

Canoeing

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SPECIAL FEATURES

PRESSURE TRAINING FOR
CANOEING

BEST KAYAKS, CANOES
AND PADDLES

TEST REPORT - THE
HUNTER K.W.3 COMPARED
WITH THE HUNTER
SUPREME

THE WAY AHEAD

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Editorially Speaking

Next month thousands of students all over the country will be enrolling for evening classes in subjects ranging from car maintenance to madrigal singing. The majority of these classes are sponsored by the Local Education Authority who provide a wide range of facilities, including a paid instructor, for what is a very nominal charge. In a number of areas, canoe building is one of the subjects available and from all accounts is one of the most popular groups.

With the increasing number of clubs sponsoring Eskimo rolling classes, it seems to us that it may well benefit some of them to consider placing their classes under the auspices of the Local Education Authority. This would have several advantages not least of which is the increased pressure which can be brought to bear to obtain the use of the local swimming baths. Of course, if such a class is organised in this way admittance must be thrown open to the public but this would seem to be a good thing for the more people who can be taught the correct canoeing skills the better, and ultimately it should result in increased club membership.

Any clubs who are interested in organising classes should in the first instance approach the Local Education Officer, indicating the scope of the course and the number of people already interested. In some cases, you may meet with a flat refusal for not all authorities are prepared to sponsor purely recreational activities, but in most cases you may be assured of a sympathetic hearing.

Pressure Training For Canoeing

BY FLIGHT LIEUTENANT P. F. WILLIAMS

Pressure Training is a method of intensifying practice in a particular skill. By forced attention to a skill the performer can eliminate weakness and consolidate technique. In pressure training the same skill is repeated time and time again until the required standard of technique is reached. Selected canoe techniques are ideal for applying pressure training methods, the benefits derived being a reduction in the time of assimilating the technique and a higher standard of skill attained.

Pressure Training in calm water not only assists the beginner to learn quickly but also prepares him for more difficult conditions which can be simulated by artificial means. Some skills that lend themselves to pressure training are as follows:-



Skill

Slap support
or Sculling
for support
(Single Canoe)

Method

The canoeist takes up his position in the canoe with a partner in the water preferably at waist depth holding the stern of the canoe so that his intended movements cannot be seen by the paddler. The partner tips the canoe on one side and relaxes his hold, the canoeist rights the canoe by sculling or slap support with his paddle. The tipping is repeated on either side without warning to the canoeist and he rights himself in the same way. To intensify the practice and to simulate rougher conditions with the boat yawing and pitching, a second partner may lift, depress or twist the canoe from the bow.

Sculling for
support
(Double Canoe)

To give support in a heavy rapid the bow man should hold his paddle with the blade angled so that the leading edge is raised slightly and is extended to one side in a similar position to that of the paddle at the commencement of the low telemark. The sternman similarly extends his paddle to the opposite side in the same manner. In the event of a partial capsize the paddle of the person on that side sculls forward and supports the canoe. To pressurize this technique two partners assist in the water at about waist depth and on either side in line with amidships. The canoe is then lifted and depressed by lifting or depressing the gunwale and is righted by the paddle being sculled forward by the person who has his paddle extended on that side.

Bowrudder and
reverse sweep
(Double Canoe)
Fig. 2

Arrange a row of tins in line about 30 yards apart and anchored to the bed of the river. The exact position will depend on the strength and direction of the current. Using the bow rudder combined with the reverse quarter sweep stroke, move the double canoe diagonally to the left and right alternatively between the tins. As the crew becomes more proficient reduce the distance between the tins.



Telemark.
(Single or
Double Canoe)

Arrange a line of tins some distance apart, the canoeist/crew telemark around each tin to the right, paddle back to the starting position and repeat to the left. As the canoeist/crew become more proficient reduce the distance between the tins.

In many cases it is possible to obtain more practice in a few minutes than can possibly be obtained in many hours or even days of paddling on a river. However care must be taken to ensure that the increase in tempo associated with pressure training does not result in a deterioration of newly acquired technique. If this is considered then together with the added enjoyment of this purposeful teaching method its values are very considerable and worthy of wider consideration in this sport.

