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Wisconsin Hoofers
2018 Fish Hatchery Road
Madison, Wis.
Beginning descent of the formidable upper North Fork, Feather River

Milo Duffek, Don Golden, Noel DeBord

Photo by Peter Whitney. Leico M3, 50mm f2 Summicron. Adox KB17
November 22, 1964
Dear Mr. Whitney:
When I read an unfamiliar name, I often wonder how to pronounce it. When you print the name of a place or (especially) of a person, could you fill us in? Then we can kayakety-yak correctly.

Yours truly,
(Miss) Elizabeth Howard Simpson
10706 Bernard Avenue
Cleveland, Ohio 44111

(Ed Note: "Doo-fee," Miss Simpson (page 4). Thank you for the suggestion. Some people with names of foreign origin might possibly take offense — otherwise we know of no reason why not.)

Dear Mr. Hawley,
I for one would be quite willing to pay more in order to have A.W.W. sent first class. The Journal is too good to miss for such a reason as the low postal category.

As a matter of fact, though, I do have two complaints about the Journal — there aren't enough issues yet per year, and the issues are too small. Please forgive me for being greedy, but the Journal just whets my appetite.

I've been in AWA only one year, and I know that back issues of the Journal have a lot of information I could use. Are any such back issues available? Would appreciate a listing, if possible. Thanks for your help.

Carl E. Fritz, Jr.
407 Cleveland Ave.
McDaniel Crest
Wilmington 3, Del.

(Ed. Note Thanks for the "criticisms," Carl. Almost all but the very earliest issues of AWW are available at $75 the copy for $250 for a retroactive four-issue membership.)

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APPLY TO EDITOR, AMERICAN WHITE WATER, 1544
LA LOMA, BERKELEY, CALIFORNIA, 94708
Morning on the Lievre

(a little river flowing into the Ottawa River near the City of Ottawa)

Far above us where a jay
Screams his matins to the day,
Capped with gold and amethyst,
Like a vapour from the forge
Of a giant somewhere hid,
Out of hearing of the clang
Of his hammer, skirts of mist
Slowly up the woody gorge
Lift and hang.

Softly as a cloud we go,
Sky above and sky below,
Down the river; and the dip
Of the paddles breaks,
With the little silvery drip
Of the water shakes
From the blades, the crystal deep
Of the silence of the morn,
Of the forest yet asleep;
And the river reaches borne
In a mirror, purple gray,
Sheer away
To the misty line of light,
Where the forest and the stream
In the shadow meet and plight,
Like a dream.

From amid a stretch of reeds,
Where the lazy river sucks
All the water as it bleeds
From a little curling creek,
And the muskrats peer and sneak
In around the sunken wrecks
Of a tree that swept the skies
Long ago,
On a sudden seven ducks
With a splashy rustle rise,
Stretching out their seven necks,
One before, and two behind,
And the others all arow,
And as steady as the wind
With a swivelling whistle go,
Through the purple shadow led,
Till we only hear their whir
In behind a rocky spur.
Just ahead.

—Archibald Lampman
Milo in America

(The idea of inviting the great European innovator and star in both kayak and canoe, Milo Duffek, to help North American kayakers was first broached in the Autumn, 1962, issue of American White Water. A letter from George Topol of the Ontario Voyageurs said that Milo was willing. The idea was pushed by Martin Vandersteen, Executive Secretary for 1963, and "Prof" Davis, who succeeded him this year. Milo's wife, Irmgard, also a kayakist of renown, came and helped in the instruction.

There were six "Duffek sessions" in Canada, Maine, Colorado, Washington, D.C., California and Washington last summer. They seem to have been about the most successful thing the Affiliation has ever done. Here are some of the comments from those who attended. (Photos are on Pages 16, 17.)

By William Heinzerling
Chairman, Kayak & Canoe Club of N.Y.

One of the highlights of this past summer was the Duffek tour. Here is a brief resume of the KCCNY-sponsored week. The training session was held on the Rapid River in southwestern Maine, about 4 nautical and 12 land miles from Andover, the nearest town and civilization. The river lies in the heart of the American WHITE WATER
rugged and beautiful Rangeley Lake region, and connects two of the larger lakes, Umbagog and Lower Richardson. It is dam-controlled, about six miles long, and the rapids, in my opinion, go to Grade IV in difficulty. The water was somewhat low, due to construction work on the dam, but was quite adequate for enjoyable river running. In medium to high water, the rapids become most impressive and much more difficult. The river scenery is unspoiled and for the most part uninhabited, with only a few fishermen’s cabins along the upper stretch of the river. You may recall that the Rapid River was the site of the first white-water downriver race in this country. It was held in 1941, and according to first-hand reports very few of the competitors made it to the finish line. For one of our Duffek trainees, Eliot DuBois, the river brought back many memories of this race. He was one of the competitors.

There were about 20 participants in all, represented by the KCCNY, BRSC, MHCC, and the AMC. We stayed in very rustic but comfortable log cabins, near the head of the river. There were no kitchen facilities in the cabins, but we were granted permission to set up cooking arrangements as we saw fit. Generally we cooked with our Coleman stoves on the porches and ate there as well, retiring to the living room and the warmth of the fireplaces with the approach of insects and the cool night air. Ten of the people, including the Duffeks, slept in beds, while the others slept on air mattresses on the living room floors. The entire group cooked all its own meals, with the exception of a Wednesday night steak banquet at the main lodge. The food throughout the week was simple but adequate and tasty.

There were five days of instruction, Monday to Friday. Milo generally tried to split up his time between the novice and the advanced groups, either spending half of a day with each or a whole day with either. The novice instruction, which covered basic strokes, braces, leaning, rolling, etc., was usually given...
on the lake or on the upper and easier part of the river, which was about Grade III. The advanced instruction consisted of some flat-water paddling, but mostly river-running, where Milo would give pointers as best he could. Both groups practiced in a tight, 6-gate slalom set up on Thursday and Friday in a rather tricky and fast chute. This slalom workout proved to be the highlight of the instruction program, because it gave everyone a chance to practice, in one place, under Milo's instruction. All in all, the KCCNY section of the Duffek training program was well received by everyone and was very successful. Almost all of the participants felt that they benefited from Milo's instruction, and it was pretty much of a unanimous opinion that such a program is worth repeating in the future if the opportunity presents itself.

Upon their return to New York from the West Coast, the Duffeks spent one of their "rest" days touring the World's Fair. A final and unofficial bon-voyage party, in the form of a Saturday night lobster cookout, was arranged for the Duffeks over Labor Day weekend at Galligan's. It was attended by about 18 club members. As a token of thanks for the effort, patience, and time devoted by the Duffeks in instructing this summer, we presented Milo and Irmgard with two beautifully illustrated books on American scenery and history. The Duffeks sincerely appreciated this gesture, and Milo, being a geography teacher, assured us that the book would be put to good use. A run through the Neversink Gorge on Sunday provided the finale for the Duffeks' American tour. They boarded their plane for home the next day, leaving behind many U.S. boaters with pleasant memories of two wonderful people. I hope and trust that the spirit of the Duffek program will carry on with all those who came under their tutelage this summer, and that these pupils will in turn act as teachers for other boaters. This, after all, was one of the primary aims of the Duffek program as it was originally conceived.

By Nancy Brady

If a vacation is to be judged by the

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American WHITE WATER
feeling of fitness and glow of health as well as a heightened sense of achievement, then the Duffek training session I attended was one of the finest vacations I have ever spent. How much was learned? It is hard to speak for each of the independent but congenial group of twenty-odd who made up the group sponsored by KCCNY. But some of you may recollect that I began kayaking with an upset in the Neversink 14 months ago accomplished in less than sixty seated seconds. While I had graduated to the Mongaup and managed to survive a few rolls I was not an accomplished roller, and I was still afraid to venture into the Mongaup rapids in the Delaware.

