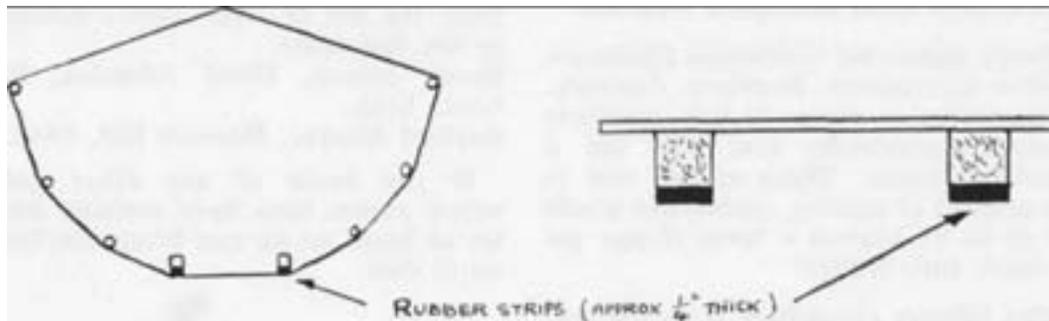
submitted by Maurice Posadn



Stowage. It's a problem to pack bags in the bow or stern of a kayak. A simple solution is to mount a pulley in the extreme bow or stern, lead a line around

it, and fasten it to the bag with a carabinier. Pull the free end to get the bag up into the boat.

submitted by George Siposs



Hull protection. Most holes in fold-boats occur where there is wood behind rubber under the cockpit. This can be minimized by cementing rubber weatherstripping from auto stores on the bottom

of the "ladder." This will provide a cushioning effect when you hit a rock; and it also helps tighten old hulls.

submitted by George Siposs

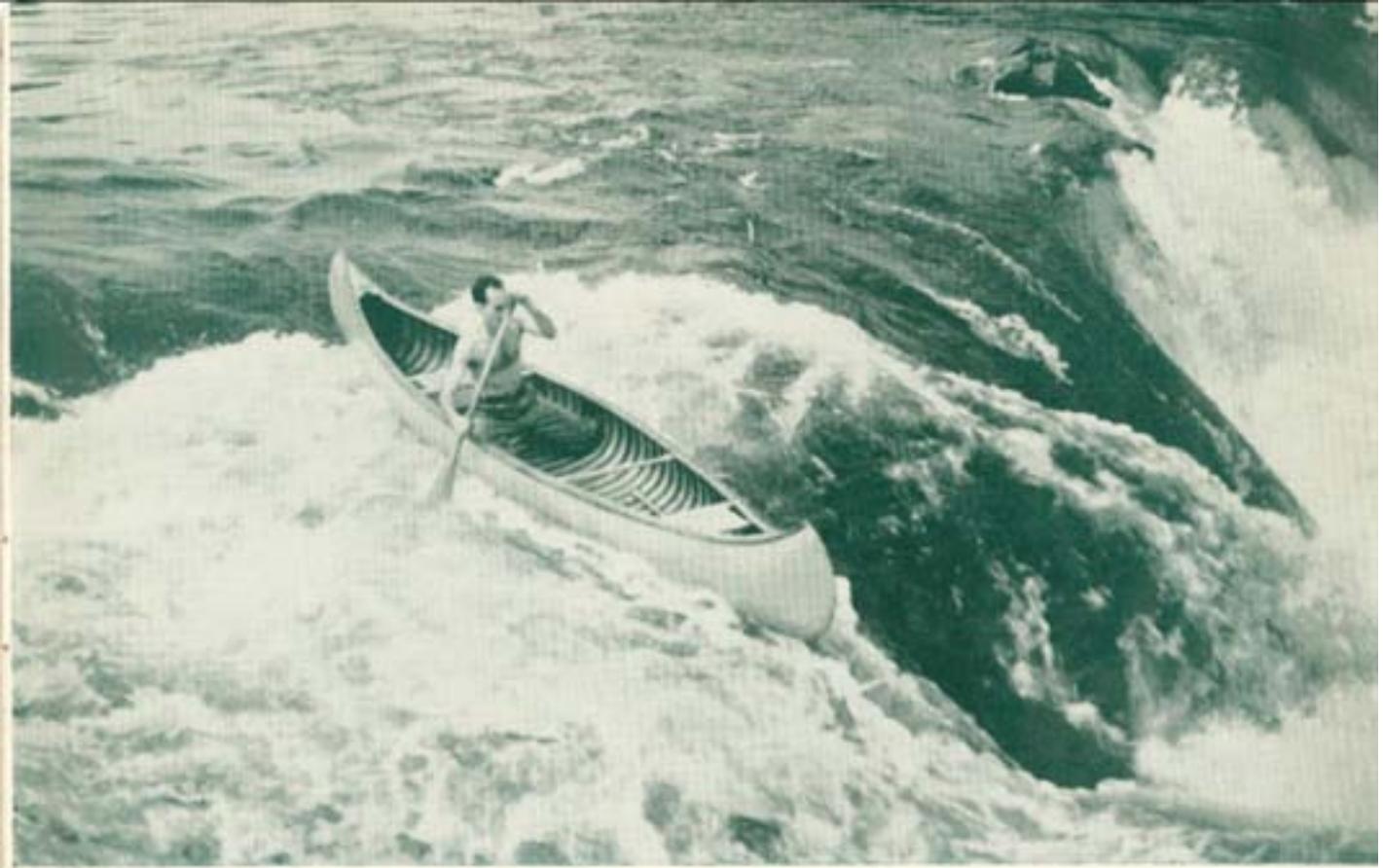
WANT ADS

The want-ad department is a regular feature of *American WHITE WATER* for the use of AWA members who want to buy, sell or swap equipment. Rates are 15 cents per word with a minimum charge of \$2.00 for an insertion.