Sprint Kayaks, Canoes and Paddles

NOTES PREPARED BY THE ARMY CANOE UNION

1. This is produced as a guide to units who may be unaware of the equipment which does exist.

The kayaks are the K1, K2 and K4 which are raced over 500, 1000 and 10,000 metres at the Olympic games and in international competition each summer by the International Canoe Federation.

2. The K1 and K2 may be used for Long Distance racing in addition to Paddling. They are produced in glass fibre and also in hot moulded veneer.

The Kayak

3. The Kayak 1, 2 and 4 are rather difficult for the novice to use. The normal novice of the Army who has done some Long Distance canoeing will usually need 10 hours or so practice spread over a week or so to become proficient. The complete novice who has never used a canoe will however normally become proficient much quicker, sometimes in an hour or two.

By proficiency we refer to the ability of the Paddler to keep the kayak upright and to move it through the water. To race it will require very much more experience.

The Kayak 4

4. The Army can succeed in kayak racing because of the advantages it has in training time, manpower, continuity of crews and finance.

Whereas technique is important in kayak racing much can be done by dint of stamina, strength and team work. Particularly in the four man kayak, the K⁴, strength and team work are most important. Britain has no K⁴ team good enough to compete in the Olympic Games mainly because of the difficulty of a 4 man civilian crew being able to train together. It would be quite possible for a unit to have a K⁴ crew good enough to represent Britain in the 1968 Olympics. In fact the British selectors are particularly looking to the Army for the K⁴ crew in the future.

The K.1 & 2

5. These kayaks require more technique than the K⁴. They appeal to the individualist. The K⁴ crew should be able to use, but not necessarily race, the K1 and K2.

The Canadian (C) 1 & 2

6. This craft is hardly used in Britain mainly because of the difficulty in using it. It is very unstable. It is raced in the Olympics. It is very similar in shape to the K1 and K2 but the Paddler kneels to paddle with the result that the CG is very high. A single bladed paddle is used.

A keen unit could sweep the field in this event, if they could become proficient.

Kayak Craft Available

7. The glass fibre kayak suitable for training and racing up to a point are:-

K1	Pointer	Cost £38
K1	Limfjorden	Cost £38
K2	Sharkie	Cost £55
K2	Merlin	Cost £55
K2	Accord	Cost £55

The Accord is obtainable from J.GMACH, Fordingbridge, Hants. The other kayak are all obtainable from the Canoe Centre, Beauchamp Road, Twickenham.

8. The craft which are essential for top class racing are the Struer, Danish kayaks. They are:-

K1	Shark	Cost £80
K1	Rapido	Cost £80
K1	Pointer	Cost £80
K2	Ribelle	Cost £120
K ⁴	Shanty	Cost £200

Second-hand craft are often available from the civilian clubs. The above are obtainable from the Canoe Centre, Twickenham, Agents for Struer, to order.

Canoes

9. The canoes available are made by Struer of Denmark. There are no glass fibre yet available. Approximate costs are:-

C1	£88
C2	£130

Paddles

10. Racing paddles, which are lighter and shorter than the touring paddles are essential to success. The best in the world is the "Liminate" costing 7 guineas which the aspiring paddler always uses. Adequate for most purposes are the 'Viking' variety costing £4. 10s. Od.

It is recommended that all novices are persuaded to use the right hand blade from the beginning. This removes timing problems in the K2 & K4 later, when left and right blades are more difficult to synchronise.

Liminate must be ordered and there is usually a delay of many weeks due to demand exceeding supply.

Other Craft

11. The single seat long distance racing canoe is a reasonable substitute for the beginner who has no K1. Class 3 and 4 of the LD are all suitable.

Suitable craft are:-

'Gannet' by The Canoe Centre
Moonraker Class 3 by Jenkins & Lancefield
Moonraker Class 4 Corsham, Wilts.

(The above article has been reprinted because it seems to us to present an admirable summary of sprint racing in this country, and as such would be of value to any group who are thinking of making a challenge in this field of our sport. Ed.)

Move of Offices The Central Council of Physical Recreation

The C.C.P.R. is transferring its Headquarters and London & South-Eastern Region offices from 6 Bedford Square to 26/29 Park Crescent, London, W.1. (Tel. LAngham 6822/9) on 3rd September 1964. The new building is on the corner of Park Crescent and Marylebone Road, close to Regent's Park Underground Station (see diagram overleaf). Buses Nos. 1, 18, 27, 30 and 176 pass the door and Baker Street is within easy walking distance.