In spite of the fact that I was so terrified of the volume of water in the Rapid River that I never ventured down the last third of the river with the "brave and the bold" (no kayaking women among them, only Bobby Rupp in the bow of a canoe made up a female contingent), I am now willing to face any roller on lesser rivers, among them the Neversink Gorge which I have run three times, and I am rolling with ease on the right and "almost" on the left. Another pleasing discovery is that what seemed difficult and challenging before the Duffeks got a hold of me, now seems quite tame. The fact that it "shows" is even more pleasing. Several members who had seen me in June at the Esopus noticed the improvement and were kind enough to say so. I love them for it, the Duffeks even more for a superb job in teaching, and KCCNY for voting for the Maine week last fall.

—From the KCCNY Newsletter

With the Duffeks in Canada

By Dave Binger

On a hot July afternoon, Ken Wisner and I and a mountain of equipment headed north on the New York Thruway for a rendezvous in Albany. At that point, all that we knew was that Milo Duffek was somewhere in Canada, that we had been invited up to learn some fancy stuff from him, and that it would have been nice to know where
we were going. At the rendezvous, we met Bart Hauthaway and Barbara Wright of the KCCB, Marion Hardy and Nancy Abrams of the CCA, our own Arnold Hoiberg, and Jane Showacre, now of Denver. Someone produced a document with a clue to our destination, and by the time we'd finished our manicotti we figured that we had a four-day drive ahead, up to Hudson's Bay, or near it. We drove until midnight, camped in some friendly farmer's field (those upstate farmers are the soul of hospitality, especially when they don't know you're there!), and continued on the next morning to the Thousand Islands Bridge, over the border and west along the shore of Lake Ontario about a quarter of the way to Toronto before turning north into the great unknown.

Hudson's Bay turned out to be the wrong place, so instead of going there, we went to Barry's Bay, Ont., where, at the end of a long dirt road, we found a beautiful lake, a campsite full of tents, a little log house that served as general store and meeting place and a whole bunch of exhausted Canadian Boy Scouts who had been learning to paddle their canoes from Duffek all week. We piled all our gear onto an outboard-powered flat boat and were taken across the lake to a campsite especially prepared for us on a little peninsula which jutted out into the lake and gave the impression of being an island because of the dense forest that separated us from the North Pole on the landward side.

The situation of our camp was idyllic. The lake was clear, clean and free from water-bombed hot-rodders and water skiers, and there weren't even any mosquitoes to speak of. Our hosts, the Ontario Voyageurs Kayak Club: had done well indeed. Fresh vegetables for our week's stay were lightered over from the mainland and stored in an impromptu but effective natural "refrigerator." The boys from the OVKC even made the pots we cooked in and a very ingenious roasting spit which was turned by a waterwheel.

A Day Off

Our first full day at the lake was Sunday, so while Milo and his beautiful wife
went off into the wilds in search of moose and wild Indians (it being their day off, so to speak), we took to the back roads to look for some white water. We saw a lot of rural Ontario, filled our cars to the gunwales with dust, and never found any water more challenging than Grade Flat to sub-I.

The next day, however, we got our fill of action. We were roused at seven-thirty for a swim, followed by a rather strenuous run through the woods and half-an-hour’s worth of calisthenics, led by the Maestro himself. Milo is, to say the least, in good shape, status which he enjoyed more or less by himself. After breakfast we were divided into groups, and while one group practiced Eskimo rolls, the other worked on gates in a flat-water slalom course set up at the mouth of the Madawaska River, hard by our camp. In passing, let me say that the goal of all of us in our rolling sessions was to master the no-paddle recovery. A surprising number of us did learn to do it, including a rank beginner who had just seen his first Eskimo roll the day before. The thing looks impossible but isn’t, and really depends on one’s ability to do the rhumba. The stiff-hipsters just don’t make it. Duffek could do it in cold molasses, I’m sure.

After lunch, which to some of us felt as if it ought to be dinner, with a twelve-hour nap immediately following, we paddled across to our cars, and drove a few miles up the Madawaska which had been flooded for our benefit. We ran down this beautiful little river through some surprisingly big rapids (there were several upsets and damaged boats due to lack of proper flotation), to a very interesting slalom set up in a nice, fast rapid, where we spent the rest of the afternoon working up an appetite under the eagle eye of Duffek. Finally, exhausted, we paddled back the two miles or so of flat water to camp, where those of us who were told off for kitchen duty started peeling potatoes while others swam, patched boats or lay like dead men, gazing vacantly at the sky.

**We Get into Shape**

After a couple of days of this kind of thing we started to get in shape. We also started to learn something about the beautiful, simple-complex way of paddling which made Duffek a great champion. His strokes are lovely combinations, each one leading to the next in a seemingly effortless and highly effective pattern. To give you an example, he taught us how to do a proper back stroke (moving backward seems to be foreign to the nature of some paddlers. As a result, many of us spent most of our time doing just that). The shaft of the paddle is held parallel to and almost in the water alongside the boat. The after blade is then pushed straight down toward the river bottom, while the boat is leaned over hard. So much turning force can be applied by this thrust that the boat can be turned 180 degrees with one stroke if desired. This differed greatly from the namby-pamby little dab which many of us had used before. Duffek combined the back-stroke with a leaning draw stroke on the other side (reverse, of course), followed by a back thrust on that side, draw on the other, back stroke, draw, and so on, resulting in a smooth and highly controlled backward progress through the water. Similarly, a forward turn, to the right, let us say, would begin with the same strong back thrust, which then by a subtle turn of the wrist and change in blade angle would become a hanging draw, also on the right. The effectiveness of these combinations must be seen to be appreciated, and I’m sure that any of us who had the privilege to be at one of the Duffek camps would be more than willing to attempt a demonstration for those who weren’t but would like to learn.

_by Martin Vanderveen_  
**Colorado White Water Association**

In Colorado the group of students varied in age from nine years old to sixty-plus and in ability from those who had never been in a kayak before to old hands at the paddle. The language problem, which had caused some qualms, was negligible. By the midpoint of their tour the Duffeks were communicating well and expressing themselves clearly. This is all the more remarkable in view of the fact that
Milo had had exactly one English lesson before leaving Switzerland.

An unexpected bonus during the Colorado sojourn was the generous offer by the Rocky Mountain School at Carbondale to feed and quarter the Duffeks as well as to provide camping space for the students and allow the use of its pool for the part of the training that did not require moving water. The Rocky Mountain School, famed in its field, is one of the few educational institutions in the world that offers its students training in white-water boating.

Despite the limited time available for the course, the training was surprisingly thorough, so much so that rank beginners on Monday were running moderate rapids with aplomb on Friday. The first stage was to have the trainees sit in their boats, arms outstretched along the paddle shafts which rested on their shoulders. Rotating the body a full 90 degrees to right and left gave the feeling of the proper body motions to be used in paddling. Immediately following this was an exercise in straight paddling, demonstrating how the use of the correct movements increases speed with little increase of effort.

Learning to Turn

A technique rarely seen in this country in the past will be much in evidence when the trainees hit the rivers next Spring. To make a gradual turn in either direction Duffek showed the students how to lean the boat 30 degrees away from the direction of the turn while keeping the torso upright and continuing to paddle on both sides. This offers an obvious advantage in competition in that it allows the paddler to turn without losing headway or even slowing down. It showed some of the paddlers, incidentally, that their seating in the boat was none too good, requiring more careful adjustment of seat, footrest, knee and hip braces.

High-bracing came next, and pad-
dlers who had never thought they could do it found themselves leaning till their shoulders submerged and then recovering. This was followed by leaning turns with the use of the high brace. Then came S-turns for control and precision. The student leaned his boat heavily with a high brace, swept the paddle towards the front of the boat, gave the blade a half-twist without removing it from the water, and immediately went into a conventional forward stroke. Repeating this exercise first on one side and then on the other made the boat move in graceful S-curves under full control. The same technique was applied to both forward and backward movement.

