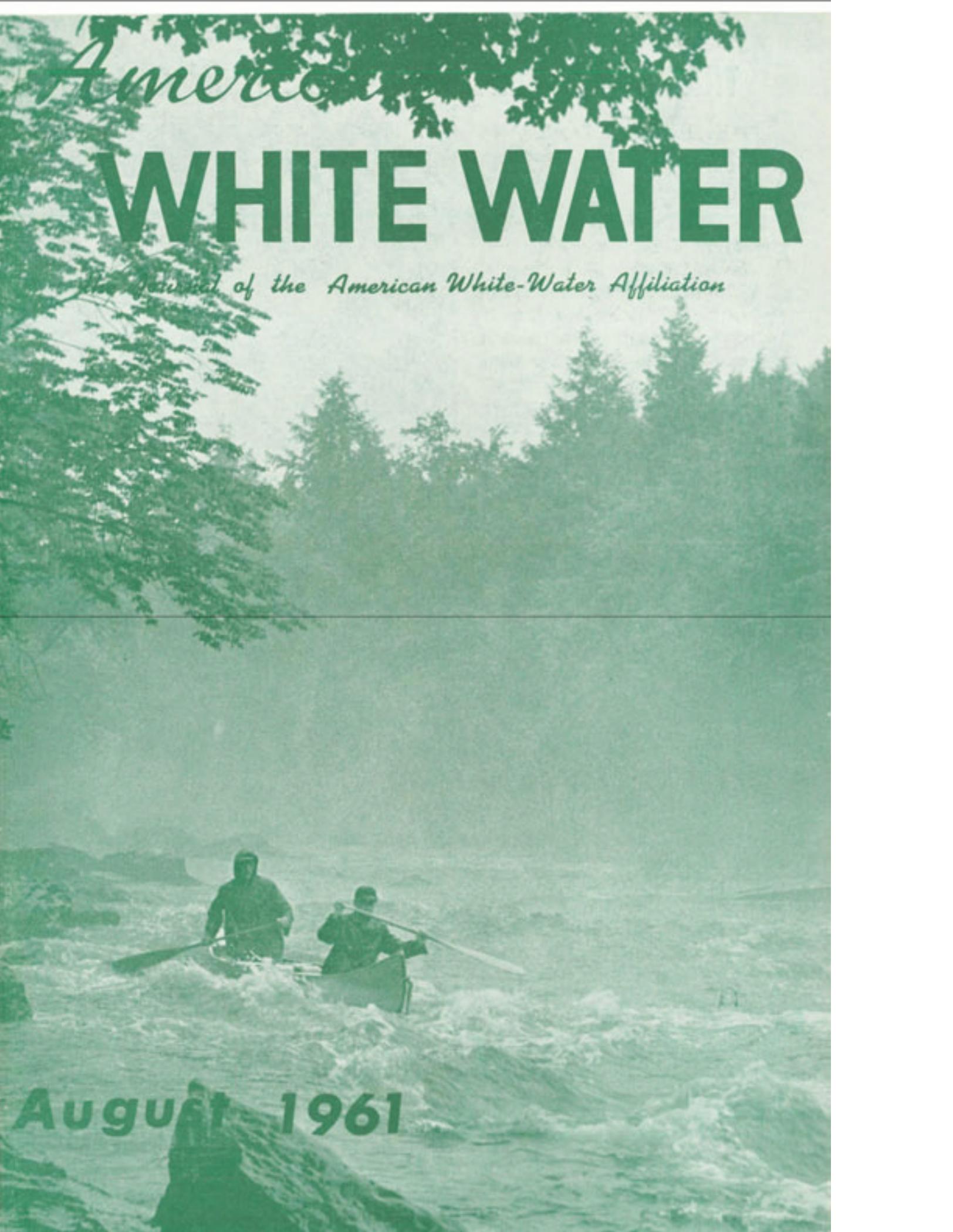


American

WHITE WATER

the Journal of the American White-Water Affiliation

August 1961



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Paul Kenworthy, a winner in the Brandywine Slalom, 1960. Note wet suit.

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WHITE WATER

Sponsored by The American Whitewater Affiliation

Volume VII

August, 1961

Number 2



The American Whitewater Affiliation

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1662 South Lafayette
Denver 10, Colorado

Advisory Committee Chrm.
MAURICE POSADA
417 Riverside Drive
New York 25, N. Y.

Editorial Chairman
PETER D. WHITNEY
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Berkeley 8, California

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Editor:

Peter D. Whitney, 1544 La Loma, Berkeley 8, California

Eastern Editor: Eliot DuBois, Sandy Pond Road, Lincoln, Mass.

Midwest Editor:

Nancy C. Jack, 805 Sandusky Ave., Kansas City 1, Kans.

Racing Editor: George Siposs, 5 McArthur Ave., Weston, Ontario

Business Manager:

Patricia Vanderveen 1514 Pratt Boulevard, Chicago 26, Illinois

Circulation Manager:

Frank Cockerline, 118 Dellbrook Ave., San Francisco 27, Calif.

Eastern Advertising:

John Berry, 5914 Greenlawn Drive, Bethesda 14, Maryland

Midwest Advertising:

Harry Kurshenbaum, 6719 N. Greenview Ave. Chicago 26, Illinois

Western Advertising:

Douglas Simpson, 1015 Keith, Berkeley 8, Calif.

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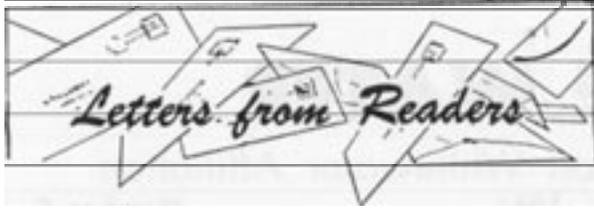
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Cover: George and Harold Sears on Nescopeck Creek, Pa.

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June 20, 1961

Dear Peter:

Further to Bob McNair's letter in the May issue, I have been thinking for some time that the affiliates should make a much more determined effort to enroll their members in the national affiliation. KCCNY is unique in requiring it of its members: it could do this because it was organized only two years ago, and could set up whatever membership conditions it wished. Older clubs would naturally find it difficult to impose such a rule, but it does seem to me that the AWA representative in each affiliate should feel it his bounden duty to plug AWA membership at all club meetings and on river trips.

AWA membership is not merely subscription to our richly informative journal: it is support of the many activities carried on or sponsored by the AWA, made possible by cooperative effort of AWA affiliates. Whether it is a fight against licensing, regional or national competition, joining in the battle to protect the Selway River (and wild rivers everywhere), or participation in state recreation programs, the spokesmen for the AWA should not have to weasel about "speaking for the interests" of an uncertain number of paddlers in scattered clubs; he should directly represent an AWA membership of 2500 or more. The dues from such a membership would make the AWA's activities more effective, more influential, and of greater benefit to the individual members of the several affiliates.

Dan Bradley,
1717 R St., N.W.
Washington 6, D.C.



From Your Editor

We are adopting a new method of handling your membership subscriptions in the Affiliation. Instead of the \$2.50 and application blank going first to the Membership Secretary, Deacon Kiehm, we're asking that they be sent to the Circulation Manager, Frank Cockerline, and his very capable wife, Ruth. That way, the subscribers' names can be added to the rolls quicker, and in the area where the magazine is actually printed. This will help reduce the delay in getting your magazine to you.

So use this address for your remittances: Frank Cockerline, 118 Dellbrook Ave., San Francisco 27, Calif.

While we're on the subject, members frequently ask us aggrievedly why we don't send out renewal notices every year. The answer is that, as a volunteer organization, it's hard to afford either the money or the labor required to follow-through on tardy renewals. A commercial magazine with a big bank of IBM machines can huff and puff and blow those punched cards your way; we can't believe that you want us to spend your money that way. So please remember that renewals are due every spring when the ice is just about to break up on the river and that we will not send magazines to tardy members until the check itself arrives!

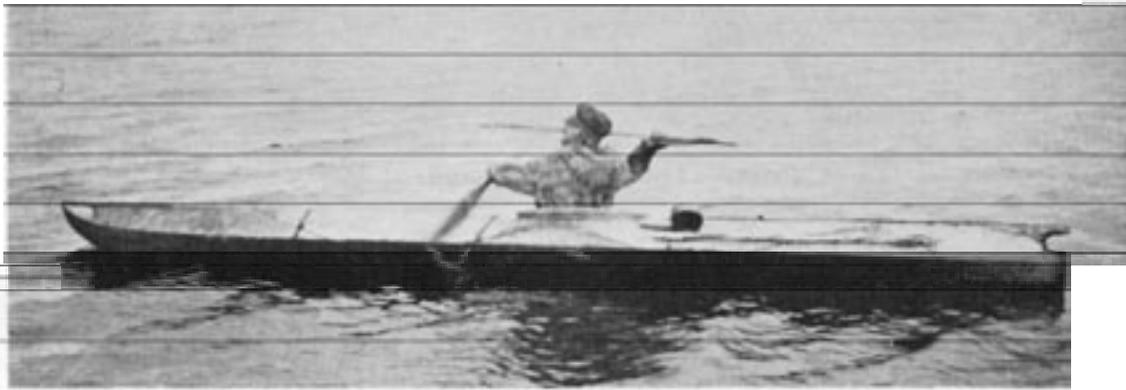
All members of each affiliate should join AWA

Dear Sir:

. . . The Michigan Canoe Racing Association has been trying to make up a list of professional canoe races. It is extremely hard to get this information. I wonder if the readers of AWW would give us a hand? Just drop a postcard telling what you know about the race. We in turn will supply a copy of the completed list.

Sincerely yours,

William Staples,
Exec. Sec., MCRA,
RR 5, St. Johns, Michigan



Eskimo hunter throwing light seal harpoon: Norton Sound, Alaska.

—Smithsonian Institution

The Kayak of the Eskimo

By JOHN D. HEATH

"A Greenlander would only have a pitying shrug of the shoulders for the strange barges that are honoured by the name of kayak on certain civilized coasts."

—KAJ BIRKET-SMITH

A professor once gave the writer the following advice about product design: "If you want to improve something, first of all, find out what has been done along similar lines." This advice might well be applied to recreational kayaking, because the lessons learned through centuries of traditional kayaking has yet to be properly utilized by recreational paddlers.

Recent trends in foldboat design indicate that modern designers are learning, through trial and error, lessons which were known centuries ago by Eskimos.

Paddling techniques are another example of learning things the hard way. There has been a tendency to copy other paddlers who learned by experiment, when more advanced techniques could be learned by getting the information "straight from the horse's mouth"—the Eskimos themselves.

Eminent yacht designers and naval architects have praised the seaworthiness and efficiency of Eskimo kayaks. Curiously, recreational paddlers have steeped themselves in the lore of the birchbark canoe, but scarcely noticed the traditional kayak. The fact remains that the present state of the kayaking

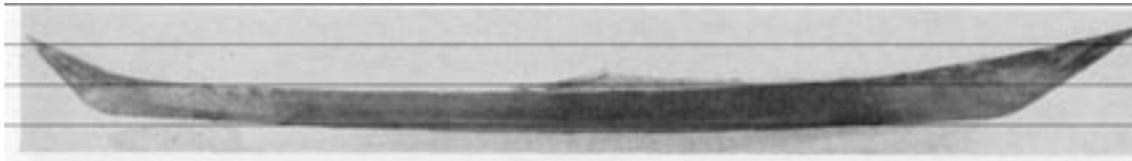
art is by no means beyond improvement. There is little need to continue groping into the future until we become familiar with the past.