The ground and first floors of the building are being taken up by the Marylebone and Bloomsbury County Courts; the C.C.P.R.'s Headquarters offices will be on the second floor and those of the London & South-Eastern Region on the third floor.

The following governing bodies of sport are also renting offices in the same building:—

FOURTH FLOOR Amateur Athletic Association.

THIRD FLOOR	British Canoe Union	All England Netball Association
	British Cycling Federation	Amateur Rowing Association
	British Amateur Gymnastic Association	Squash Rackets Association
	The Hockey Association	British Sub-Aqua Club
	British Judo Association	English Table Tennis Association

There will be two committee rooms in the new building and it is hoped that these will be available for hire to organisations associated with the C.C.P.R. Further particulars will be available at a later date.

W. Winterbottom

An Introduction to Canoe Design

Part 2

BY ALAN W. BYDE.

CALCULATION NUMBER ONE

Class rules for Hasler Trophy, class three canoe, specify maximum length of 15ft and minimum beam of 23 inches. It may take for example four inches draught, which is one third of a foot. Its volume underwater is (say) 15ft by 2ft by 1/3ft, which is 10 cubic feet, which amount of water weighs 625 lbs. One infers that the total weight of the canoe is 625 lbs, which is patently ridiculous. What is wrong? I have calculated the volume as if the canoe were a box, with rectangular plan, side, and cross section. In the case of the canoe hull, which is a combination of subtle curves, its shape is very important. The plan shape is pointed at each end, the side shape is curved up from the middle to the ends, the cross section is curved in varying degrees. This leads to considerations of shape.

Shape

Plan. If the plan shows a slim pointed shape, it is likely to be a fast hull. If it shows a parallel sided hull with sharply in curving bow and stern, it is barge shaped, and likely to be a load carrier. If it has sides which are elliptically curved, it may be a Canadian canoe, or a slalom type of hull, which has medium speed and fair manoeuverability. Clearly, shape affects the use to which a hull is to be put.

Side. If this has a straight keel, it will be slow to turn, and it may be fast, as a K1, or slow, like a "barge". A slalom hull will have a large rocker, which gives good manoeuverability, because by careful designing, it is possible to reduce the waterline length without reducing the overall length, (specified in class rules). Reducing LWL reduces speed, and it reduces the immersed length of the hull, which reduces the leverage that the water can exert upon it. In the case of a flat keel, it will be necessary to use a rudder to turn the brute. The slalom hull must not have a rudder, and in any case one travels sideways and backwards in slalom almost as much as one travels forwards. A rudder used on a reversing hull flips sideways, and locks on like a brake.

Cross section. This affects stability, or rolling characteristics. If it is wide and flat, it is inherently very stable on flat water. If the water peaks up into a wave, with a vertical face parallel to the canoe, the canoe bottom will follow this vertical face, stand on its gunwale, and roll over. No one can stop it. The slalom hull section is smoothly rounded, giving a hull which is sensitive to changes of balance, giving the novice a feeling of general instability. Conversely, it is this characteristic of the canoe which allows it to be leaned over on, for instance, the face of a wave and so remain upright on sloping water. This requires and ensures paddling skill.

The K1 hull is the fastest of all solos, and is a smooth curve from waterline to waterline, almost a semi circle. This gives the smallest wetted area for a given buoyancy, and a smooth water flow at the expense of transverse stability. This reduces skin drag. Later types have cunningly contrived cross sections which give the

narrowest waterline beam possible without reducing the minimum beam set by the rules. This is achieved by flaring out the sides of the hull above the waterline to the maximum beam. This may allow an extra $\frac{1}{8}$ of a mile per hour, which is enough to win races.

Chine design canoes are usually so constructed to make use of flat sheets of ply, not because there is any great merit in slab sided hulls. An approximation to a curve cross-section can be achieved by introducing an additional chine, or chines; this is known as a multi-chine. Thin three millimetre ply can be persuaded to take two curves, one at right angles to the other, in other words, a modified "dome" may be fashioned from flat ply. The amount of curve which can be achieved, however, is severely limited.