The Eskimo Roll

Rolling, of course, was an essential part of the course, as was jet-ferrying, using the force of the current to carry the boat across the jet. After seeing Duffek roll first with his hands only and then with just one hand, most of the students redoubled their efforts to the point where they could roll up successfully at least part of the time. Milo demonstrated rolling while in the middle of a jet ferry, but the majority of the trainees decided to pass this one up. Those who had had only limited previous experience in playing the rapids expressed amazement at the ease with which fast water can be mastered.

On the final day of the Colorado sessions the students managed to teach Duffek something new. They organized a game of kayak polo, something the Europeans had never seen. After a fast game which included a formidable array of talent (Duffek, Paris and Kirschbaum all in the water at the same time) Milo was so enchanted that he said he plans to introduce the game in Europe.

Tight though the schedule was, a little time was found for diversion for the visitors. Welcomed to Denver with a small party on the evening of their arrival, they spent the next day on a jeep trip through one of the more scenic mountain passes, followed by a quick visit to Rocky Mountain National Park. En route from Denver to Carbondale where the classes were held they traveled a roundabout route which took them through some of Colorado's larger cities and gave them a chance to inspect the site of the annual Salida race. Another trip to the hills and a visit to a drive-in movie completed the entertainment with the exception of a farewell breakfast on the morning of their departure for California.

The possibility that the Duffeks might return in 1965 leaves us with a vista of still greater progress in the coming year. Many of those who were unable to fit their vacation schedules to the class sessions will be able to participate, as will more of the newcomers to the sport.

By Al Bennett
President,
Colorado White Water Association

Some thoughts about boats and boating gleaned from discussions with Milo Duffek.

We all look for points and pointers on boating if we are interested in better future boating. One of the most overlooked parts of our sport is the boater himself. He is babied, overfed, overindulged to the point of extinction—by himself (author's opinion).

Next in importance to the boater himself is the boat. The basic categories of our present white-water kayaks are the slalom, the downriver, and the combination or touring model. The slalom boat is designed for maximum maneuverability and is not so fast nor does it track so well as the other models. The downriver, as the name implies, is built for speed and consequently sacrifices some degree of maneuverability. The combination is a compromise boat with a bit more maneuverability than the downriver and somewhat more speed than the slalom. It has higher inherent stability than the others and is generally considered less fun to paddle.

In rigid kayaks the shapes vary according to the purpose and the designer's ideas. The most common shapes are the flat bottom as in the Baschin slalom, sloped sides with pronounced curves to the bottom as in the Klepper R-7, and crescent as in the Bohlender design or the Boston.

The accepted width is approximately 24 inches. Over this width the boat becomes increasingly hard to handle,
Milo's positive back-brace

especially with the modern hanging strokes which are so important in today's paddling.

The cockpit should be ample to allow free movement to both sides and to the back. Hip braces should not come higher than the belt line to avoid interference with body movement. For the same reason it is best if the boat's spray ring or coaming is kept low. The seat, too, is a factor. An ideal seat is about 12 inches from front to back. The rear 8 inches are level, with the front four inches angled upward to form a lip about 2 inches higher at the front to support the thighs. The back of the cockpit should be far enough back to permit a 45-degree backward lean from the seat.

Foot braces should be located so that when the foot is pressed forward the ball of the foot rests on them and pushes the paddler back into the seat, which has a sloping back. Knee or thigh braces are essential for a firm support in the boat. Thigh braces can be tempered aluminum tubes about 33 inches long and $14\frac{1}{2}$ inches apart located so as to catch the thighs about 12 inches from the back of the seat when the legs are spread out. Curved supports fastened to the underside of the deck can also be used.

The bow of the boat should have a high breakwater extending all the way to the front usually in the form of a high center ridge on the front deck. Flat or shallow decks with pronounced gunwale lines tend to catch waves and upset the boat in heavy water, and to make turning more difficult, particularly when a strong lean is used.

Choice of paddles is a personal matter, but my own preference is for flat blades for people under 160 pounds and slightly spooned flat-faced blades for individuals over 160. The one-piece shafts are preferable, since they have no joint to wobble. The new aluminum-shaft, epoxy-blade paddles are preferred by many.

By Peter D. Whitney
Sierra Club RTS

Our session with the Duffeks was held on the North Fork, Feather River, site of our annual Pacific Invitational Slalom and Downriver Races. This is a pleasant Forest Service campground where, although we have to disturb fellow-campers to some degree, there is room for considerable activity. We also resorted to a flat-water pool down on the East Branch of the North Fork, a stream that is undammed and hence has tapered off to a pleasant warm flow by August. (In the Spring, this East Branch is a torrent with some passages that Roger Paris has classified as "Class VI provisional," meaning that anybody who wants to go out and lower it to Class V is welcome to try, but I will hold a camera instead of a paddle. Rivers often don't like to be reduced in grade — seem to take it rather more personally than seems sporting or polite.)

I brought away two main conclusions from my experience with Milo. One was a strong feeling of having heard a lot of this before. And this was because I had been one of the lucky Eastern and Pacific paddlers who had been exposed to Paul Bruhin, 5 years before. Paul is a student of Milo's, and the Duffeks informed me that Paul has got to be a much better paddler now than he was then.

The lessons about how to back-brace, what to expect of the back-brace, the extensive use of forward-ferrying across jets (rather than the wasteful
S-curve that costs you many yards of downstream distance), the steering of the boat by leaning outside the turn, the strong preference for the screw-roll over the time-consuming long-paddle methods, the concern about having a tight but flexible position in the cockpit—these were well recognized. So was the relative indifference as to the employment of the plastic boat or the folding kayak.

Most important, though, were the elements that have become trademarked with the Duffek name—the hanging turn, the high brace, the commitment of the paddler’s weight without reservation to the blade on the water. This is the main lesson, it seems to me, that Milo communicated to us in the way of technique. We see a lot of very good paddlers, people who stay up through big water and who know where to go in a rapid, who have still not learned this lesson. They try to maintain an equilibrium that might be described as land-based; they have not learned to be water creatures. This applied, incidentally, to the back-brace as well as the high. Duffek insists that you invest all your confidence in the ability to bring yourself back up with a paddle-stroke, and to this end the Eskimo-roll is just a culminating maneuver in a process that begins with the normal paddle stroke—which in Duffek’s version is accompanied by a strong lean of the boat, a high, aggressive paddle angle, and fantastic control of blade.

The second impression that I brought back from the Duffek sessions was the importance of constant practice—and surprisingly, a large part of it on flat water. Milo took our group down to the swimming hole every morning, where we practiced not only rolls but the high-speed attack on slalom gates forward and backward, steering the boat by leaning, and a number of other technical points. I was pleased to be confirmed in what I had been preaching in "White-Water Sport" and elsewhere, about the importance of making the two arms help each other, rather than fight against each other—in "hanging" the body from the paddle with the lower arm as a fulcrum for the upper.

Too many paddlers try to get by with cramped positions that activate mainly forearms and wrists "dabbing" the water, and find neither arm really free to act.

One by-product of the sessions was a realization of how fast our younger generation could learn if only there were more teachers around with the galvanizing quality of Milo. The first day the class started down the North Fork downriver course—six miles of Class III/IV with little resting space—one fourteen-year-old went along, with the rest of us crossing our fingers. He tipped over several times, but didn’t quit. Milo and others rescued his boat. By the end of the session, he made the run with perfection and the unmistakable beginnings of style. His enthusiasm has now been engaged, and it may only be a year or two before we shall be listing his name in the race results.

The final day of the session, Milo ran the formidable upper stretch of the North Fork along with Walt Harvest and Noel DeBord. The rest of us followed along by car filming. One result is that Charles Smith has a club film that compares favorably with the European reels we’ve occasionally seen. This is a piece of water, said Milo, “that deserves a World Championship.”