FOR SALE: Klepper single kayaks, one touring (T-9) and one downriver (T-66) model. Boats purchased last August in Germany,

used only on lakes, fine condition. Owner returning to Europe. Price delivered express: \$160 each. Dwight Gibb, 2107 East 125th, Cleveland 6, Ohio.

KLEPPER T-6 Single with spray cover, pack bags, paddle, extras. Like new condition. \$175.00. Bill Russell, 43 North Ave., Westport, Connecticut.



Murray Spear shooting "Lovrr's Leap" in an Old Town 17 ft. Otca.

LOVE THAT

Old Town

Your Old Town will match your skill and daring on wilderness waterways with a smooth, winning performance. Fast and steady, this canoe is naturally buoyant — a natural for white water cruising. Under that handsome appearance are strong ribs and sturdy planking of tough, lightweight cedar. Here's a craft that's really rugged — built for fun and hard work, built to give you lasting service. Take an Old Town on your next run through the rapids — and you'll make a friend for life!

Old Town canoes come in a variety of models and in sizes from 11 ft. to 25 ft. Paddles, oars, sails and sailing equipment are also available. Write for FREE catalog TODAY.



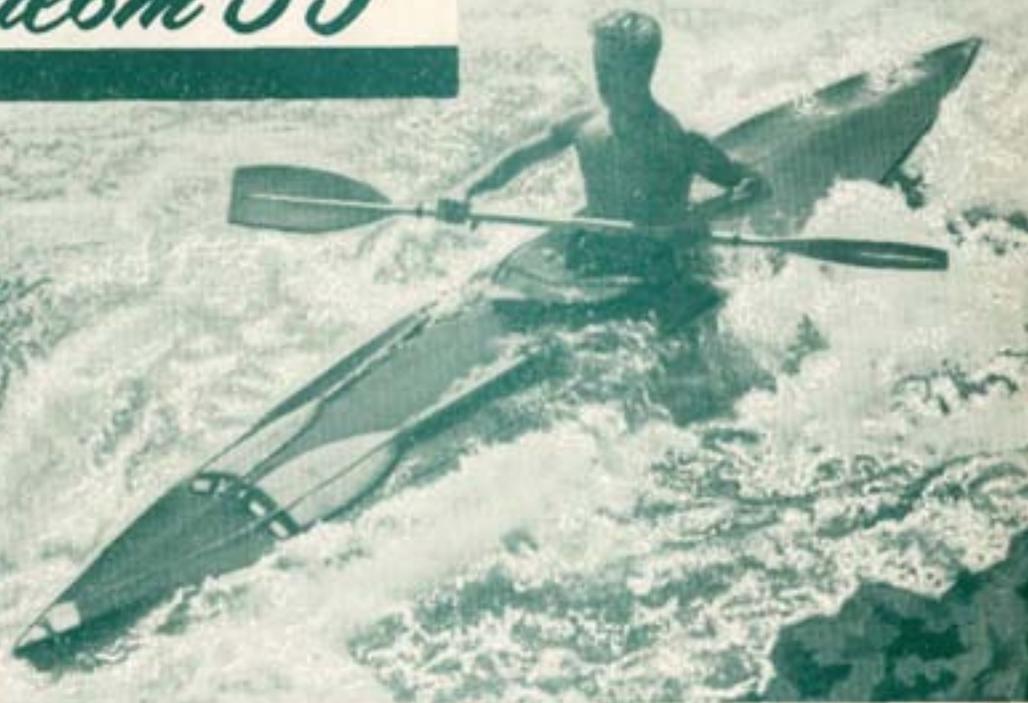
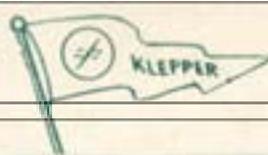
Old Town[®] CANOES

OLD TOWN CANOE COMPANY

725 Middle Street, Old Town, Maine

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Slalom '59



In accordance with specifications by white water experts, this Klepper Champion was specially built to meet the stern challenges of tough competition. The sleek, rugged Slalom '59, fastest and most maneuverable craft afloat, maintains a proud tradition of leadership . . . Kleppers have won world's championships in all the major folding boat Slalom contests.

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**KLEPPER — The Only
Folding Boats with
ALL these Features:**

- **Carry it like Luggage**
Minimum storage space
- **Snap-Lock Fittings**
make assembly easy,
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accurate to 1/32".
- **Built in Air Tubes**
Guarantee maximum
safety and stability.
- **Economical**
No dockage. No trailer.
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