In the Beginning

The origin of the kayak has been lost in antiquity. Eric the Red found remains of skin boats when he landed in Greenland in or about the year 985. There is in a European museum a kayak believed to be about 250 years old, which is identical in form to those found on the central West Greenland coast today; this indicates that the kayak reached a high stage of evolution many centuries ago.

The word "kayak" is of Eskimo origin. There have been attempts to link it with "caique," a Eurasian boat, but the similarity is purely coincidental. The Eskimo language is remarkably uniform from Greenland to Norton Sound, Alaska. For example, the Greenlandic word for a double-bladed paddle is "pautit," and the equivalent at Pt. Barrow, Alaska, is "pautin." South of Norton Sound the language changes drastically, however, and at Nunivak Island the equivalent for kayak is "kai-yuh." Early Russian explorers applied the term "baidarka" to the kayaks of southern Alaska.

The kayak was aboriginal to a region extending from East Greenland to the Sea of Okhotsk. This included most of the arctic coastline of Canada and the



A Greenland kayak in profile. Length: 17 feet.

—Smithsonian Institution

entire coastline of Alaska north of Prince William Sound. Users of kayaks included the Eskimos, Aleuts, the Chuckchis and Koryaks of Siberia, and some of the Indians of southern Alaska.

The Purpose of Kayaks

Hunting was the major occupation of these people. The kayak was developed as a hunting implement, rather than as a means of transportation. Seals were the main quarry but other aquatic mammals, ranging from muskrats to whales, were often hunted, and so were caribou and waterfowl. Fishing also was often done from kayaks, although it was by no means as important.

A full description of hunting techniques is beyond the scope of this article, but the traditional kayak can be better understood with a knowledge of them. The Eskimo used the bow and arrow for hunting on land, but it required the use of both hands, whereas a kayak hunter must have one hand free in order to hold his paddle and steady his craft. Throwing and thrusting implements were therefore used. Very little "body English" can be put behind a harpoon from the seated position of a kayak hunter. This necessitated the use of a throwing stick to increase the leverage — and thus the range.

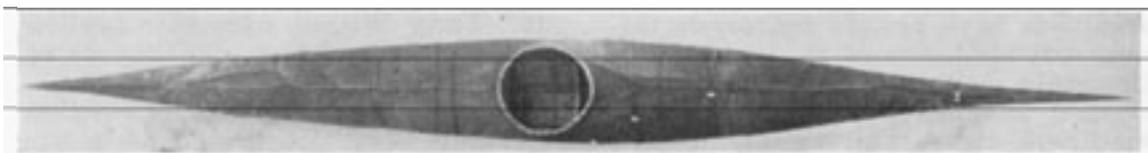
Kayak hunting implements generally included a harpoon for slowing down aquatic mammals, a lance for dispatching them or swimming caribou, and a multi-pronged bird dart for waterfowl.

These were held in place on the deck of the kayak by skin thongs. Harpoons for the larger seals had an inflated sealskin float with a line fastened to a detachable harpoon head. The float was carried on the afterdeck and the line ran forward along the deck, passing along the starboard side of the cockpit coaming, thence to a line tray on the foredeck wherein the slack line was coiled, and finally to the harpoon head.

When a seal was sighted, the hunter would quietly stalk to within range, then, turning his bow slightly to port, so that his harpoon line would unreel without snagging on the kayak, he threw the harpoon. The shaft dropped off and floated free, leaving the harpoon head with its attached line in the flesh of the seal. The float was quickly thrown overboard; its drag of the float soon tired the wounded seal so that it could be approached and dispatched with a lance. Large seals were towed home and small ones were carried on the afterdeck (in the eastern arctic) or inside the kayak (in the Bering Sea).

Caribou were hunted from the kayak when they forded streams or lakes. Hunters would hide around a bend or along the shore until the herd was in the water, then paddle among the swimming animals and kill as many as possible with the lance. Women and children sometimes herded caribou into the water for the waiting hunters.

Kayaks were sometimes used for transporting passengers and cargo, by



The same kayak seen in plan. Beam: 21 inches.

—Smithsonian Institution

American WHITE WATER



One way of carrying a spouse. Nunivak Island, Alaska.

—Smithsonian Institution

rafting two or three craft together, side-by-side. The stable, flat bottomed kayaks of Labrador and Baffinland could accommodate a prone passenger on the afterdeck. The broad beamed, deep kayaks of Nunivak Island and vicinity often carried the paddler's wife, children, and puppies under the deck. Nunivak Island kayaks had rather large, circular cockpits in which two persons could ride back-to-back. Two-hole kayaks were aboriginal to southern Alaska, but the three-hole model was developed as a passenger-carrying vehicle for Russian settlers.

Building a Kayak

The basic principles of construction were similar for all kayaks. Driftwood was used for the thwarts and longitudinal members, willow for the bent frames. The members were lashed together with baleen strips or skin thongs. The mortise and tenon was also a common method of Eskimo joinery.

Eskimo kayak builders are not to be pitied for having to use driftwood. The long immersion in cold salt water actually conditions the wood by keeping it at constant temperature and by slowly leaching out the natural oils. Selected driftwood is superior in many respects to commercial kiln-dried wood.

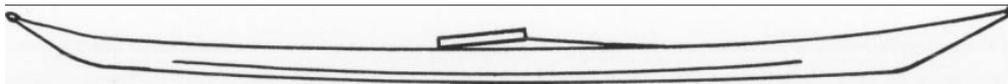
A kayak was built in the following manner: First, the gunwales were roughed out with an adze and then finished with a crooked knife. Thwarts were mortised into the gunwales fore and aft of the cockpit opening. The

ends of the gunwales were brought closer together as each thwart was added, working fore and aft from the cockpit. The framework at this stage roughly resembled a ladder, with the thwarts corresponding to the position of the rungs. The ends of the gunwales were pegged or lashed directly together in some districts and fastened to bow and stern pieces in others.

The partially completed framework was then turned upside down and the ends of "U" shaped bent frames were inserted into holes drilled along the bottom of each gunwale, starting in the middle and working toward bow and stern. From three to eleven longitudinal stringers were lashed to the outer surface of the frames. Most eastern kayaks had only three stringers, resulting in a hard-chine hull section, with V or flat bottom. Western kayaks usually had from five to eleven stringers, resulting in a multi-chine hull section. The central stringer served as a keelson, and was usually larger than the others.

In addition to the bottom stringers, there was usually a single stringer in the center of the deck. West Greenland kayaks had two stringers of partial length arranged side-by-side fore and aft of the cockpit. The cockpit hoop was an integral part of the framework in Alaskan kayaks, but elsewhere the hoop "floated", i.e., was attached to the skin only.

From two to six sealskins were usually required to cover a kayak, although some of the three-hole baidar-



GREENLAND



EASTERN CANADA



CARIBOU ESKIMO



MACKENZIE

HEATH

kas of southern Alaska required as many as twelve. The skins were sewn together with a double "blind stitch" seam, in which the stitching holes did not penetrate the outer surface, to prevent leakage.

The skins were stretched over the framework while wet and joined by a seam down the center of the deck. The cockpit hoop was then attached by pulling the skin up inside and lacing or pegging it to the hoop. In Alaska, the skin was brought over the hoop and down inside, thus covering the hoop. The wet kayak skin tightened as it dried and eventually became as taut as a drumhead.

The final touches consisted of adding deck thongs to hold the hunting implements and (in some districts) bang-plates of bone at bow and stern to protect the skin. Deck thong arrangements generally consisted of adjustable transverse thongs immediately forward and aft of the cockpit and fixed loops nearer the bow and stern. The adjustable thongs had one end fixed through a hole in one gunwale. The other end was pulled through a hole in the opposite gunwale and tied to one of the bent frames. It could be adjusted from inside by slackening or tightening. Implement holders of bone or antler were threaded on these deck thongs.

The skin was finally rubbed thoroughly with boiled seal oil to make it watertight and the kayak was then ready for use.

Types of Kayaks

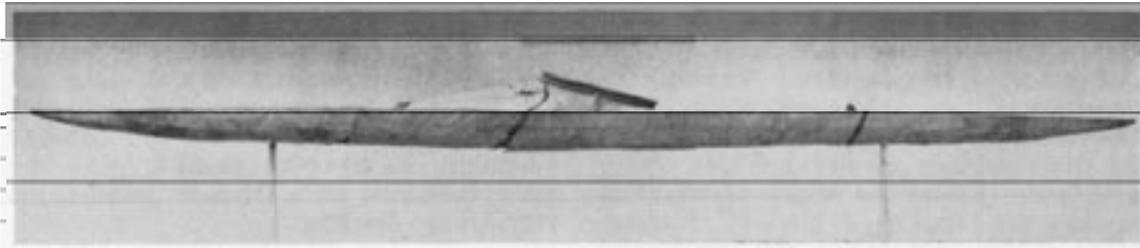
All traditional kayaks had many features in common. The gunwales were always the strongest members of the framework; transverse frames had longitudinal stringers attached, etc.

Despite these points of similarity, kayaks differed radically in form. Different quarry and water conditions required different hull forms and dimensions. Thus kayaks intended for river or fjord duty were long and narrow because they often had to be paddled against the current for long periods of time. Sea kayaks had to be stronger and more maneuverable.

Only the major kayak classifications can be discussed here, in geographical order from east to west.

Greenland

The Greenland kayak is the general type found south and east of Melville Bay. It was apparently the first type of kayak seen by white men and most Europeans have it in mind when they say "Eskimo kayak." There are a number of different types, ranging from about 16 to 20 feet in length and 18 to 22 inches in beam, with a hull section ranging from a V to a flat bottom. The weight ranged from 30 to 50 pounds. The Greenland kayak has simple lines and intrinsic beauty. When properly fitted it holds a paddler in position better than any other kayak and thus makes rolling comparatively easy.



An Arctic Alaska type of kayak: the author nominates this design for recreational use. Length: 19'; beam, 18"; wt., 32 lbs. —Photo by the Smithsonian Institution

Canadian Kayaks

Canadian kayaks may be classified in three broad categories—those of eastern Canada, the Barren Grounds, and the Mackenzie Delta. The eastern types are from 18 to 27 feet long and from 22 to 28 inches in beam, with a hull section having a broad flat bottom and a knuckle along the sides, giving a rounded effect. The weight ranges from 40 to 110 pounds. The profile tapers from a deep forefoot to a very low stern. They are found from Ponds Inlet, Baffin Island to the tip of the Melville Peninsula and throughout Labrador, varying according to district. The Labrador types have very long (about 5 feet) stems. The eastern Canada type of kayak was adopted by the Polar Eskimos of the Thule district of Greenland during the 1860's, after their own knowledge of kayak building had been forgotten through centuries of isolation.

The kayaks of the Barren Grounds and vicinity, in a zone extending from Hudson's Bay westward to Dolphin and Union Strait, have the reputation of being the tippiest of all. They range from 18 feet to more than 28 feet in length and 15 to 19 inches in beam, with a multi-chine hull section. The weight ranges from 25 to 40 pounds. The cockpit hoop is raked sharply aft. The deck rises abruptly immediately forward of the cockpit to meet the high forward edge of the cockpit hoop. The kayaks of the Caribou Eskimos, an inland group found in this district, are distinguished by a stinger-like upturned projection at the stern and a similar horizontal projection at the bow. These add to the length—one specimen measured 28', 3".