MISLEADING CALCULATION NUMBER TWO

Another basically wrong calculation. Consider a weight, say 240 lbs, acting at a centre of gravity about 6" above the water surface. This is the weight of the loaded canoe, and is kept afloat by an equal upthrust acting at the centre of buoyancy, which must be directly below the centre of gravity. It is, say, 2" below the surface of the water. Here there is a downthrust of 240 lbs in place 8" above an upthrust of 240 lbs. This is a very unstable position, and if the canoe should go off balance the slightest little bit, it will be flipped over by a couple which, when it is in the horizontal position, is 160 lbs/feet. This is a very powerful turning movement. What happens to the canoe in fact when it is slightly off balance? It gently returns to its stable position.

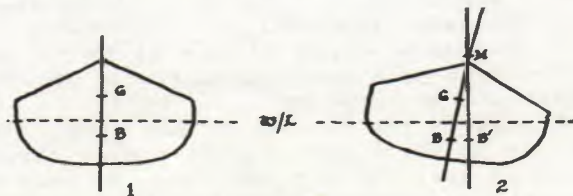
The reason why this calculation leads to a wrong conclusion is that the shape of the cross section of the hull has been ignored. What happens when the hull tilts slightly is that centre of buoyancy moves across in step with the centre of gravity, and a slight righting effect is felt. The diagram will help you to see this. This leads to considerations of stability.

Different cross section shapes have different characteristics, and these characteristics can be measured. Whenever measurements are taken, it is always from a reference point. The reference point for measurements of stability is the metacentre.

THE TRANSVERSE METACENTRE

The metacentre is the point of intersection of a vertical line through the centre of buoyancy in the initial position with a vertical line through the centre of buoyancy in the slightly tilted position.

The metacentre is the point above which the centre of gravity of the loaded canoe must not be raised if it is to remain stable on the water.



In these illustrations of the cross section of a hull in the initial, or upright position and in the slightly tilted position, G is the centre of gravity of the loaded canoe, B is the initial centre of buoyancy, M is the metacentre, B' is the centre of buoyancy in the slightly tilted position. Provided that M remains above G there will always be natural stability in the canoe, and it will always remain upright.

When the canoe reaches the point of no return, it has tilted so far that the deck has dipped underwater, and B' is on its way back towards the centre of the canoe after having moved outwards. It goes out, and then comes back because of the inward slope of the deck. When G, which is still moving outwards arrives directly above B' the canoe is at the point of no return, and a support stroke is needed.

The height of the metacentre above the centre of gravity varies because it is affected by many things. The centre of gravity remains in much the same place but the metacentre is affected by the tilt of the hull. At the point of no return the metacentre and the centre of gravity are in the same place. Tilt affects metacentre. If the canoe moves from fresh water to sea water, the hull rises slightly in the water because it is in denser water. Water density affects the metacentre. If the canoeist takes on a heavy load, and the hull rides deeper in the water, the metacentre is affected. Loading affects metacentre. As a canoe encounters rough water, it is constantly and rapidly changing its attitude, and its waterline is difficult to determine. The metacentre changes also, and balance is affected. The inertia of the canoe affects its rate of change of attitude. Inertia affects metacentre.

Do not worry about these things, but be assured that an understanding of them will improve your ability to design and build your canoe. Experience of paddling several different types of canoe is a great help.

There are other forms of stability. such as end to end, or longitudinal stability which has its own measuring centre, called the longitudinal metacentre. I have added one, which I will call directional stability.

Directional stability. This is the inherent ability of the canoe to follow a straight path. A K1 has a large amount of directional stability, a slalom hull has little or none. Other types of canoe come somewhere between these two extremes. The amount of directional stability designed into a hull should be conditioned by the use to which the canoe will be put; there is no ideal amount. For a sprint paddler to use a slalom type hull would be bad for several reasons, not least of which would be that he would be correcting direction instead of concentrating on speed paddling. A touring canoeist might find the directional stability of a K1 type of hull too much of a handful on a rough river. A slalom canoeist would be at a disadvantage in a slalom hull on a short choppy sea, where a rudder and a straight keel are an advantage.

Directional stability is affected by shape, degree of rocker, length of LWL, whether a rudder is fitted or not, and whether the canoe has a high degree of inertia about a vertical central axis.