The warm affections which the Duffeks inspired throughout the country were duplicated here. Western hospitality did what it could to repay a debt of gratitude, but it may—just for once—have been stumped.

**Classified**

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The practicality of a no-paddle roll may indeed be questioned. However, the maximal hip action it teaches will certainly be useful in leans and boat balance generally, as well as in strengthening all types of paddle rolls. Besides, a one-armed, no-paddle, half roll is sure to impress your friends.

While training with Duffek this summer, I was amazed to see the technique of his no-paddle roll (AWA, Autumn, 1964). Two years of struggle and experimentation had convinced me that quite a different method is the only one capable of righting a kayak with hands only. Duffek uses 3 or 4 breast strokes to swim the body to the surface in the initial phase; the alternate method relies on one synchronous movement between body and boat. It might be possible to describe these two techniques accurately enough to be practiced even by those who did not have an opportunity to study with Duffek. Like many other things, it’s easy when you know the trick.

Hip Practice

Really effective hip and knee action is the fundamental ability basic to any no-paddle roll, and should be dealt with first by doing the following exercise: Flip over and rock your boat with your hips until you can almost tip it up on its gunwale line. Your body should be perpendicular to the long axis of the boat. Try to tuck the boat under you with a snappy upward pull from your leading hip and knee. The next step is to lay your hands gently

By Barbara Wright

Kayak and Canoe Club of Boston

Esquimautage

Sans Paddle

- American WHITE WATER
on those of a friend standing by your boat. Flip, and press your hands down on his as you snap the boat under you. On successive tries, apply less and less pressure with your hands.

Using the momentum of a full roll is the best way to start. To initiate the roll, dive down with some force beside your seat—i.e., lean sideways, not forward—pointing your hands (held flat, side by side) downwards, reaching for the air on the other side of the boat. As soon as you break water, push down with the hands and simultaneously use hip and knee to flip the boat under you. As you come up, the body should stay in the water as long as possible. Imagine your arms to be the upper jaw and your boat the lower jaw of some creature snapping at a piece of water.

Practicing with a square of plywood is very helpful. Saw one inch off of it every night. After mastering the full roll on both sides, try the more difficult half-roll.

Duffek's no-paddle roll is a half roll; the technique involved breaks the momentum of a full roll. Flip. Twist the body so that you face down and your shoulders are as parallel as possible to the water's surface. Using 3 or 4 broad breast strokes, bring your upper body towards the surface—until your shoulders break water. NOW, using leading hip and knee, snap the boat under you while pushing the body and hands downwards.

**The One-Hand Roll**

It has also been possible to develop a dependable one-armed roll. Although this trick was not yet in Duffek's repertoire when we trained with him in Canada, I am willing to bet my new 22-lb. kayak that he does it like this: The inactive hand is tucked into your skirt (to prevent cheating). After capsizing, the boat is flipped under you with one strong effort, in perfect synchrony with the first of 2 or 3 strong "pawing" motions of the hand. With optimal hip and knee action, only two arm strokes are necessary.

Please drop me a card when you can scull up with a no-arm body roll.

WINTER 1964/65
The 1965 World Slalom and Wild Water Race Championships will be held in Spittal, Austria, on August 14-18. This news comes to us from the October ICF meeting in Tokyo. (Previous reports gave July 30-August 3.) In this slalom as well as in the wild water race F-1 and R-1 will start in the same as a K-1 class. Every competitor will start in one individual and one team category which need not be the same!

As of January 1, 1966, ICF rules will be amended as follows: At international competitions each contestant shall be allowed one practice run on the official course. This was done already this year at Tacen, Yugoslavia, and at Augsburg, West Germany. The system will likely be used at other international competitions in 1965 but will not be used at the World Championships.

Other rules for World Championships are: 1. The number of gates is unlimited, but the minimum is 15. 2. The maximum length of the course is to be 800 meters. 3. The minimum distance between gates is to be 15 meters.

The data for the above comes to us unofficially from Karel and Vretka Novak, former World Champs from Czechoslovakia who toured this country this past summer, participating in the Colorado races and the Feather River races and from Milan Horyna, international expert in C-2 from Czechoslovakia. If there are any differences when the official ICF Bulletin comes to us, they will be reported in this column.

Partial 1965 Race List

The following races constitute a partial list of the slalom and wild water races being held in the United States and Canada for the 1965 season. All races have been definitely scheduled.

1965 Divisional Slalom Chairmen
American Canoe Association
Pacific Coast — Peter D. Whitney
Rocky Mountain .......... Ted Makris
Western ........ Dwight Gibb
Central ............. Tom Southworth
Dixie ................ John Bombay
Middle States .... Dan Sullivan
Atlantic ............ John Connet
Eastern ........... (to be decided)
National ............ Dave Kurtz

Other races as they come to the attention of the Race Editor will be published in future AWW issues.

March 13 — Dartmouth Indoor Slalom (INVITATIONAL), Hanover, N. H. (Ledyard CC)
April 3-4 — North Fork Wild Water Race and Slalom, Petersburg, Va. (NATIONAL CANOE AND EASTERN KAYAK WILD WATER RACE) (CCA)
April 3-4 — Credit River Slalom and Downriver Race, Erindale, Ontario, Canada (OVKC)
April 10-11 — Brandywine Slalom, Wilmington, Del. (Buck Ridge SC)
April 10-11 — Beaver River Slalom and Downriver Race, Collingwood, Ontario, Canada (Fourth Weston Scout Troop)
April 10-11 — AMC Interchater Canoe Slalom, Salmon River, Conn.
April 11 — Mascoma Slalom (INVITATIONAL), N. H. (Ledyard CC)
April 24-25 — CCA Slalom, Dranesville, Va.
April 25 — Intercollegiate Downriver Race (White River), Vt. (Ledyard CC)
May 1-2—Loyalsock Slalom and Wild Water Race, World's End Park, Pa. (WBC)
May 2—Potomac White Water Race, Great Falls, Md. (CCA)
May 8-9—Elora Gorge Slalom, Elora Gorge Park, Ontario, Canada (Fourth Weston, Mohawk Rod and Gun)
May 16-17—West River Slalom, Jamaica, Vt. (NATIONAL CANOE AND EASTERN KAYAK CHAMPIONSHIPS) (Eastern Clubs)
May 16-17—Wolf River Slalom and Downriver Race, Landglade, Wis. (Wisc. Hoofers)
June 18-20—Salida Slalom and Arkansas Wild Water Race, Salida, Colo. (NATIONAL KAYAK WILD WATER RACE) (FibArk)
June 26-27—Pacific Invitational Slalom and Downriver Race (MEN'S K-1 NATIONALS) North Fork Feather River. (Sierra San Francisco RTS, Sierra Mother Lode RTS, Haystackers)
Fall (Aug. ?) — Peterborough Slalom Ontario, Canada (OVKC)
Fall (Sept. ?)—Icebreaker Slalom, E. Sidney, N. Y. (Oneonta OC)
Fall (Oct. ?) — Cohasset Invitational Slalom, Mass. (KCCB)
### Cohasset Invitational Slalom (Tidal)
October 3-4, 1964
Cohasset, Massachusetts

**K-1**
1. Keith Daniel .......................... 630.8
2. Bill Prime .............................. 693.0
3. Bart Hauthaway ......................... 693.8
4. Brooks Dodge ......................... 835.6
5. Joe Knight ............................ 893.7
6. Jay Evans ............................. 898.2
7. Barb Wright ........................... 930.0
8. Tom Asher ............................. 978.4
9. Heinz Poenn ............................ 992.2
10. Ekhart Rapin .......................... 1019.1
11. Charles Bridge ....................... 1064.6
12. Les Bechdel ........................... 1293.7
13. Arnold Hoiberg ....................... 1320.3

**C-1**
1. Tom Southworth ....................... 808.6
2. Dave Guss .............................. 953.6
3. Dave Kurtz ............................. 967.4
4. Chuck Kaufman .......................... 1254.4
5. Bill Heinzerling ........................ 1433.3