The Mackenzie kayak is found at the mouth of the Anderson River and the

Mackenzie River, in northwestern Canada. When viewed in profile it has a distinctive "banana" shape, because of its symmetrical bow and stern. A short, upturned projection is usually present at both bow and stern. Length ranges from 14 to 18 feet and the beam ranges from 18 to 22 inches. The weight runs from 30 to 40 pounds, and the hull section is of the multi-chine type.

Alaskan Kayaks

The Alaskan kayaks may also be divided into three categories—those of arctic Alaska, those of the Bering Sea, and those of southern Alaska. Those of the arctic coast are usually from 16 to 20 feet long, 18 to 20 inches beam and from 30 to 40 pounds weight. The cockpit hoop is strongly raked aft, and the deck has a humped appearance forward of the cockpit. This increases the leg room. The hull section is of the multi-chine type.

Kayaks of the Alaska side of the Bering Sea are often distinguished by the presence of handholds at the bow and stern. The bow handhold ranges from a small elliptical finger hole to a large circular hole. At the stern it is a projecting grip designed to be grasped like a handlebar grip on a bicycle. The handhold is for towing the kayak on a small sled when it becomes necessary to portage across ice floes. The sled is then placed on the afterdeck of the kayak until needed again.

Bering Sea kayaks range from 14 to 17 feet in length, 24 to 32 inches in beam, and 35 to 50 pounds in weight. The cockpit hoop is level and the deck has a high ridge its full length. The hull section is of the multi-chine type.

Bristol Bay is the dividing line between the Bering Sea kayaks and those

of the southern coast and offshore islands, including Kodiak Island and the Aleutians. The southern kayaks, or "baidarkas" as they are more often called, are distinguished from all others by their bifid bows divided into upper and lower parts, the upper of which is always the broader. A cursory examination might lead one to the conclusion that this was a primitive feature. It is, in fact, a rather ingenious means of approximating flared section in a skin-covered craft. The sealskin cannot follow a concave curve, as can a stiff material. Making the bow in two parts—the upper part the wider—achieves much the same effect as flare.

Another distinctive characteristic of some baidarkas was that they were the only aboriginal kayaks with two cockpits. Russian influence introduced the three-hole baidarka to southern Alaska, because two paddlers were required to propel an idle passenger efficiently. Russian influence introduced both the two- and three-hole kayaks to the Eskimos of the Bering Sea, the two-hole version having been previously unknown north of Bristol Bay. The two-hole baidarka was developed for certain specialized forms of hunting (whaling and sea otter hunting) and the one-hole baidarka was used for catching seals and sea lions. Baidarkas varied according to district. Thus the length ranged from 14 feet to perhaps 30 and the beam from 17 to 39 inches, depending upon the district of origin and the number of cockpits. Weights ranged from 30 pounds upward. The hull section was of the multi-chine type with a decided V-bottom.

Siberian Kayaks

Eskimos were essentially a Western race, but a small group lived at East Cape, Siberia. The Chuckchi and Koryak people of Siberia had a material culture similar to that of the Eskimo. The use of the kayak was very limited among Siberian Eskimos and Chuckchis, but the Koryaks used it to some extent.

The Koryak kayak was from 8 to 10 feet long and 25 to 30 inches in beam. The hull section was V-bottomed. The general appearance was that of a modern duck boat. An unusual feature

was the use of two very short paddles on some of these kayaks, one paddle being held in each hand and used alternately. A lanyard was tied from the handle of each paddle to the cockpit coaming, to prevent paddle loss—the only instance of a tied-in paddle on traditional kayaks.

Paddles

One of the first questions which recreational paddlers ask about traditional paddles is "Why are they so narrow?". There are several reasons, none of which has anything to do with a shortage of wood, as is often believed. First of all, a narrow paddle is easier to make. It is less likely to split or break in service, and it doesn't offer much wind resistance in paddling. Stalking is easier when a narrow paddle is used, because the moving blades are less likely to be seen or heard by the game. A narrow paddle is less likely to be wrenched from the paddler's hands in rough seas.

It is true that a narrow blade slips more than a wide one during acceleration strokes, but compensation can be made by taking deeper, longer, or more rapid strokes. Short, wide spoon blades grip the water so well that a sudden powerful stroke can result in strained muscles. This is unlikely with a narrow paddle.

Eastern paddles were often tipped and edged in bone to prevent splitting. Some had hand grips carved in the loom. Drip-rings of skin, baleen, and bone were found on some eastern paddles. Another type of drip-ring was carved into the loom.

Western double-bladed paddles were usually wider than those of the eastern arctic. Single-bladed paddles were also used from the Anderson and Mackenzie Rivers westward. Greenland paddles were from 2 to 4 inches wide and 6 to 8 feet in length. Those of eastern Canada were from 2 to 4 inches wide and 9 to 12 feet long. The paddles of the Anderson and Mackenzie Rivers and westward, including Alaska, usually were from 3 to 6 inches wide and from 7 to 9 feet long.

The traditional loom usually has an elliptical rather than a circular section, the widest section being at right angles

to the blades. This gives the most strength in the direction of the greatest load and therefore provides a higher strength/weight ratio than a paddle with a round loom. And the attitude of the blades can be determined through feel alone—a big aid in rolling or even ordinary paddling.

Paddling Techniques

The most spectacular contribution made by traditional paddlers was the development of the kayak roll. It reached its highest development in Greenland. The Pawlata was copied from the standard Greenland roll, a difference being that in Greenland the paddle is held blade-on-edge alongside the gunwale rather than on the deck. Greenlanders have so many methods of rolling that space does not permit a full discussion, but in addition to the standard roll they can roll by leaning backward, holding the paddle under the kayak, behind the neck, with one end of the paddle in their teeth, against the deck, without a paddle, by using the throwing stick, or even with the hand alone.

The Bering Sea Eskimos were also good rollers and they could roll even their wide-beamed kayaks by sliding down inside so that only the hands and paddle stuck out. When the roll was completed they sat up and dumped out the water by taking up the slack of their long waterproof jackets. The sculling paddle-brace was also highly developed. It enabled a paddler to lean into a wave when crossing a beam sea, thus preventing a possible wrenched back from the force of tons of green water falling from above.

Rescue Techniques

Two common rescue techniques were used to save capsized paddlers who, for whatever reason, were unable to roll up. One was placing the bow of the rescuer's kayak within reach of the capsized paddler's hand, so that he could pull himself up.

The other I call the "paddle-grab" method. The rescuer paddles alongside the overturned kayak until the two are parallel and about 2 feet apart. He lays a paddle across both kayaks, one end on the deck of his own and the other

on the bottom of the capsized kayak. The rescuer holds the paddle with one hand and reaches under the water with the other to grab the capsized man's arm. Then he pulls the other man up between the kayaks, the capsized craft rolling under the paddle that bridges the two craft. The advantage of this method is that it allows an unconscious man to be rescued.

A Comparison of Prowess

It is difficult to make an objective comparison of the various paddlers, because each excelled in a different way. The Greenlanders were the best rollers and the Aleuts were the best navigators. Both were excellent seamen. The King Island, Alaska, Eskimos were excellent rollers and specialists at embarking under rough water conditions.

Credit is due the Caribou Eskimos of Canada in the matter of balance. Their kayaks were as narrow as 15 inches, with an unstable hull section as well. Merely remaining upright while lancing a swimming caribou required a special type of skill.

Few recreational paddlers ever reach good traditional standards, and perhaps none will ever achieve the skill of the best paddlers of a century or more ago,

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simply because the opportunity of daily practice from childhood is almost nil. There are still good traditional kayak men in the remote districts, but their number is declining under the advance of a different way of life.

Kayaks for Recreation

A few traditional kayaks have been brought back from the arctic and used as recreational craft or "character" boats, but repairs are difficult, due to the special sewing technique used on the seams. Hog lard or other substitutes may be used to grease the skin when boiled seal oil is unobtainable, but the skin must be allowed to dry thoroughly after using or it will rot.

Some so-called Eskimo kayaks have been manufactured, but most of them bear only a superficial resemblance to any Eskimo craft. The writer believes that replicas of traditional kayaks, authentic except for skin, could supplement existing recreational kayaks with craft which would not change with the whims of fashion, thus reminding an owner that he, not the kayak, should be improved.

The Greenland kayak has been the style most often chosen for recreational use. It is beautiful to behold and a joy to roll, but it has deficiencies as well as merits. It should not be used on rivers because of its hull form and tight-fitting cockpit. Its low freeboard necessitates the use of some type of spray cover at all times. This can be uncomfortable on hot days.

The writer would like to nominate the type of kayak used in Arctic Alaska as a good recreational form. These could be used on rivers or sea, and it would not require a spray cover except in rough water. The raised foredeck facilitates entry and exit and contributes to leg room. Personal experience with a replica has proven that the raised foredeck does not interfere with ordinary paddling, due to the ridged deck section.

Lessons to be Learned

Regardless of whether recreational paddlers will accept a "pure" form, important lessons are to be learned from traditional kayaks. The most important is to have a cockpit that

seals effectively—a weak point in contemporary design. The traditional way of doing this is simple. The cockpit hoop should be circular or oval and the periphery of the hoop should be straight, i.e., in a single plane—never warped to match deck curvature. If the sealing ring does not lie in a single plane it violates fundamental laws of nature and will tend to leak where it changes direction.

Recreational cockpits tend to be too long and too narrow. There is no need to compromise a kayak to the point that it has the disadvantage of an open canoe. Eskimo paddlers always have their knees beyond the deck thwart immediately forward of the cockpit. This is done even in the large circular Bering Sea cockpits, by sitting forward. The contact points should be the hips and just behind the knee caps. It is not necessary to pinch the pelvis with side boards if the kayak is fitted properly.

Reasonably narrow paddles with oval looms would eliminate the need for feathering the blades, and would result in fewer broken paddles. Narrow, easily driven kayaks would be ideally matched with the narrow paddles and would make upstream paddling possible and open water paddling pleasurable.

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In rescue, especially at sea or in lakes, the kayak should never be abandoned and need not be if all members of a group know Eskimo rescue methods. Cold water quickly saps the strength of even expert swimmers, and the time spent in practicing climbing back in a kayak would be far better spent in Eskimo rescue practice.

The "two holer" baidarka of southern Alaska has features which would improve recreational kayaks. The separate cockpits of aboriginal two-seated kayaks were usually spaced a third or more of the overall length apart. This resulted in better control, reduced the possibility of clashing paddles and improved the stern field of vision. It also placed the point of maximum beam well forward of the rear cockpit, thereby allowing more room for paddle

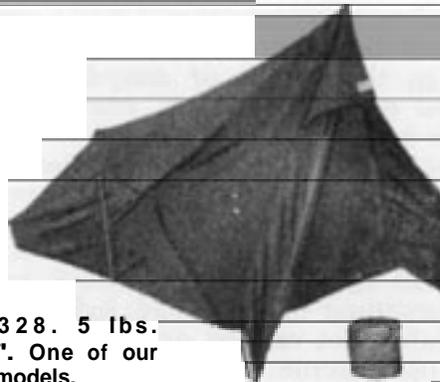
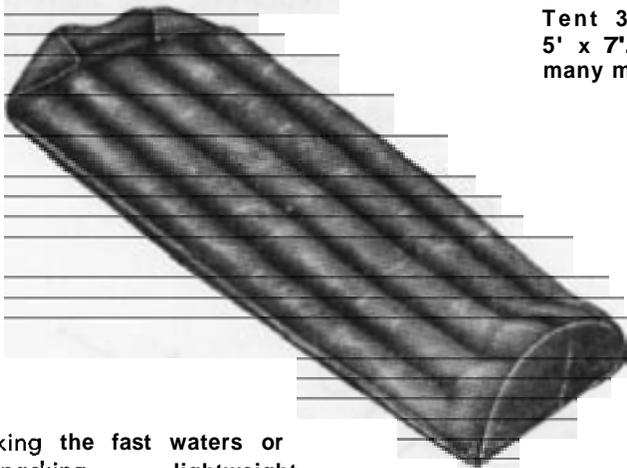
work by the steersman. The incorporation of traditional design features could make the two seater kayak as popular among expert paddlers as the two man canoe.