Test Report

The Hunter K.W.3. Compared With The Hunter Supreme

BY ROBIN WITTER



The K.W.3 at first sight looks rather unusual, having its widest point slightly behind the cockpit. The deck is very low, at least 2" less than the Supreme, making it easier to avoid that 50 with the high hanging pole. In cross section it looks remarkably flat bottomed for a slalom boat, though there is plenty of rocker. This style of design is currently favoured by the East Germans (The World Champions) and calls for a somewhat different style of paddling, the boat being easiest to turn in the upright position; no advantage is obtained by leaning the boat onto the gunwale as in the classic Telemark.

The boat received for testing was very strong, and certainly much stronger than some of the earlier Supremes, where weakness lay in the deck. This improved strength comes from a thin strip of beading enclosed in fibreglass running from bow to stern in both the deck and the hull, and also two rigid metal bars fixed across the gunwales about 2ft fore and aft of the cockpit. Both these features help to reduce the force tending to break open the gunwale joint when a heavy weight of water hits the deck, and have proved very effective in some heavy surf and stoppers. The gel coat, however, after considerable use has shown signs of cracking at the bow and stern - the two most vulnerable points.

The K.W.3 is considerably slower than the Supreme: 45 secs in 7 mins 20 secs under identical conditions in a recent Leven Test. Paddling this boat on flat water makes one realise how fast the Supreme is for a slalom boat.

The seat is centrally placed in the cockpit in the K.W.3., and is provided with adjustable webbing hip supports and backrest. This latter comes at about waist height and gives a very comfortable arrangement with great freedom of movement, particularly when leaning backwards. The backstrap tends to chafe on long journeys. The big disadvantage of this arrangement is that having a backstrap in the middle of the cockpit and a low deck makes the boat quite difficult to get in and out of.

The footrest is efficient, easily adjustable, and does not jump out when diving as the Supreme's footrest tends to. In my opinion the kneegrips are the best to be seen on any boat, and

really are knee-grips. These are again fully adjustable, sliding on a metal bar and locked by a wing nut. They look heavy but aren't.

The spraycover on the test model was very tight to put on, but once on was efficient. Again a big improvement on the earlier Supreme spraydecks.

As already stated, to get the best out of the K.W.3. it is not necessary to lean it when turning, and thus it takes a little time to learn how to paddle it efficiently if one is used to the more conventional shape. Once got used to it handles remarkably, though it has a "point of no return" like the Spuhler MkVI, which is absent in the Supreme.

Overall the K.W.3. is a big advance, as a slalom boat, over the Supreme, being shorter and lower and thus easier to manoeuvre. For this it has had to sacrifice some speed. Once got used to it is a superb boat, and I think it is the shape of things to come.

Manufacturers: Streamlyte Mouldings Ltd.,
124 Brighton Road,
Shoreham-By-Sea,
Sussex.



First Steps in Canoeing

These boys are on a course at the Derbyshire Education Committee White Hall Centre for open country pursuits learning the basic techniques of fell walking, caving, mountaineering and canoeing. The Centre, located at Buxton, takes children from schools all over the county.

The canoes shown here at the Whaley Bridge reservoir have been moulded from Cellobond polyester resin and glass fibre by the staff of White Hall Centre. Fifteen have so far been produced. They are 13ft 6in long and weigh less than 40 lb. The canoe has been specially designed so that it is safe and easy to handle in the water and light enough to be carried by two youngsters.

Paddling Instincts v. Natural Instincts

BY GEORGE TOPOL (OKVC, CANADA)

Let us first find out what an instinct is. The Oxford Dictionary says it is "an innate impulse; a natural or spontaneous tendency or inclination; an innate propensity in organized beings (esp. in the lower animals), varying with the species, and manifesting itself in acts which appear to be rational, but are performed without conscious adaptation of means to ends." (Please disregard the reference to the "lower animals").

Apparently, our natural instincts are of little or no use as far as paddling is concerned. In fact, they are the greatest handicap when it comes to handle the little craft. Just watch a beginner. You will not have to wait too long. The first little wave will make the boat lose its balance. The boat would come back by itself to its upright position were it not for the occupant's instincts. When he feels that the boat is leaning to one side, his instinct tells him to bend his body to the other side. This brings the boat to the verge of capsizing. Again his instinct tells him to drop the bothersome paddle and to get hold of something firmer. So he grabs the gunwale and slowly and majestically disappears from view.