**Class II**
1. Tom Wilson .............................. 230.0
2. John Berens ............................ 288.6
3. Cheeb Everett ........................... 408.2
4. Eric Loftfield ............................ 481.8
5. Sally Beal .............................. 786.0

**Juniors**
1. Sonja Kalckar ............................ 473.8
2. Eric Evans .............................. 582.3
3. Robert Alexander ....................... 951.6
4. Audrey Alexander ....................... 1141.2

### White River Slalom
September 27, 1964
Hartford, Vermont

**K-1 Beginner**
1. Eric Evans ............................. 129 20 149
2. Wiff Jones ............................. 129 20 151
3. Chan Weller ............................. 142 30 172
4. Alan McKibben ........................... 150 50 200
5. Nancy Weidner ........................... 165 40 205

**C-2 Beginner**
1. Walker-Macornack ..................... 148 40 188

**K-1 Expert**
1. Jay Evans ............................. 100 10 110
2. Joe Knight ............................. 114 30 144

### Ontario Slalom Championships
August 22-23, 1964
Lock 22, Peterboro, Ontario

**K-1**
1. Heinz Poenn ............................ 230.2
2. Ekhart Rapin ........................... 280.4
3. Joe Knight .............................. 293.2
4. Al Zob ................................. 310.2
5. Bart Hauthaway ........................ 313.0

**K-1W**
1. Barbara Wright .......................... 367.3
2. Nancy Abrams ............................ 492.1
3. Terry Franz ............................. 562.1

**C-1**
1. Tom Southworth .......................... 341.0
2. Dave Kurtz .............................. 369.1
3. Roger Parsons ........................... 389.0
4. Dave Guss ............................... 390.4
5. Bill Bickham ............................. 417.3

**C-1W**
1. Barbara Snyder .......................... 1044.2

**C-1 Jr.**
1. Larry Scott ............................. 440.4
2. Ross Durfey ............................. 475.2
3. Rex Anderson ............................ 512.3

**C-2**
1. Guss-Southworth .......................... 299.2
2. Kurtz-Bechdel ........................... 314.0
3. Fawcett-Shipley .......................... 361.4
4. Parsons-Poem ............................. 378.0
5. Brigley-Jack ............................. 380.0

**C-2M**
1. Wright-Bickham .......................... 360.2
2. Parsons-Parsons .......................... 402.1
3. Wick-Shipley ............................. 448.2
4. Abrams-T. Southworth ........................ 470.0
5. Stephens-J. Bridge ........................ 509.1

**c-zw**
1. Modine-Franz ............................ 695.0
2. Yano-Berry .............................. 165.3
3. Coleman-Elliot ........................... 799.1

**C-2 Jr.**
1. Durfey-Scott ............................ 400.0
2. Chettle-Wyld ............................. 738.4
3. Daniels-Ratcliff .......................... 761.0

**Team**
1. Poenn-Zob-Baur .......................... 488.1
2. Wright-Hauthaway-Daniel  ............... 571.0
3. Parsons-Durfey-Scott  ..................... 655.2
4. Kurtz-Guss-Southworth .................... 674.0
5. Bickham-Sweet-J. Bridge ................... 728.3

American WHITE WATER
Safety as We See It

By John Bombay
AWA Safety Chairman

Several members have requested me to discuss the usage of a wet suit in the light of safety. The wet suit is basically used as a protection against chilling in cold water, but it providentially also gives protection against abrasion and provides flotation when swimming (the question remains how much).

My own experience, and that of others passed on to me, indicates the following:

**Thickness of Neoprene**

- The ¼-inch-thick neoprene foam suit gives maximum protection against prolonged immersion in cold water; it gives maximum protection against abrasion on rocks; it provides enough flotation for anyone to eliminate the need for a life jacket; it is not comfortable because it is not pliable enough.

- The ⅜-inch-thick suit gives adequate protection in cold water, it gives enough flotation for a 150 to 175-lb. person, it gives adequate protection against abrasion, it is reasonably comfortable if properly fitted.

- The ½-inch-thick suit gives sufficient protection for short immersions (as in most boating mishaps); it gives a minimum abrasion protection; it does not provide adequate flotation; it is very comfortable even if not too well fitted.

**Nylon Lining: No**

The nylon-cloth lined suits will last longer and provide better abrasion protection, but they will not tear loose when you are "hooked" by a submerged tree stump. Their use is not advised.

**Color**

Colored neoprene is not as durable as black, also is less pliable. For maximum abrasion protection and comfort the use of black material is advised. Bright colors do have the virtue of high visibility, aiding rescue. This may be important in ocean or wilderness boating.

The above information is based on full-length suits. Armless and legless wet suits obviously do not provide adequate abrasion protection and flotation, but of course are extremely comfortable and are appropriate for the canoeist who wishes to be the least encumbered, and does not mind a chilled leg and arm.

For comfort, it is advisable to have your wet suit fit rather loosely under armpits, elbows, behind the knees and in the crotch. Sea divers prefer tight-fitting suits.

**Recommendation**

To summarize, we can conclude that the best wet suit for the average person would be a ⅜-inch black neoprene full suit when using a light life jacket, or a ½-inch-thick full black suit if one does not wish to wear a life jacket. The recommendation of ⅜-inch material is based upon the fact that it is the most comfortable while still satisfactory in other points. The more comfortable the boater is, the better will be his execution of braces and strokes, and the less the likelihood of a tipover. He needs protection against the water that drenches him from the haystacks more than against the less likely submergions.

I have been thinking of getting another ⅜-inch black wet suit for myself and adding a built-in life jacket of foam plastic in front and under armpits—a 1-inch layer would do; however, I am afraid that I might be mistaken for the wrong sex. This bit of advice is obviously not going to help our well-endowed female boaters.

(See "Building a Wet Suit," in AWW for February, 1960.)

**Revised Rescue Rap**

I just received word from my friend Ray Cochrane of the Sierra Club RTS in California, that they improved on the catch-line setup I mentioned and
illustrated in my article in the Summer, 1964, issue. The reason was that the line "as was" gave rope burns to those boaters swept up against the tight wet hemp by the powerful current.

Our genius friends of the RTS now have constructed a contraption that not only saves you painlessly but also brings you to shore effortlessly, using the power of the stream itself.

The idea is to install an endless belt diagonally across the river, supported by pulleys so arranged that when a swimmer grabs the rope, his weight and the movement of the water will carry him to shore. All you need to do is hang on and you are saved!

The RTS used the system also to transport rescued boats from the other side of the river to the take-out side, by simply tying them to the line; the boats ferried across by themselves. We are grateful to our RTS friends for letting us share their invention. The above sketch shows their set-up and is self-explanatory.

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There have been some meditations of late on various ways and means of preserving our wild and semi-wild rivers. Some AWA members on the West Coast have been thinking in terms of a "Save Our Wild Rivers League." The summer issue of our journal carried the letter of Dave Binger (KCCNY) to 65 outdoor groups urging the formation of a general organization for the same purpose. These are both fine ideas, and this digger in the vineyard would be much interested to hear if they have met with any strong response.

The ever-increasing concern for preserving the best of our still free-flowing rivers certainly demands organization of some sort. But just what sort, precisely? Just how do we go about saving a wild river? An acre of redwoods or a mountain range is a solid, stationary object we can point to on a map. A flowing river, on the other hand may ramble about from here to there over a distance of 10 to 100 miles through private, county and state boundaries. The quality of its wildness varies with the perception of the mind looking out upon it—and the physical skills of the body it inhabits. Its appeal, especially its appeal to the white-water paddlers, is more intangible, and more difficult to describe in concrete terms to non-believers. I have grave doubt that any organization whose objective is limited to saving anything so amorphous can achieve any solid, widespread support. The only recent instances of success (or probable success) in this field that come to mind have been where the quality of the river area was such as to merit designation as a "national riverway."