The writer has been interested in traditional kayaks since the 1930's, and began a comprehensive study of them in 1955. The study includes the construction of full scale replicas of the various types of kayaks for recreational use and performance evaluation. The replicas are authentic except for the skin, and a paddle of the appropriate style is made for each kayak. Although the main purposes of the study are to classify all traditional kayaks according to provenience and construction, it is hoped that all facets of traditional kayaking can be explored for whatever value they hold for the recreational paddler.

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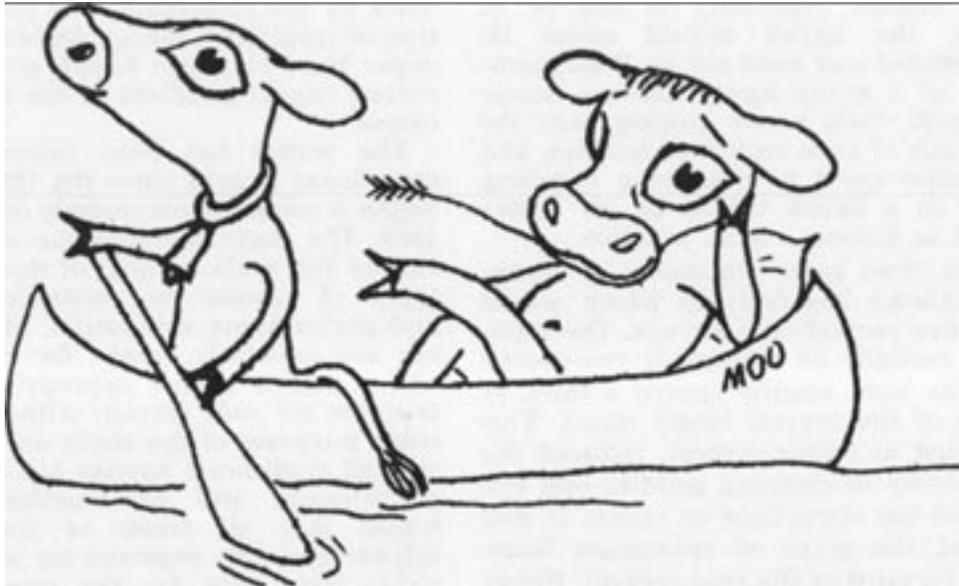
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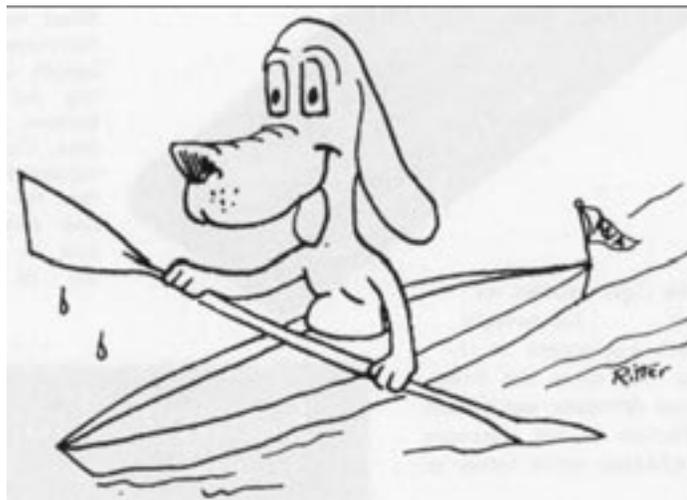
Some Ideas on Diet

By Clyde Jones

In these days of dehydrated foods, low calorie diets, etc. one wonders if we boaters could not use some of these foods to advantage. But, instead of the usual things that manufacturers are trying to sell such as low calorie diets, we want a high calorie diet. Also instead of those expensive foods we want something that is cheap, light and preferably not canned or refrigerated. We must assume from the start that our diets will not taste like T-bone steaks — unless we eat T-bones.

There are two immediate solutions for our specifications. The first is a calf milk replacer, which can only be found in feed stores. It is claimed that milk is the most perfect food, and therefore the first feed a farmer gives a calf must be as good as milk.

Let us look at the label of one of these milk replacers. The ingredients include: dried skimmed milk, hydrogenated sardine oil, wheat second flour, dextrose, soybean flour, dried whole whey, vitamin B₁₂, antibiotic feed sup-



plement, Vitamin A feeding oil, D-activated plant sterol, riboflavin, choline chloride, niacin, calcium pantothenate, tricalcium phosphate, 0.5% iodized salt, and traces of iron oxide, manganese sulfate, copper oxide, cobalt carbonate and zinc oxide . . . This feed contains 25% protein, 2.5% fat, and not more than 12% moisture.

Therefore by inspection we see that here is a well-balanced food. We should then taste-test this food . . . It is somewhat sweet, but with enough water it goes down easily.

If we compare this food with the so-called Low Calorie foods, we see that about 1.3 lbs. of milk replacer is equal to 1 lb. of Low Calorie food (in calories). The ingredient lists are almost the same. Let us add a word of caution here. One pound of milk replacer furnishes about 1,500 calories. And although a person is supposed to be able

to live on 1/2 lb. of these Low Calorie diets, an active boater needs at least 3,000 calories instead of 900. Therefore if a boater were to take along a 25-lb. bag of milk replacer (\$5) it would last him for about two weeks . . . As this food is dehydrated one does not carry water. It would be wise to package it into daily portions to prevent loss or wetting.

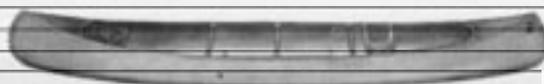
Another possible food for us is the new types of expanded dried dog foods. These are made up of dried meat scraps and soybean meal mostly. This food is light and crushy and easy to chew. One should take care that he gets the correct kind. The best ones are light brown in color and about the size of a fair sized marble. One could use these as a complement to the milk replacer diet or use just the dog food itself.

Woof, woof, let's stop for lunch . . .



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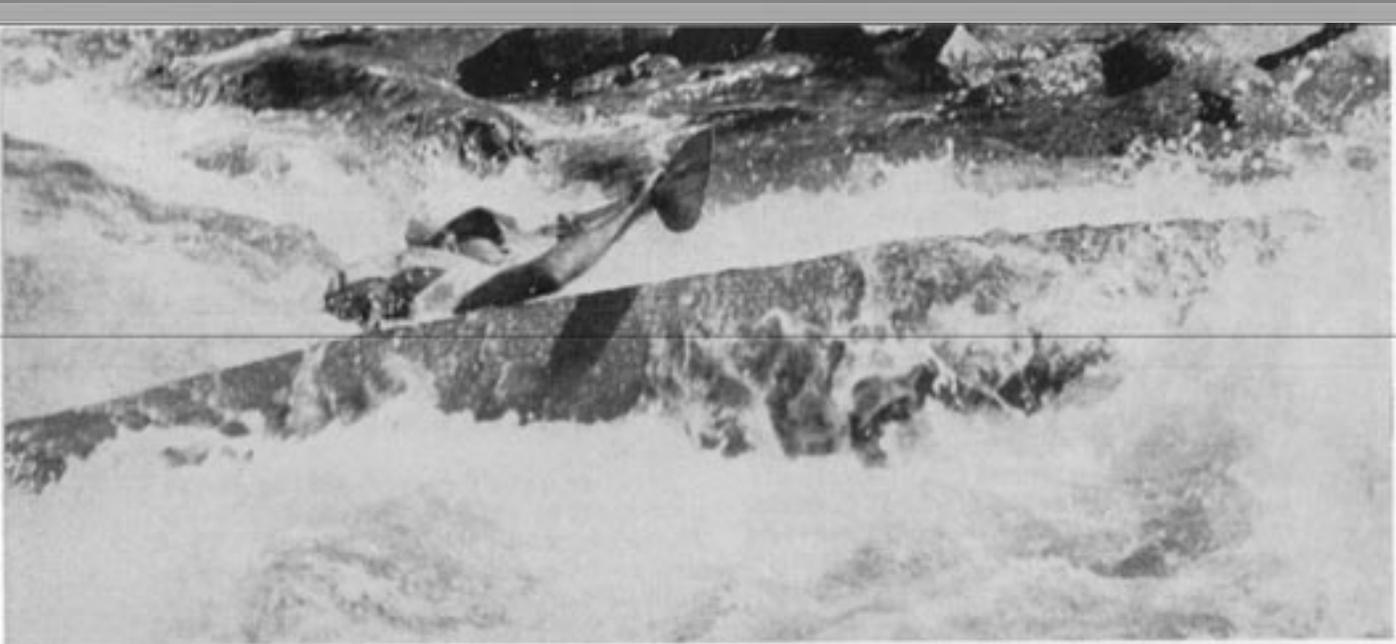
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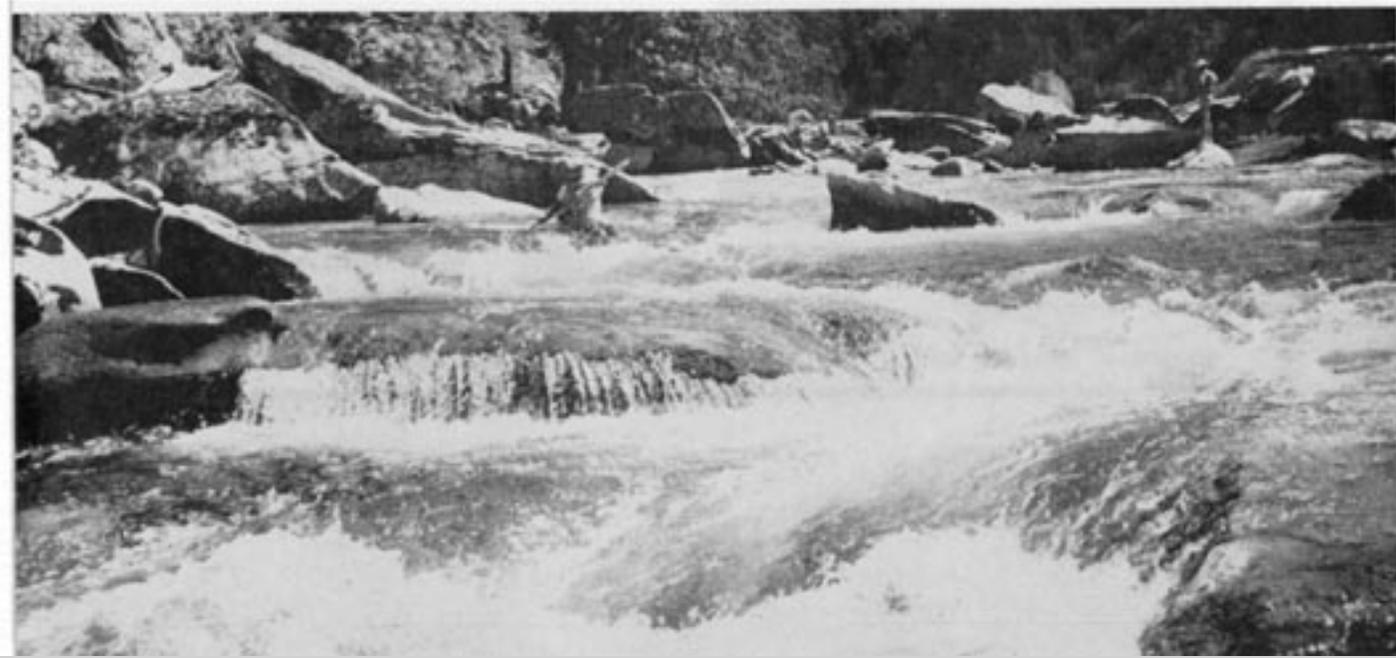
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Ernie Svaton missed with his brace.