Over the years I have been impressed—perhaps depressed is more accurate—by the great number of conservation organizations abounding in the land: associations, societies, leagues, committees, and what not for the preservation of this and that, on a national, regional and very local scale. The leaders of these groups are dedicated public servants whose labor cannot be measured in marketplace terms, and the activity of each group is a necessary contribution to conservation. Each group must, however, by reason of limited manpower, concentrate its activities in its own field—parks, wilderness, wildlife, a river, or a specific local area. The larger organizations are handicapped by their dependence on tax-exempt status for funds, and the legal restrictions on political activity involved therein. The little local groups fighting against powerful dam and road builders, real estate and other industrial interests, are hard put to it just to spread the word to people who would be concerned and who would help, if they could but know of what is involved.

**Fight for the Meramec**

Right in the center of these United States, for instance, is a scenic semi-wild river, the Meramec, offering fine wildland recreation within easy reach of large urban concentrations. A local association is fighting doggedly to stave off "development" by the Army Engineers supported by state and local politicians. There is no thought of a national riverway, little hope for a state park. The Engineers and politicians
aren't going to stop for a handful of paddlers and birders who like the “worthless” scenery. What chance have the latter, unless massive public opinion is marshalled in their behalf? How can they, with their slender resources, gain such support? If there was a national committee to which they could state their case, their appeal could be quickly transmitted to the affiliated organizations and to their memberships.

All these organizations, big and little, national and local, are but fragments of an enormous jigsaw puzzle, and I think it is time it be put together. When conservationists rallied together on a national scale, as in defense of Dinosaur or in behalf of the Wilderness Bill, they were victorious. But many a critical area, such as Glen Canyon, has been lost for lack of such massive national support.

It seems to me that what is needed is not another conservation organization (perish the thought!), but an affiliation of all existing organizations, which will serve as a communications center for transmitting information both from and to the field, and which will be free to engage in unrestricted political activity, as the separate affiliates may not. The pillars of such an affiliation would have to be the large national and regional organizations, but it should be open to all state and local groups concerned with outdoor conservation, on a pro-rata basis. Perhaps some such idea has already been considered and found wanting of sufficiently wide support. Conservationists are notoriously individualistically-minded. I suspect that more than one individual serves in Washington as a sort of unofficial lobby for the conservation movement as a whole, but that is far from being the same as an affiliation representing existing membership groups all over the country. The major hitch is probably that the large organizations cannot contribute adequately to a political lobby without losing their tax-exempt status, and are similarly proscribed. (Though heaven knows there are a number of private foundations engaged in some frightful political propaganda — they call it "education.") But in the rather
more favorable climate now obtaining in the national capital, surely some way can be found around this difficulty.

**Now Might Be the Time**

The AWA can hardly do more than urge the idea — and thereby give the "pillars" a shove. Right now seems an exceptionally propitious time, when we have a new liberal Congress and one of the most well-disposed Interior Secretaries in a long while. Quite possibly by the time this is in print, Congress will have revised some of its hoary rules and made it easier for conservation and other legislation to come to the floor of the House and Senate for a vote. The forces against us are mighty and powerful, both in financial resources and influence. It is time Conservation also went "big business."

It will, for instance, take some such all-powerful, all-representative conservation organization (and a good many others) to dynamite Congress and the Federal Executive into effective action against pollution of our waterways. This problem has grown to such alarming proportions as to be a national scandal, yet the federal Public Health Service does little more than conduct inconclusive studies. Harvesting polluted shellfish has become an exciting midnight pursuit like border run-running in Prohibition days: people may die of hepatitis as they did of bum gin. Our foods may be poisoned by lethal pesticides sprayed onto truck farms, which in turn run off with the rains into our rivers and poison our water supplies.

But the PHS traditionally follows a policy of maintaining amicable relations with the state health services. State governments are of course much more concerned with attracting revenue-producing industry than with saddling it with costly waste-disposal requirements. Local governments of course have not the resources. Only the federal government can crack heads and get action. It has been suggested that pollution control should be set up as a separate agency responsible directly to an Assistant Secretary of the Interior, leaving the PHS to concentrate on medical public health, in which it has been eminently successful. But it will take a great outcry from an aroused citizenry to accomplish this — and this is political activity, which is proscribed to most conservation organizations.

The need for a vigorous Conservation lobby is obvious enough. Can conservationists pull together strongly enough to support an effective, non-partisan political leadership?

Your Conservation Chairman would welcome comment on these meditations.

**From Your Editor**

Pictures on Page 16 are by (top) Peter Whitney and (bottom) Bart Hauthaway. Those on Page 17 are both by Bart Hauthaway.

In an early issue there will be a photo sequence showing Milo's regular (with-paddle) roll.

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**Classified**


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The Lost Beauties of Glen Canyon

By D. B. Luten

Lake Powell, if it is ever full, will be almost equal in area to Lake Mead. Named for John Wesley Powell, leader in 1869 of the first known expedition to float down the Colorado River, the lake is the reservoir formed by Glen Canyon Dam and it is today filling and destroying the Glen Canyon of the Colorado.

The water is backed up today 350 feet deep at the dam. Hydroenergy generation began in mid-August, a month ahead of schedule.

Late in June, we set out on the green waters of the lake, quite a crew of us, on an ungainly rubber raft assembled from war surplus bridge pontoons, the whole perhaps 30 x 20 feet and driven by two tired outboard engines. Our speed was perhaps 5 knots. With another sort of craft we might have made 25. But when looking at Nature, be it canyon walls or whatever, the important matter is not how fast you can go but how long you can spend at it. Five knots was perhaps as slow as we could afford to go.

Bitter Controversy

Our purpose was to see how Glen Canyon looks, now that the bottom of it has vanished forever from the sight of man. This has been a matter of bitter controversy for ten years now. The dam’s proponents have insisted no more beautiful sight exists than a water skiing beauty on blue water framed by red cliffs. The opponents, as they gradu-
ally learned what was in Glen Canyon, became more insistent that it should be left as it was—and they lost.

The proponents have said and continue to say this will be a major recreational center and that much economic benefit will accrue to the region. Recreation is, as most of us know, commonly justified on the score that it is good for the economy even though no one will allege that the purpose of recreation is to benefit the economy. And so now we find this region has become a National Recreation Area, very slightly administered by the National Park Service with one formal campground, perhaps a little togethery for a desert area, about three concessionnaires and, I believe, the same number of outhouses.

While the number of concessionnaires seems adequate, if it is to be a National Recreation Area with intensive use it needs more outhouses—in some places its shores are festooned with toilet paper.

It is not the most accessible place in the 48 States. In fact, this part of Utah and a region in central Idaho are the two largest regions not crossed by a road. And while it is not farthest away from the people of the 48 States, it does not miss this distinction by much. The remotest places are—and it seems curious—southern Oregon and a corner of northwest California, and the Canadian border of the northwestern States.

The lake has been given a tremendous ballyhoo for its water skiing, fishing and sightseeing. The water skiing seems fine—when the waters are quiet enough—but seems likely to be limited to the 5 per cent of the lake hard by the dam. The fishing may be good, for the lake has been stocked with millions of warm-water small game fish and whenever we were wading up some small backwater, we would have blue-gills and such nibbling at our toes. These matters I will leave to specialists in the field. The matter of sightseeing is more complex, and is too important to be left to specialists.

Too Late the River-Runners

Glen Canyon never became well known to the American public. In part, perhaps, this resulted from the late development of a technology of running rough rivers. This technology began with Powell himself when he showed the Colorado to be passable, but has only really developed in the last generation. Even so, two years ago at the place half way up the canyon, which is known as Hole-in-the-Rock, I counted names on a log book and found that at least 600 people had passed by there in the preceding month. Most had gone down in rubber rafts, in rubber assault boats and such. A few had driven 50 miles across the high empty plateau from the nearest town, Escalante, and then had clambered down the gap in the cliffs which gave the place its name. More pass by today, how many I could not say; the logbook would be under 200 feet of water and landing has little attractiveness.