Above: Louise and Ruth go over Double Falls. Below: Ernest in Goat Creek Rapid.



The Glory of The Selway

By PETER D. WHITNEY

Your editor has gone along on Oz Hawksley's AWA Summer Trips from their beginnings in 1959. In fact, he and spouse are the only persons, aside from the Hawksley party, who have such an unbroken record.

In many ways this year's trip was the greatest. We took Selway No. 2, through the magnificent cedar and ponderosa forests of the Selway-Bitterroot wilderness, a trip pioneered on a scouting basis by Oz and a small group last year. Like other trips we'd been on, it runs a branch of the Clearwater River of Idaho, next Snake tributary downstream from the Salmon.

Before it all began, when we arrived at the lower Selway rendezvous, the passengers from Trip No. 1 had just scrambled off the rafts. Many were friends from last year's North Fork Clearwater cruise, and they had an odd look on their sunburned faces. A certain embarrassment, we thought, a vague pre-execution compassion, clouded their smiles.

Finally, one of them came out with it: "You're going to have one hell of a rough trip."

"Twice as tough as the North Fork!" said a veteran of that doozy.

"The rapids are just as sharp, and they go on for hundreds of yards," said another.

And their estimates of the amount of time your Editor would be spending in, rather than on, the water were proportionately high.

And then they told us—a legendary white water situation had truly come to pass. A canoe had started the cruise, but had had to be sawed in three and flown out of the canyon. Its paddlers had been exhausted by one tipover too many and daunted by the rain. Moreover, a raft had been plastered on a rock and a canned ham lost to the river.

Naturally, this story had the same effect on ourself and on the other



A sharp pitch.



Oz with Wanda Bradley, Barbara Bachenheimer



Louise and Ruth hung up, but wriggled free.

small-boat men that Dr. Johnson diagnosed in the criminal facing execution on the morrow: it concentrated the mind incomparably.

When, crossing the mountain range, we met our old friends and fellow-Appies from New York, Louise Davis and Ruth Walker, we re-enacted the whole thing from the other, or tormentor's, point of view. We weren't going to miss that lugubrious pleasure, on the eve of the ordeal; why should Louise and Ruth, for that matter, go innocent to the place of execution?

So it was a jumpy bunch of paddlers who limbered up at Paradise Campground the following day: John Bombay, Dick Bachenheimer, Ernest Svaton and Peter Whitney of the Sierra Club in kayaks; Ruth and Louise of the AMC-NY in a shoe-keeled, spraydecked seventeen-foot Grumman. Four rafts carried the other voyageurs and the luggage. In all, 23 persons (including one girl of 2%) were on the manifest.

Well, there's no doubt that we found the river challenging; it was more difficult, in places, than the Clearwater.

We had to portage or line two rapids for difficulty, three to five for lack of water. A certain number of dignified tipovers were observed, and they were democratically spread out.

On the credit side, we found The Ham that Trip No. 1 had lost, and with due gratitude to our predecessors, we devoured it. The rapid where it had spent 8 days was rechristened from "Lost Ham" to "Ham Regained."

In short, it was a glorious white-water week amid scenery completely unspoiled. There are two fly-in resorts; a horse trail parallels the river; an occasional pack train passes on it; one other party of fishermen were descending the river on two-man rafts at the same time we were. Otherwise, we had the country to ourselves.

It is country worth saving, in the current fight to prevent the Selway-Bitterroot Primitive Area from being truncated as it's turned into a Wilderness Area. The latest indications are that the fight will have to be carried to the Secretary of Agriculture, Orville Freeman.

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



The "Marlboro Man" Courtesy Universal Pictures

This classy Single has been designed especially for the American White Water and built with German craftsmanship and quality. The pronounced rocker, insuring high maneuverability, and the exceptional stability make the "Champion" the ideal single seater in which to enjoy the thrills of fold-boating.

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RACING REPORT

By George Siposs

Hudson River Whitewater Derby and Giant Slalom

This year's Hudson River races were the most successful ever. Eighty-eight boats competed, while splendid weather and water conditions all contributed to a weekend of whitewater fun. Noticeable was the presence of a large number of recreational canoes from the Adirondack Region. Most of these were equipped with spray covers and quite a few finished "in the money" this year, indicating that our sport is fast gaining popularity in part of the country.

The giant slalom course consisted of 12 gates for the beginners plus six more for the experts. The water was higher than we have ever seen it, so that all waves were class III. After the slalom race most competitors formed a friendly group and floated down the river for 4 miles to North Creek.

Sunday morning a great throng of spectators, sheriff's wagons, and competitors converged for the start of the famous Derby. Since there were no rocks to watch for, everyone gave his best so that records were broken left and right. For the first time the magic "hour" mark was broken and by several competitors at that. After a tough fight, Dick Schaner churned his way to victory, just edging out Paul Bruhin. Yours truly came in third, in the overall classification.

Mrs. Dick Schaner, the petite speedster, led the ladies with a fantastic time of 1 hour 1 min. 38 sec. Rosalie and Bob Field came home first in the C-2M class. John Muhlenberg and Ferdinand Thun of the Buck Ridge Ski Club won their class, canoe doubles.

Here are the detailed results:

Hudson River Giant Slalom

May 13, 14

Experts

C-2

- | | |
|------------------------------|-------|
| 1. Bickham-Heinzerling | 8:59 |
| 2. McRoberts-Walker | 9:11 |
| 3. Hunt-Hunt | 9:56 |
| 4. Shipley-Shipley | 10:06 |

F-1

- | | |
|--------------------------|------|
| 1. Paul Bruhin | 7:05 |
| 2. Richard Schaner | 7:12 |
| 3. William Prime | 8:07 |

R-1

- | | |
|---------------------|------|
| George Siposs | 7:42 |
|---------------------|------|

C-2 M

- | | |
|---------------------------|-------|
| Rosalie & Bob Field | 10:25 |
|---------------------------|-------|

F-2

- | | |
|-------------------|-------|
| Weiss-Weiss | 14:31 |
|-------------------|-------|

Whitewater Derby

C-2 Mixed

- | | |
|------------------------------------|---------|
| 1. Rosalie and Bob Field | 1.04:59 |
| 2. Clemence and Eddie Demers | 1.06:35 |
| 3. Mattie and Bill Baker | 1.06:41 |

C-2

- | | |
|--------------------------|---------|
| 1. Muhlenberg-Thun | 1.00:51 |
| 2. Shipley-Shipley | 1.01:03 |
| 3. Rugge-Rugge | 1.02:20 |

F-1 Women

- | | |
|---------------------------|---------|
| 1. Brigitte Schaner | 1.01:38 |
| 2. Miriam Alexander | 1.16:32 |

F-1 Men

- | | |
|---|-------|
| 1. Dick Schaner | 54:35 |
| (Fastest time of day and course record) | |
| 2. Paul Bruhin | 55:21 |
| 3. Bill Prime | 57:08 |

R-1

- | | |
|---------------------|-------|
| George Siposs | 56:29 |
|---------------------|-------|

R-2

- | | |
|-----------------------|---------|
| Allard-Sullivan | 1.02:06 |
|-----------------------|---------|

F-2

- | | |
|-----------------------------|---------|
| 1. Gosse-Blank | 59:46 |
| 2. Fellehner-Erlinger | 1.02:07 |
| 3. Isachsen-Isachsen | 1.03:32 |

F-2 Mixed

- | | |
|-------------------|---------|
| Weiss-Weiss | 1.06:40 |
|-------------------|---------|

C-1

- | | |
|--------------------------|---------|
| 1. D. W. Brightman | 1.07:35 |
| 2. W. G. Holt | 1.15:30 |
| 3. L. G. Wilke | 1.20:45 |

Brandywine Slaloms

Wilmington, Del., April 15-16

Bob McNair writes: "As always the area was overrun with friendly canoers trying to watch and talk at the same time . . . Boaters picnicked on the ledges and boulders . . . there was opportunity to study new ideas in equipment, new boats, new ways to make splash covers, new tricks to brace the legs.



Phil Hugill-Barbara Wright at Solida.
—Photo by Wolfgang Lert

"Techniques were greatly improved over previous years. For the first time there were teen-age paddlers doing well. . . some were sons of white-water families, others were members of Dave Kurtz's Explorer Group from State College, Pa. At last it has been shown that youngsters can handle white water if they have the right training."

Results:

F-1

1. Paul Bruhin 2. Bob Harrigan
3. Ken Wisner

C-1

1. Bill Bickham 2. Phil Hugill
3. Southworth

C-2

1. Harrigan-Berry
2. Bruhin-Heinzerling
3. Bickham-Newell

C-2 mixed

1. Bridge-Showacre
2. McNair-McNair
3. D. Bridge-Reidel

Potomac River Whitewater Race

While this race was dominated by a great preponderance of C-2's the best time of the day was turned in by Dick Schaner of Cleveland, Ohio, in F-1. Olympic stars Frank and Bill Havens, who maintained their high kneeling position throughout the 7.5 mile race, won the C-2 class. Remarkable time was also recorded by Barbara Wright and Phil Hugill of CCA (they won the Eastern Slalom in April) whose C-2 Mixed time was better than three fourths of the men's C-2. There were 57 boats competing. Results are as follows:

Potomac River Whitewater Race

May 7

C-2

1. Frank & Bill Havens 1.06:47
2. Bob Harrigan & John Berry 1.08:04
3. Dave & John Bridge 1.13:23
4. Atkinson & Meadows 1.13:42

C-1

1. George Small 1.28:30
2. Lex Anderson 1.31:45
3. Don Peoples 1.34:33

C-2 Mixed

1. Philip Hugill & Barbara Wright 1.16:01
2. Earl & Shirley Mosburg 1.26:12
3. Arnold Mason & Helen Foster 1.31:35

F-1

1. Richard Schaner 1.02:06
(Best time in race.)
2. Ernest Heincke 1.17:48
3. Lou Robbins 1.20:40

R-1

1. Peter Reilly 1.14:34
2. Ferenc Albert 1.14:38
3. David Woolley 1.31:07

F-2

1. Andy Bond & Ted Fletcher 1.16:35
2. Gordon Gray & J. P. Demombynes 1.18:35
3. Edmund P. & M. P. Schiemer 1.27:55

Not in Class — C-4

1. Dick Bridge, Elliott, Sundstron & Topping 1.25:45

Third Western Canadian Slalom and Downriver Races

This race had an international flavor since the host club, the British Columbia Canoe and Kayak Club members, were competing against the guests, the Washington Foldboat Club. The organizers headed by Vern Rupp did a very

2 NEW White Water Boats by KLEPPER



1: KLEPPER "QUIRL" —for White Water down-river . . . Weight: 44 lbs. (20 kg); length: 15 ft. (450 cm); width: **25-1/5"** (63 cm) . . . Comparable model: Klepper Folding "T-67".