Again, Rainbow Bridge, a National Monument for a generation, has been described as the least accessible of all National Monuments because prior to the rise of Lake Powell it could be reached only by 14 miles of trail or by...
a boat ride down the river plus a hike five miles in from the river. Nonetheless the logbook there showed 22,000 visitors by the end of 1962. Many people fail to find logbooks at these places and many scorn to register. The total of visits could be much higher, whether twice as many, or even more, I cannot know. In 1963, with access by power boat up the lake and part way up the side canyon, 2800 names went into the logbook, and in the first half of 1964, 2100.

**Revealing Answers**

Some of these visitors I questioned, asking whatever came to my mind at the moment. It should, of course, have been done scientifically, with a preliminary test sample and question evaluation and medians and confidence intervals and all that, but I wasn't in the mood.

At the narrows below Rainbow Bridge, I asked if it were worth the trouble to walk a mile up to the Bridge. "Oh, yes, don't miss it." And to clinch the matter, "Zane Grey carved his name on the Bridge." Next I asked if it would be better if the water were all the way up to the bridge. After a little reflection, the answer was, "No, I think you'll appreciate it more if you have to walk to it." But, it was decided the 5 miles from the river was too far to walk. So, I guess, at the lake's present level we have the best of all possible worlds; or perhaps we have merely estimated the optimum hike for a motorboater.

From another motorboater, who had been down the river before the lake, I got a spirited defense of the lake on the score that it made the region accessible to everyone. When I asked him whether Music Temple, half under water, had been improved, and he replied with a hard "Yes," I dismissed him as a witness trapped in his own illusions. From another, who had brought a group of Southern Californians, came a voice of dissent, "They're asking why all the build-up? Nothing here but red walls and heat."

Our own testimony is that a great deal remains and must always remain but it takes time to find, to understand and to appreciate it. Many things along these 1800 miles of shoreline will remain obscure. But, while another Cathedral of the Desert, another waterfall in a Hidden Passage, may exist, inaccessible to man until the waters bring him up through unsealed gorges, this is unlikely.

**Fierce Wind Storms**

Further, while the river, though swift, was flanked by a friendly shore, the lake is edged by cliffs which offer no shelter and which reflect the waves kicked up by the afternoon winds into a jumbled tossing sea without order. These winds, which were often a nuisance on the river, have sometimes, on the longer reaches of the lake, become a real peril. One of our afternoons, on a north reach of the canyon we had a furious tail wind driving us. But, on rounding a 90-degree corner to the west it became just as furious a headwind. At the turn, where the two winds met and where they had to leave the Canyon vertically, a substantial water spout appeared, wavered, broke, and formed again.

On the river’s shores, fuel was abun-
dant. At the lake's edge, in those places where one can land, it is usually rare. Camping sites are certainly no more abundant and are never the equal of the old river bars. We can also speak of the debris, scattered widely in the upper reaches of the lake, and so dense in some side canyons as to make entrance slow and arduous, although never impossible. We can also recall the great aeolian deposits of sand, piled up in leeward corners of the canyons, now slowly collapsing into the lake and leaving its curious residue of floating hydrophobic scum, sometimes six inches deep: the bright scum of Lake Powell. And, finally, the drowned cottonwoods of the Escalante and the magnificent aroma, filling the entire canyon, of pure vanilla from its oxidizing lignin.

Of the many places we visited on this trip, let me focus on the five named Rainbow Bridge, Music Temple, Hidden Passage, the Balanced Rocks, and the Cathedral of the Desert.

To get to Rainbow Bridge today, one need only go by motorboat perhaps 40 miles up Lake Powell, then turn to the right up Aztec Canyon for perhaps four miles, at which time he will find himself near the mouth of its tributary, Bridge Canyon. Landing at or near here, he can walk another mile or so to Rainbow Bridge. As the lake level rises or falls this distance may vary. However, a marina is planned for the mouth of Bridge Canyon at what is known as the Narrows, one of those deeply incised canyons, and presumably those who would see Rainbow Bridge in the future will tie up at the marina and be carried up to the limit of water in the canyon in a concessionnaire's boat. The bridge is enormous, spectacular perfection of its kind and was the focus of the controversy over Glen Canyon Dam. To me, though, it was never the crown jewel of Glen Canyon.

Music Temple
Music Temple is perhaps five miles above Rainbow Bridge. Powell came on it during his passage down the river and in a few paragraphs gives it high praise. Here, a small stream has been able to carve its canyon down to river
level for only a half mile back from the river. At this point, though, it had created an enormous amphitheater in the river's wall, and the cliffs rose, red, stained with the black of ages, on either side, tending to narrow rather than widen at the top. At the apex of the amphitheater, the stream had cut a narrow gorge descending steeply, and then dropping almost precipitously still some hundred feet to a pool at its base, a pool perhaps fifty feet across. The rest of the floor of the amphitheater was level sand. It was one of the wonders of Glen Canyon. Now one need not walk a half mile to see it. One can motorboat in to see what is left—the water is 200 feet deep in it. Accordingly, no one again will see any of it from the throat of the gorge downward. When Powell saw it, it was a wonder; today it is not much.

Across the river from Music Temple, is a most narrow canyon, one which comes in at such a sharp angle to the river as almost to escape notice. This was Hidden Passage. Here a stream had been quite capable and had brought its bed down almost to river level for quite some distance. About a quarter of a mile upstream after some wading, a little swimming, and a scramble around a great boulder caught in the throat of a short gorge, one came—before this year—on one of the real crown jewels of the region. It was a simple pool, with sandy bottom, deep, crystal clear, round, ten yards across, framed by rock walls, themselves adorned by maidenhair ferns, except at its outlet, and fed by a small waterfall, breaking free at the top, but then joining the steep wall fifteen feet lower, and entering the pool with never a splash, never a ripple. This place, of utter Grecian simplicity, made no effort to impress by grandeur, it simply reflected in perfection the red and black stained rock walls, the blue of the sky, and the green of the maidenhair ferns. It was beauty itself.

This summer we entered Hidden Passage. No walk, no wading, no swim, no scramble. We motorboated in 200 feet over all that was there, pushing the debris aside as we went.

One afternoon, two years ago on an earlier trip, we had scrambled up the sloping Navajo sandstone to get up where we could look out a bit. And up there, 200 feet above the stream, we came on the remnants of an ancient beach. Here were left, still, the hard stones brought from great distances.

A number of these stones were perched on pillars of sandstone, perhaps three inches high. Apparently, when they first came to rest they had protected the stone beneath them from the rain and, as the millennia passed, the rain itself with its small burden of acidic carbon dioxide from the air had dissolved away the cementing limestone of the rock and then washed away the resulting sand. How long had it taken? Who could say? A rough calculation suggested a minimum of 100,000 years. The river, 200 feet below, suggested it might have been millions. But in all that time, no one had come here, no one had moved a rock, no one had lifted one or turned it over to see why this had occurred.

Today that old beach is under fifty feet of water.

Next, farther up the river, we turned
up the major tributary from the west, the Escalante River, whose canyon was, if anything, more wonderful than that of the main river.

Eliot Porter, in a book primarily of photographs of Glen Canyon titled "The Place No One Knew," has caught the spirit and beauty of these places in a fashion rarely found on printed pages. It was titled The Place No One Knew because when the balance sheet of the gains to be expected and the costs to be incurred in the construction of the dam was made up, no entries were included for the loss of this most magnificent scenery. No one knew it well enough to speak up boldly on the size of the loss.

It is one of the confirmations of Eliot Porter's thesis that, unknown to him, a few miles up a side canyon of the Escalante lay another stream-carved amphitheater, similar to Music Temple, but on a greater scale, with more subtle coloring in its walls, with an almost enclosed roof, with incredible reflected lighting. This place we also saw. Its name, Cathedral of the Desert, can be dismissed as a Madison Ave. venture only until one has seen it. It still lies above water. But the lake has come the five miles up the Escalante and more besides, and perhaps a mile up Clear Creek Canyon, at the head of which is the Cathedral.

**Cathedral of the Desert**

The Cathedral itself was not easy to assess. It seemed not large, but I paced it and found its greatest length and width to be 130 and 60 yards. A thousand feet above, the cliffs seemed almost to touch each other. But was it, in fact, narrower up there, or was this an effect of distance? The pattern was strangely similar to Music Temple, a Z-shaped plan. Can we say its Creator shaped them both with the same hand?

Regardless of such fancies, to be there troubled one's conscience. For we knew that each day water was rising eighteen inches. How soon it might invade, we did not know. Since then, measurements suggest the Cathedral's floor to be 38 feet above the level the lake reached in August when they began to draw it through the turbines, when it reached MPP, the minimum power pool. To raise the lake's level up to this cathedral will take perhaps another million and a half acre-feet and it is unlikely that so much will accumulate until the spring runoff in 1965. Strong demands for water downstream should keep Lake Powell from rising much above minimum power pool until then. But unless in 1965 the forces which have produced two excessively dry years, produce a third, then inevitably, the Cathedral will be flooded and here as elsewhere the motorboats will cruise freely through it, leaving their sewage behind.

It troubles the conscience even if one should dream that it might never be flooded. Thus far, the place is still almost unknown. Eliot Porter did not know of it, in spite of quite a lot of time spent in the Canyon and many miles of hauling heavy cameras through difficult terrain.

If only the level of Lake Powell could forever be limited to a height of 3510 feet, the great bulk of electrical energy from its generators could still be obtained, and the climax of the magnificence of Glen Canyon could be saved. Whether the American people would destroy it in due course is uncertain and is another matter. But at least the decision would be theirs.

But as it now stands, the water will rise into this cathedral next May, because of a miscalculated, misrepresented, misbegotten concept of economic advantage. Should we then turn our minds away and leave it to its fate, as we turn our head away from the outstretched hand of the beggar in the street? Shall we, by remaining ignorant, avoid any test of our conscience?

(Ed. Note: Mr. Luten asks us to clarify a statement in his article in the Autumn issue that, as printed, was incomplete. An acre-foot of water equals approximately a kilowatt-hour when it falls one foot. It thus makes as many kilowatt-hours as there are feet to the penstock.)
From the weather reports coming in from various sections of the U. S. and Canada it is quite apparent that the white-water boating season has come to an end except in a few more favored spots. It is hard to realize that the summer and fall are gone and with it the joy of being out on the rivers with fine comrades, through beautiful scenery and friendly competition. There's nothing like it to put a zip in your blood stream.

Looking back over the summer there is one AWA activity that stands out above all others . . . the DUFFEK TOUR. This highly successful undertaking, spearheaded so ably by George Topol, finished in a blaze of glory and left behind some one hundred very happy participants. Without exception all reported it a wonderful experience and rated both Milo and his wife as SUPER — both in ability as well as personality. Milo has indicated that they would be willing to repeat the trip in 1965 if there is enough interest among our members. Will EACH OF YOU please write me your recommendations on this offer by Milo. We must give Milo an answer at an early date in order for him to make the necessary arrangements.

Now that the Duffek tour is history we can report a running "battle" with the Immigration Service trying to convince them that the Duffeks were NOT taking a job away from some worthy American paddler — or union member. About ten days before the Duffeks were scheduled to leave Switzerland we finally received clearance — in San Francisco — for the trip but Washington and the Swiss offices still had to be notified. We finally were able to get the local Immigration Service to wire Washington and request Washington to cable Switzerland. The big word finally reached the Duffeks about five days before they were due to depart.

In our original agreement with the Duffeks we were to pay their expenses while on this side of the Atlantic. They were to pay their flight expenses over and back — with the understanding that if we had any money left over from local collections and expenses, the over-age would be sent to the Duffeks to help defray part, or all, of their air fare. I am happy to report that our very able Treasurer, Charlie Smith, mailed the Duffeks a check for $452.40—the amount left over after all local expenses were paid.

A recent letter — Duffek to George Topol — stated that the Duffeks very much enjoyed the tour, especially meeting so many fine and friendly people. He "had received many letters
from the participants and inquiries as to whether he would come again next summer." He plans to go to the world championship but would certainly prefer to come here on another training tour. He would like to know of this possibility not later than the end of February, 1965. So, please talk this over among your various groups and let us hear from you on this at your earliest date.

Once again I want to pay tribute to all those who had a part in making this undertaking such a huge success. Particularly do I want to thank George Topol and each local chairman—also those who provided lodging, entertainment and equipment for this fine couple.

Also, a TIP O'THE HAT TO THE AMERICAN WHITE-WATER AFFILIATION!

Received a letter and folder from my friend Russ Park of the Hudson's Bay Company, way back in the vicinity of Ottawa, advising me that, recently, the Hudson's Bay Company purchased a number of new aluminum canoes and were launching a new "U-Paddle Canoe Service." These canoes will be made available to experienced canoeists at various points in Canada. You rent them at one Hudson's Bay store, or post, and turn them in at another at the completion of your trip.

The canoes are 17 ft. Grummans, weight 75 lbs., with keel, and come equipped with white ash paddles and a carrying yoke. Charge: $25 per week—the minimum rental period. Inquiries should be sent to: Hudson's Bay Company, Hudson's Bay House, Winnipeg 1, Canada, attention the Northern Stores Department. We have written for more details on the plan.

I have a clipping before me, from the San Francisco Call-Bulletin, telling of the departure (last summer) of staff writer Luther "Doc" Meyer, age 68, and his 12-year-old grandson, for the arctic. Last year "Doc" Meyer "made a 1,000-mile kayak trip down Canada's 'mighty and treacherous MacKenzie river' solo. This year he will be front man in his 'two-man imported kayak for a similar trip'... to the 80-mile delta where the MacKenzie pours a half a million cubic feet per second of water, sand and silt into Alex MacKenzie's frozen sea.' " If interested in such a jaunt next summer—write Doc and I'm sure he would be willing to give a few tips on such a trip.

From recent talks with representatives of the Bureau of Outdoor Recreation much progress has been made in the on-the-spot studies of the rivers on the original list and the reports on these studies are already in Washington, D. C. Many of you have cooperated with your local BOR representatives and helped them to better understand the meaning of WILD RIVERS. For this CONGRATULATIONS!

Here in California we have also made much progress with our State Department of Beaches and Parks with the idea of setting aside certain stretches of rivers as State Wild River parks. About a month ago I had Mr. Edward Dolder, Chief of this Division, in the front seat of my double foldboat on a two-day, 55-mile trip on our Sacramento River. It was his first experience in such a craft. There were some small rapids, fast moving water and good scenery—and he had the time of his life. He has since informed me that, since our trip,
they have flown over this and other sections of our rivers, and taken color photos as an aid in selecting the more suitable stretches of rivers. They also have several landscape architects working on plans for certain sections to improve their appearance by planting more trees, shrubs, etc.

What progress have you made with your state officials?

A letter from Dave Kurtz (with apologies to our Canadian friends):

"Many people have asked us how they can support the U. S. efforts in sending a top notch team to the World Slalom and Wild Water Championships. I estimate that to do this will require raising in the neighborhood of $15,000. We could then send a larger team of our very best paddlers and would have a very good chance of bringing the championship to the U. S."

So here's your chance to help in raising the necessary funds to send a top-flight team to Europe next summer. Talk this up in your local meetings and encourage as many as possible to donate to this very special cause. Any amount will be acceptable. You could get a small donation from each member taking part on your various river trips and put this into the racing kitty. Send donations to: DAVID A. KURTZ, National ACA Slalom Chairman, 623 West College Avenue, State College, Pa.