2. KLEPPER "SL-61" —for White Water Slalom . . . Weight: 42 lbs. (19 kg); length: 13 ft. 9" (408 cm); width: 24" (60 cm) . . . Comparable model: Klepper Folding "Slalom 59".

Both boats have been designed by recognized experts—White Water champions of Europe. Quality built by Klepper craftsmen to international racing specifications, they provide supreme performance and utmost strength. With sleek styling and beautiful finish they're as smart as they are rugged. Select "Quirl" or "SL-61"—you'll find it your finest kayak.

MATERIALS . . . Hull: 2 matts (300 $\frac{g}{qm}$) plus 1 layer fabric fibreglass (450 $\frac{g}{qm}$). Deck: 2 matts (300 $\frac{g}{qm}$). Binding Agent: Polyester-resin by Farben Fabriken Bayer, A.G., Leverkusen, Germany.

COLORS . . . Hull: Swissair-blue; deck: golden-yellow.

STANDARD EQUIPMENT . . . Seat and Backrest: molded fibreglass. Hipboards: Finnish plywood. Footrest: Fibreglass and Finnish plywood; adjustable. Kneebraces: molded fibreglass; **foam-**rubber-covered. Flotation: Styrofoam in bow and stern.

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good job of setting up the course. A local television station covered the race so that the general public had a perfect view "from the armchair."

The Hudson Bay Company's Rose Bowl was awarded to Vern Rupp for his combined results (third in slalom, fourth in Downriver). There was a private duel between two ladies. Liz Wheelright of W.F.C. took the slalom while Lucie Luede of B.C.K.C.C. won the downriver race. Results are as follows:

**May 13, 14
Chilliwack River
Slalom**

F-1 Expert

Place, Name & Club	Points
1. Herbert Flatow, W.F.C.	288
2. Gilbert Hartin, W.F.C.	304
3. Vern Rupp, B.C.K.C.C.	308
4. Martin Feichtinger	363

F-1 Ladies

1. Liz Wheelright, W.F.C.	371
2. Lucie Luede, B.C.K.C.C.	451

R-1 Expert

1. Lincoln Hales, W.F.C.	292
2. Peter Leech, W.F.C.	335

Down River Race

F-1 Ladies

Place, Name & Club	Time
1. Lucie Luede, B.C.K.C.C.	34:55
2. Liz Wheelright, W.F.C.	37:15
3. Susan Meredith, W.F.C.	43:30

F-1 Expert

1. Hubert Swartz, W.F.C.	33:25
2. Gerry Storch, B.C.K.C.C.	34:00
3. Toni Sobieralski, W.F.C.	34:06
4. Vern Rupp, B.C.K.C.C.	34:20

Clear Creek Slalom

30 mi. West of Denver, Colo. June 25

Dick Prideaux writes: "The Clear Creek Slalom races were one of the CWWA's outstanding events of the year. Classes C-1, C-2 and K-1 had 17 entries—with 7 upsets in the wild water. This looks like a future pacesetter . . .

Results:

K-1

1. Ron Bohlander	161.8
2. Don Sullivan	167.2
3. Ralph Brailsford	239.5

C-2

1. Richard Bridge-William Bickham	182.7
--	-------

2. Bob Worrell-Conrad Swensson	219.5
3. Phil Hugill-Barbara Wright	387.1

C-1

1. Bickham	217.1
2. Hugill	493.5
3. Bridge	563.7

National Downriver Race

Glenwood Springs, Colo., July 4

The race was run on the Roaring Fork at the low-water level. There were 16 entries.

Results:

K-1

1. Danny Makris	1:24:33.8
2. Ron Bohlander	1:25:47.0
3. Bob Waind	1:25:12

C-2

1. Bill Bickham-Phil Hugill	1:32:22.8
2. Richard Bridge-Barbara Wright	1:41:52.3

Pacific Invitational Slalom

Feather River

June 24-25

The Sierra Club's first venture into the sponsorship of major competition took place on a course that was proudly proclaimed as the hardest slalom ever set in the United States. Roger Paris, a former world champion in canoe, took the men's F-1 handily with no penalties on one run, while Dave Morrissey of Denver (our AWA Secretary) filched second place from the locals. First in ladies' F-1 was Jackie Paris, Roger's wife.

The section of river chosen is a small river bed filled bank-high with the output of two big powerhouses working full-tilt to light the rotisseries of California. The power company cooperated by giving exactly the level the River Touring Section asked for. Gates were hung over pulsing haystacks and holes that were difficult just to stay upright in; the problem gates were clustered in two pools where the jets hissed with malice at the almost equally swift counter-eddies. Tipovers were many.

Results:

F-1 MEN

1. Roger Paris	223
2. Dave Morrissey	312.5
3. Glenn Gaumer	358.8

F-1 WOMEN

1. Jacqueline Paris	420.4
2. Mary Ann Danielson	608.3
3. Elsa Bailey	693.8

**First Annual Root River Race
Sault Sainte Marie, Canada
April 16**

The Sault Sainte Marie Canoe & Kayak Club held its first annual down-river race at the Root River, a fast and high and crooked course of 1½ miles of strictly expert water. A misty day, snow on the banks, and cold water added to the excitement.

Results (all C-2)

1. Frank Gaudin & Ron Pratt 14:15
2. John & Lorne Pigeon 15:16
3. Lou Miklessen & Max Island 17:09

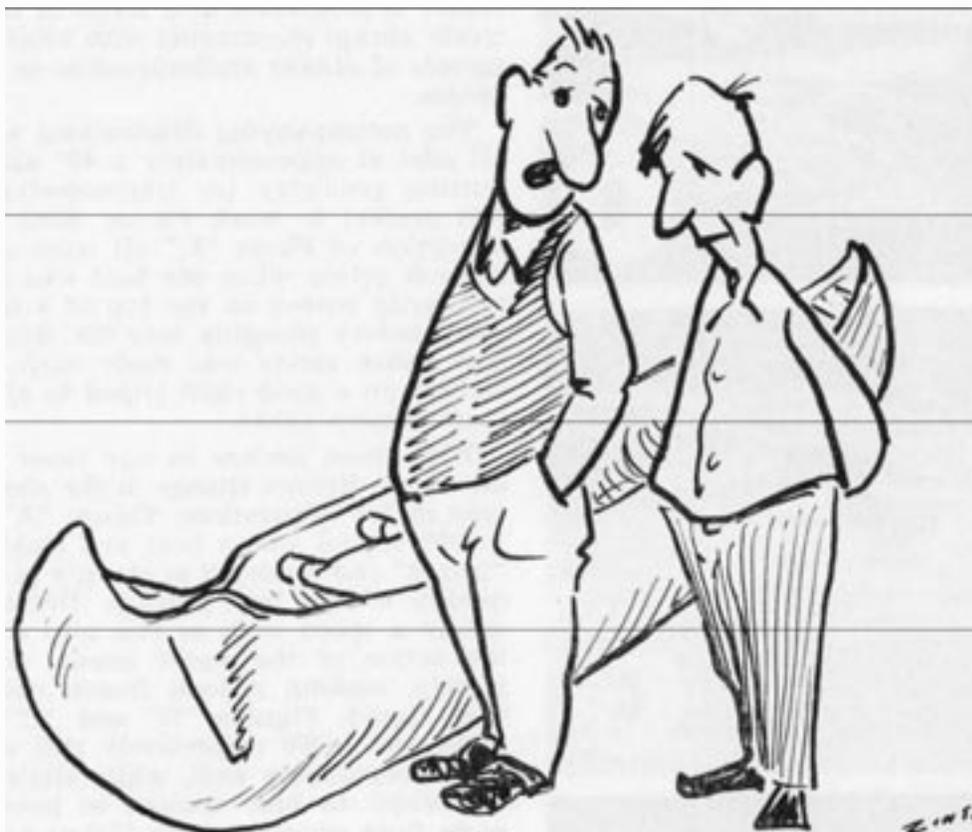
Why Join AWA? (2)

Have you never needed a river-touring companion? The way to assure safe yet venturesome river touring is to support North America's only continent-wide white-water organization.

PA. RIVER GUIDE

The Pittsburgh Council of the AYH has produced a useful and sophisticated (from the white-water point of view) guide to the rivers in the Allegheny-Ohio drainage. Available at \$1.00 to non-members of the AYH (free to members). Write to 6300 Fifth Avenue, Pittsburgh 32, Pa.

One minor criticism: the authors have devised a difficulty rating system of their own, of five stages, and somewhat proudly state that it "does not correspond to other systems." The grade differentiation at the front of the leaflet is less precise than the familiar International System of the Alliance Internationale de Tourisme. Even this latter has been hard enough to interpret in practice, so it's with a jaundiced eye that we look upon another, free-lance effort.
—P.D.W.



DAVE HAS A VERY STRONG PRYAWAY

White-Water Camera

By MARTIN VANDERVEEN

How fast do we have to shoot to stop action? Two points have to be considered before we can discuss; the basic question of shutter speeds. First, plane geometry indicates that a moving object takes nearly 50% longer to cross our field of view at a 45° angle than if it is traveling at a 90° angle. Hence if we shoot upstream or downstream at an angle we can get better action-stopping effect at the same shutter speed. Second, careful study of a canoe or kayak in white water will reveal that it does not travel at a uniform speed; rather it progresses in a series of relatively abrupt movements with brief intervals of almost motionlessness in between.

The accompanying illustrations were all shot at approximately a 45° angle, putting geometry (or trigonometry if you prefer) to work for us. With the exception of Photo "E," all were shot at peak action when the boat was momentarily poised on the top of a haystack before plunging into the trough. The entire series was made with the camera on a good rigid tripod to eliminate camera shake.

With these factors in our favor we can see a distinct change in the sharpness in the illustrations. Figure "A" at 1/1000 second shows boat and paddler "frozen" and rendered as sharply as the quality of the lens permits. Unfortunately a speed such as this also stops the action of the water almost completely, making it look frozen rather than liquid. Figures "B" and "C" at 1/500 and 1/400 respectively still stop action reasonably well, while allowing the water to blur enough to have a more fluid appearance. In "D" at 1/250 the boat remains sharp, but we begin to see a trace of blur in the head and the paddle blade. At 1/100 second, "E" is saved by the canoe being almost entirely motionless while being swamped

American WHITE WATER



in the haystack. Had it been moving normally it would have been fuzzy. "F" at 1/50 shows objectionable blurring, with the water beginning to assume a rather abstract appearance. "G" at 1/25 and "H" at 1/10 are included as horrible examples of what can happen to an otherwise good shot.

Don't Try to Pan

In some types of action photography it is possible for a skilled cameraman to "pan" with his subject, thus keeping the subject sharp while deliberately blurring the background to create the feeling of fast movement. This won't work in white water pictures, since the boat does not move either in a straight line or at a uniform speed. We have no choice but to use high shutter speeds to stop action. On a bright day, with the camera on a tripod and all conditions being ideal we can get by with 1/200 second. With a hand-held camera, or shooting a boat that is not at peak action, we must at least double this speed. All this, of course, assumes we are shooting from the shore. If we are shooting from a boat (which compounds the difficulties by imparting motion to the camera) we just set our shutter at its highest possible speed and hope for the best.

Before I am inundated with a flood of protests that color film is too slow to allow such shutter speeds, let me point out that there are many color films on the market with speeds of ASA 25, 32, 100, and 160. Some of the faster ones are worth a try. I won't be so brash as to state that any one is better than another — each has its advantages and its drawbacks, and the final choice is a compromise between personal taste and the exigencies of the situation. Black-and-white film creates no problems, as it is available in emulsion speeds running as high as four figures.

A final point to consider in studying the accompanying illustrations is that these prints are reproduced in contact size from the original negatives. When we contemplate enlargement we have



to consider that any blur will be magnified to the extent of the enlargement. In other words, small negatives call for even more care.



More on Automation

There have been a few inquiries about my comments on electric eye cameras in the February issue. No, I'm not "agin" progress. However, I do feel that in this particular case we have made limited gains at the cost of substantial sacrifices in other areas. The gain, of course, is in convenience; we simply aim and push the button. The loss is in picture quality and control. In the first place, many of the automatic cameras just don't have high enough shutter speeds to stop action in the situations in which we will be shooting.

The real weakness, however, is that they don't have a sense of judgment. The range of brightness in a white-water scene can be tremendous, and our film can capture only a fraction of this contrast. The automatic camera at its best can do no more than give us an

average exposure for the over-all illumination of the entire scene, and that average may and often will be entirely wrong for the illumination level of the principal subject in which we are interested.

The person who uses an exposure meter properly will get consistently better results than an electric eye can give him. The automatic camera's sole justification is that it's a convenient answer for the person who wants to take pictures but is too impatient to learn to use a meter and a manually operated camera. With flat lighting and a bit of luck it will give him better pictures than he can get with a box camera.

* * *

Ed. note: Van has moved. Send your photographic inquiries to him at his new address: 1514 Pratt Blvd., Chicago 26, Illinois.



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Safety as We See It

By JOHN BOMBAY
AWA Safety Chairman

With our white water sport expanding rapidly, we are now confronted with the need for a boatmanship classification program not only within our own clubs but nationwide. We now begin to join our neighbor clubs on their trips and some even go all the way from New York as far as the Rocky Mountains to participate on our Salmon and Selway trips. Soon it will be normal to see a couple from Chicago join the Sierra Club in the West for a thrilling trip down the Feather River Canyon.

But how will the Western club know how good a boater the Easterner is when he calls on them? Who is going to decide if a guest can safely participate in this trip? A good lifejacket is not going to help him much to negotiate a fourth class rapid if he is only a second class boater.

What is needed is a certified classification card given to this boater by his club, and this classification has to be uniform throughout our nation to be of any value.

With many of our clubs still in the growing stage, we still have time to resolve this problem; and we should do it now while it is still easy and does not require drastic measures within our clubs.

I propose to all our club members that we initiate a grading program based on the international scale for rivers. Thus, a class I boater is defined as one who can go on a class I river and so on up to class IV, which should fall in the highly skilled class (class V and VI should be run by teams of experts only).

Class I, II and III should be earned only after an appropriate test; class IV should be awarded only after the person not only has reached class III and shown his yet higher abilities on the river, but also has shown leadership abilities, strength, endurance, caution, superb water-reading qualities and concern and helpfulness for his co-

paddlers. In fact, it should be an honor class.

I know that some clubs are following different systems. Most notably, the New York Appies some time ago installed a four-grade system, and I had a chance to discuss how this works with Louise Davis and Ruth Walker on the Selway this summer. The Ontario Voyageurs have in turn based their four-grade system on the Appies, and like them they rate paddlers by committee rather than by tests, as we do in the San Francisco Sierra Club.

I would like to suggest that these existing four-grade systems be adjusted to the International grades I to IV, and that the V and VI grades—as far as paddlers are concerned—be considered exceptional or never be formally awarded. This would be a means of quickly getting into step.

The tests for classes I, II and III could be easily taken and could look as follows. (This is actually based on the Sierra Club R.T.S. tests):

BEGINNER'S TEST

Must be passed before paddling on moving water.

1. Get into and out of boat properly.
2. Paddle forward, backward, and simple turns.
3. Tip over deliberately and get out of boat (use spray sheet if owned).
4. Swim around boat, surface-dive to other side of boat and continue to swim for 5 minutes without support. (Red Cross intermediate test, or equivalent, acceptable.)
5. Recognize hand and paddle signals.
6. Know equipment needed.

INTERMEDIATE TEST

Must be passed before paddling Grade II river.

Still Water

1. Have boat and self properly equipped: boat flotation—minimum 1 cu. ft. (equivalent of 2 commercial fold-

boat bladders), preferably 1 cu. ft. each end; boat line 8' attached so that one end comes free only with a tug; repair kit; adequate life preserver; tennis shoes, and prescription glasses tied on securely.

2. Simple paddle brace.
3. Simple draw stroke.
4. Tip over deliberately and swim boat to shore.
5. Understand principle of ferrying.
6. Understand rescue procedures; stay with boat until rescuer appears or until it is easy to swim to shore; stay on upstream side of boat; do not turn boat over; keep legs high; obey instructions of rescuer.

Moving Water

7. Take off from shore and load properly.
8. Simple paddle brace (single kayaks only).
9. Up and downstream ferry in gently moving water.
10. Cross easy eddy line.

THIRD CLASS TEST

Must be passed before going on Grade III river.

1. Cross in and out of fairly strong eddy line (with assurance).
2. Paddle brace and draw stroke in rapids. (Modern technique strongly recommended.)
3. Up and downstream ferry in 2-3 mph current.
4. Utilize rock anchor eddy.
5. Find own way through Class II rapid.
6. Esquimautage strongly recommended.

One Class Upward—If

Boaters of one class lower than the river class should be allowed on a trip if they show promise, have two persons to support them, and have the approval of the trip leader.

The above may sound horrible to some of us; but let us bear in mind that with our sport so rapidly expanding, this classification may well save many a life in the near future and allow all of us to enjoy our trips better and safer. It should be understood that a competent boater is a safe boater, and a grading program does force some

to become competent boaters while otherwise they would always remain a drawback and hazard to their friends who might have to rescue them under dangerous conditions.

To help promote and instruct our new and existing members, I also suggest the following training program which should, if possible, be uniform and nationwide. The program could consist of:

1. A textbook (I propose Peter Whitney's book "White Water Sport.")
2. A good instructional movie.
3. Assistance by competent AWA leaders on instruction trips on moving water.
4. Test procedure and grading.
5. A training program outline and suggestions for the instructors.

Emphasis should be put on skill since skill comes first and makes the boater safer. An incompetent boater will kill himself regardless of all our safety equipment.

The film and the instruction on moving water should concentrate on the following:

1. Basic paddle strokes.
2. Basic paddle braces.
3. Basic water reading (class I through 3).
4. Esquimautage.
5. Rescue.
6. Equipment.
7. Social camping for attraction purposes.

I do hope that many among us will see the need of these programs and join in the effort to their realization. Thus we may achieve great progress in our members' skill and thereby their safety.

A reply on the above proposal from our member clubs' safety committees as well as individual replies are kindly requested. My address: 601 Oakland Ave., Oakland 11, California.

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Conservation

Comment

By DAN K. BRADLEY

AWA Conservation Chairman

More and more people in many parts of the country are becoming increasingly concerned over the critical problems of preserving the natural environment of our few remaining wild rivers. Our water-use agencies have been authorized separately as the need arose over the past century and a half: navigation, irrigation, municipal water supply, flood control, drainage, pollution control. Today there are 33 separate federal agencies scattered between at least three government departments, dealing with water management of one sort or another, each working independently of all the others, and sometimes at cross-purposes. In all this apparatus the preservation of wildlife, scenic beauty and recreational values count not at all — the intangible values are carefully overlooked by those concerned only with "economic progress."

Before we can appraise intangible values, however, it is necessary to develop scientific criteria by which to measure the value of a mountain wilderness or a wild-river watershed. Before we can develop a positive program, it is necessary to secure a comprehensive view of the problems faced in various areas of the country.

Heretofore when an exceptionally fine wild river area has been threatened, a few individuals and outdoor organizations have tried to stir up enough public opinion to save it. At best it is a defensive emergency operation, with a negative approach, and wasteful of all-too-limited human resources. Each is a separate operation, and most likely defenders in Virginia are unaware of

the efforts of others in Missouri or Montana. The problems faced and the methods for coping with them vary with each watershed. A forum is needed for the exchange of experience and ideas, for determining which watersheds should be protected, and for developing a positive program for their preservation before they are attacked.

This is the background for a proposal, strongly supported by a number of individual conservationists, for a wild-river preservation panel at the next North American Wildlife Conference. It seems to us an excellent idea, long overdue, which the AWA and its affiliates should support to their fullest capacity. And with our intimate and accumulating knowledge of wild river watersheds, we should have something of appreciable value to contribute. As John Craighead has remarked, the only way conservationists can get the jump on the Army Engineers and the Bureau of Reclamation is to make plans for recreational development of our waterways just as they do for power, irrigation and flood control. By determining which watersheds are of such high quality as to warrant preservation in their natural state, we can forewarn others of strong opposition to incompatible uses. With proper, far-sighted planning by *conservationists*, there should be less conflict.

Annual C & O Canal Hike

For reasons which could hardly have been anticipated, the eighth annual reunion and hike on the Chesapeake and Ohio Canal along the Potomac River probably received more publicity than



Secretary of Interior Udall as Bob Harrigan's bowman. —Photo by Bob Greene

any since Justice Douglas led the original hike of the full 185 miles. Held this year near Washington, the Friday night campout was graced by the presence of Interior Secretary Udall, of Paul Douglas of Illinois, one of the most distinguished ornaments of the U. S. Senate, and by a number of other VIPs. In the evening Bob Harrigan of the Canoe Cruisers showed the exciting movie of his trip in Dinosaur and of white-water competitions in Colorado and Ontario.

Saturday came up sprinkly, but it didn't look serious, and we set off down the towpath. At River Bend Ellery Fosdick tacked a map on a tree and explained what would happen to the canal should the long-discussed dam be built at that point.

Below Great Falls Secretary Udall

took one end of Bob Harrigan's canoe and helped lug it down the steep, rocky trail to a cove for a trip through the wild-scenic gorge — just as the rain really started falling. Probably Mr. Udall had never settled himself into a craft quite like Bob's decked canoe (see AWW, Feb. 1961), but with the adaptability of a natural athlete he was soon pulling his weight. The circumstances were hardly of the best for full appreciation of the scenery and geological features, which can be fully enjoyed only from the river.

But he got the message. What he said was: "I'm amazed that such a wild area still exists this close to a metropolitan area. Surely it has qualities that warrant serious consideration for future protection. This stretch should be protected to afford city people a look at wild beauty."

Mr. Udall certainly deserved a lot of credit for his guts in going through with this rough ride in bad weather when he could so easily have begged off. A cheer also for Mrs. Udall and their two kids, and several other youngsters who stuck with it to the bitter end.

The rest of us trudged through the rain and mud down the towpath, looking for sheltered nooks to eat lunch. Those in front put in at the Angler's Inn, a quality eating place by the Canal, and others naturally followed, muddy and dripping. Mr. Udall had just come in off the river when the tavern's proprietress came down the stairs screeching, her sense of cleanliness and order outraged beyond all reason. She neither knew nor cared who they were and furiously ordered the bums out — Cabinet member, senators, admirals, and all. "I run this place to make money, not to serve **tramps!**"

This newsworthy incident went out over the AP wires and radio newscasts and landed on the front page of The New York Times, which followed up with an editorial urging enactment of pending legislation designating the C & O Canal a national historical park. The former President made it a national monument on almost his last day in office, but his Executive Order does not provide for the acquisition of additional

lands needed for campsites and other recreational development.

An interesting sequel to the paddle through the gorge was a summons from the Interior Secretary's office to Harrigan to show the film of a canoe trip down the Cheat River gorge in West Virginia for the Secretary and other officials. There has been some little discussion of reviving that state's depressed economy by developing its recreational potential under combined Federal-state auspices. This film offered a unique view of a representative area. From these two events it seems clear that Secretary Udall is taking a keen personal interest in preserving and developing recreational areas, and that is all to the good.

Minnesota Canoeing Roadless Area Threatened

"Members of northeastern Minnesota's Tri-Country Committee have tossed a match into a pot of political gunpowder which may explode into another battle over the Superior National Forest wilderness area," commented Richard Conlon of the Duluth News Tribune. The county officials have proposed three roads, the most extensive being a 30-mile highway connecting the Fernberg Road out of central Ely with the Gunflint Trail to the east, right through the heart of the heretofore inviolable roadless area. It's the same old story: country politicians see there only a large area which could be "developed" and exploited to the profit of individuals and of the county. The steady attrition since the area was set aside in 1938 has been bad enough, with access roads pushing into one area after another, but now they want to hack it to pieces.

A public hearing was demanded, and was held on May 12, at which the strongest sort of opposition was expressed. The politicians took refuge in legal history, about which there appear to be considerable doubt and confusion. Lawrence Neff, Superior Forest Supervisor, firmly denounced the violation of the roadless area, and added that the roads would chop it up into little pieces and leave no really isolated back country. Make no mistake: the local foresters are virtually all dedi-

cated wilderness men; it is the higher-ups who do the real damage. We greatly wonder what is the attitude in this issue of the Forestry Service in Washington.

Another fine "float" river has been "plowed under" with the start in June of construction work on the Yellowtail Dam on the Big Horn River in Montana. Members of the Billings Geological Society slipped down the "fabulous" Big Horn Canyon the first weekend in June, just under the wire. Jack Nichols writes, "I just made my sixth (and probably last) trip down this one over Memorial Day. The dam will probably serve to bolster local economy while under construction, but there are many who feel the completed project will fill no worthwhile purpose." We share his misery — and we are reminded of a quaint remark of Justice Douglas: "We pay the farmers not to grow wheat; why can't we pay the Army Engineers **not** to build dams?"

Another Hearing on Yellowstone: We were a bit shocked to learn that the Department of Interior had reneged on the new boating regulations for Yellowstone Lake and had opened up the three southerly arms to powerboats again. We had naively supposed that

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this matter was definitely settled with the publication of the zoning regulations in the Federal Register. The revised rules, issued without hearing on June 9 by Asst. Secretary John Carver, exclude powerboats only from the last two miles of each arm, and restrict speeds in the remaining areas of the arms to 5 mph, both of which are quite unenforceable.

A hearing on this revision was finally called for July 17 at Salt Lake City and conducted by Frank J. Barry, Solicitor of the Department. According to information from Cal Giddings, President of the Wasatch Mountain Club, who also spoke for the AWA at the hearing, ten representatives of outdoor organizations favored the zoning regulations as originally stated, while only four individuals spoke in favor of the current revision. When the hearing was thrown open to all present who wished to express their opinions (but who had not previously notified Washington), five more persons spoke vigorously against any restrictions against powerboats. Several of these complained bitterly of the closing off of Shoshone Lake since, they said, it was an inaccessible wilderness anyway. An odd comment, one would think, from such a source, until it is realized that the river connecting the two lakes offers no great difficulty to the new, powerful—and noisy!—jet boats.

The hearing record is being kept open until Sept. 1 for further statements from any who are interested—meaning us paddlers—but that means the revision won't be rescinded this summer, so the powerboatmen have won another round. Their last, we hope.

Maps for Canoeists

Those considering a trip into the Boundary Waters Canoe Area in Minnesota may be interested to know that there is a set of 15 detailed maps of the canoe country, Canadian as well as U.S., showing all portages in chains and rods, published in 1952 by the W. A. Fisher Co., lithographers, Virginia, Minn. Available separately, on **water-proof** paper, at 25¢ each, or in a single volume.

BOOK REVIEW

TACKLE CANOEING THIS WAY, by Percy W. Blanford, Stanley Paul & Co., Ltd., London, 1961.

This is a small (128 pp.) book of elementary canoeing information and instruction. The American reader will have to orient himself to the terminology; i.e., what we call a kayak is considered a canoe in England, while our canoe becomes the Canadian canoe.

On the subject of paddling technique the author confines himself largely to the older technique of forward- and back-paddling, with only a brief and rather casual reference to the more advanced strokes. There is a considerable amount of useful information on equipment and trip organization—apparently the British organize their group trips somewhat more carefully and formally than do the American clubs.

Your reviewer has to take exception to the author's recommendation that in case of an upset the paddler should hold on to either end of the boat. When I spill I want to hold on to the end of my boat, but I **don't** want to be at the dangerous downstream end.

An interesting portion of the book is devoted to touring. In England the rivers above the tidewater limits are privately owned; paddling above this point without permission of the owner or lessor constitutes a trespass. Even in tidewaters you are trespassing if you step above high water mark. There appear to be a few, but only a few, rivers that constitute a public right-of-way. Other than this, the only places where canoeists can go are on the ocean and the canals which criss-cross the island. This is a reminder to us of our good fortune in having thousands of miles of rivers on which we can still paddle—and at the same time it is a grim warning that there isn't much time left for us to get organized to protect, define and expand our rights on our rivers lest we too find ourselves restricted to tidewater estuaries and commercially navigable waterways.

Although it is a bit elementary for a white-water man, this is a book that might well be presented to a novice to introduce him to paddling.

—Reviewed by Martin Vanderveen

SECRETARY'S SOAP BOX

By Dave Morrissey
AWA Secretary

Your secretary had an opportunity to talk with affiliate members from the East and West during the latter part of June and early July. From these discussions it was noted that local affiliate problems seem to be quite universal and that some assistance on a national level may be needed.

First of all, while attending the Sierra Club's Pacific Invitational Slalom Race on the North Fork of the Feather River in California, your secretary had an opportunity to observe the average level of boaters in this area. It was noted that many of the boaters considered themselves cruisers and were not particularly interested in racing. In fact, some seemed rather hostile to the very idea of racing. Hostility of a similar nature has been expressed on a number of different occasions by your secretary.

However, it must be noted that these same boaters have not progressed very far in accepting and executing some of the high strokes or the other latest techniques, despite Peter Whitney's fine book. This same lack of technique is very evident in Colorado and was a primary reason for your secretary's trip to California.

Conditions Ideal

As for the race, conditions were superior to any slalom ever held in Colorado. Especially the water—both its temperature and difficulty—was superb. The race was held next to a campground providing an ideal situation for boaters. There is no question but that serious consideration should be

given to holding the Nationals at this site.

After talking with Peter Whitney and Roger Paris I concluded that the best approach to improving the relatively poor technique of our boaters would be to hold a national boating week in which affiliate members from all over the continent could gather and train under our top boaters. Such a session would not only demonstrate the correct techniques and point out weaknesses of individual boaters but would establish the basic methods of training that boaters would be able to take back to the local affiliates. Such a session would do much to elevate the standard of boating that presently exists on our side of the world.

A national training week should probably be held in late June or July to correspond with normal vacation time and preferably to be held prior to a national meet or perhaps an international meet such as a North American Championship. The AWA as an international organization could logically sponsor a North American Championship. An international meet would tend to encourage greater communication and competition between our Canadian affiliates and our U.S. affiliates.

Canoes and Kayaks

Bill Bickham of the Penn State Outing Club noted that it was ridiculous to have national canoe competition in the West when most canoeists are located in the East. Despite the obvious drawbacks involved this merits considerable



attention. Perhaps canoe and kayak competition should be held separately. Instead of having the nationals in the East and West in alternate years, canoe championships could be held in the West only every third year, while the reverse rule could be applied to kayaks. In this way each section could emphasize its specialty without serious loss to its respective canoe or kayak fans. This would also give California, a predominantly kayak area, an opportunity to hold the Nationals.

In any event, affiliate representatives should talk over the possibility of participating in a week-long training session during 1962. If sufficient interest is indicated the details will be worked out. Anyone interested please contact your secretary.

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New Products

An announcement the whole white-water world has been waiting for has come from Hans Klepper Corp., 820 Greenwich St., New York 14. Their new rigid kayaks are being imported into the U. S.

The fact that Klepper is known as the pioneer of the foldboat has not prevented the famous old company from moving into the fiberglass-and-plastic field with boats for slalom and downriver racing in the R-1 class.

The SL 61 is the slalom entry, comparable to the Slalom 59 foldboat. . . . It weighs 42 lbs., is 13'9" long and 60 cm. (the I.C.F. minimum) in beam.

The "Quirl" is the new downriver boat, comparable to "T-67" foldboat. It weighs 43 lbs., is 15 ft. long and just 63 cm. wide.

Rudy Walter informs us that shipping costs for the boats are approximately \$18 to Colorado, \$28 to the West Coast. The price of either is \$195, F.O.B. New York.

Both boats incidentally have seat and backrest, hip-boards, foot and knee braces installed.

The boats will be shown at the New York, Boston and Philadelphia boat shows.

Klepper also announces a new one-piece double-bladed paddle with multi-laminated blades. It is available only in a feathered version—either right or left-handed (specify).

Chauveau's Lightweight Kayak

Jean Chauveau's newest development has just been announced—the lightweight Downriver Competition 61. This fleet racers' foldboat weighs less than 30 lbs. Unlike its predecessor, the Competition 58, the new boat is not a compromise suitable for cruising; only speed has been considered in its design, which incorporates some radically new features. Thus, the spray cover is not a separate apron, but is an integral part of the kayak, Eskimo-style. It wraps around the paddler's waist and seals tight with the new pressure fastening recently developed in France. Production of these kayaks is limited, Monsieur Chauveau warns.

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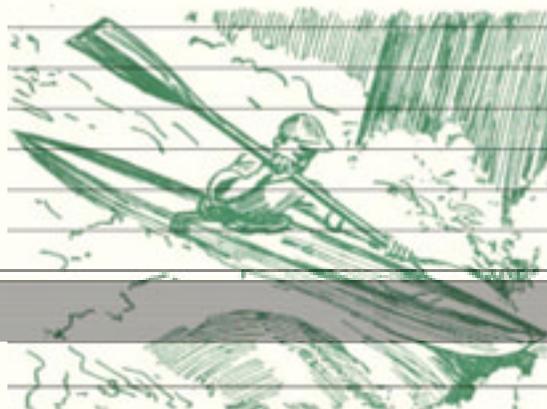
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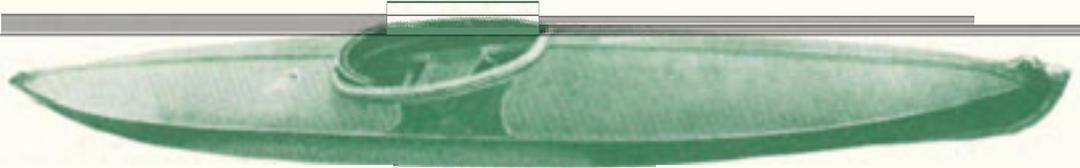
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