What happens next? Naturally, first come the usual two big bubbles, a gurglè and a wet head. By this time the swimmer has regained his dignity and his instincts continue to issue commands. The first thing he notices is that the boat is upside down. His instinct tells him: "Flip it over". He again follows his instinct and in no time the boat is filled with water and nearly sinks. At this moment the instinct commands: "Get to the shore" and the capsizes leaves the boat. But the current is fast and the instinct says "Stop!". So he tries to get a footing on rocks and gets bruises as a result. Finally, soaking wet and limping he reaches the shore and wonders what went wrong....

Mother Nature gave us instincts to protect ourselves in cases of emergency. It was not her fault that we sold our souls to that funny white water sport. Man was not intended to thrive in rapids. That is why we have to use the boat and the paddle and that is also why we have many things to unlearn. After a few upsets we will lose the natural fear of water and also the "wrong" instincts. However, some of them are quite stubborn.

Subconsciously we are all afraid of water. To plunge into cold darkness, to be cut off from the life sustaining oxygen is too much against our nature. We might want to do it on our own terms - to swim and dive whenever we feel like it. But the river and the boat like to take us by surprise. If we are not used to sudden upsets, we are likely to get panicky and act in a very unwise manner. It does not help to read about how to behave before and after an upset. This is something we have to get into our blood and do automatically. Only practicing makes a master and the best place to practice is the swimming pool. There the water is clear and warm and there are no rocks and no muddy bottom.

If you have an opportunity to paddle in a swimming pool, make it a point of capsizing as often as possible. This will teach you to remain calm in emergencies and that in turn will reduce the amount of involuntary upsets during the season. Try to learn the Eskimo Roll. It does not matter whether you succeed to roll but trying will get you accustomed to stay under water. The most important thing you will learn is not to drop the paddle when tipping over.

There was the case of a paddler who, through his own stupidity, was swept over a fall. He went down head first against shallow rocks but since he held on to the paddle with all his might it was the paddle and not his head which broke and absorbed the shock. This is an extreme example but there are many instances when the paddler can save himself a great deal of trouble by simply hanging on to the paddle. Especially, in shallow rivers one can frequently right the half capsized boat by simply pushing with the paddle against the river bottom.

Another common mistake in the eagerness to leave the boat before it even capsizes. In most cases it takes more than one second for the boat to capsize. If the paddler remains calm, he can easily recover from a near upset by using a proper stroke. But if he gives up too easily, drops the paddle and grabs the boat, he is asking for a swim.

We want to stay in the boat and this is where our instincts deceive us. They tell us to stay as far away from the water as possible. Even experienced paddlers tend to lean away from the water when the boat loses its balance. The proper thing to do is to defy the instinct and lean towards the wet element. Thrust your paddle deep into the water, your lower hand below the surface, and then push with the upper hand. This is the most effective recovery stroke. If you lean away from the water and only skim the surface with the paddle, you are inviting the inevitable.

Our boats have a very small amount of natural stability. The sooner we learn not to depend on them the better for us. It is the paddle and the water which are our only reliable means of support. Let us all learn to use them to our best advantage. Practicing in swimming pools and shallow lakes will teach us things which hundreds of paddling miles will never do. Get rid of the wrong instincts and learn the new one which will give you the confidence and skill you need to enjoy the fine rivers we have.

STOP PRESS:

OLYMPIC TEAM FOR TOKYO, 1964

The following have been selected to represent Britain in the Olympic Games at Tokyo:

K.1. Wilson, K.4. Wilson, Lawler, Palmer, Edwards.
K.1. (Women) Tucker.
Team Manager: Woods.

There is also a possibility that another man may be sent.

Letters

Dear Sir,

Hasler Trophy Points

It is hoped that all competitive canoeists take part in races for the satisfaction of competing and possible winning. However, as the B.C.U. sponsors Long Distance races with National Championships the Hasler Trophy to give added interest competitors presumably race with trophies and championship points in view. This of course is a very good thing, particularly as canoeists can still behave as amateurs in the true style. It is noticeable though that there are a lack of entries for the Ladies sections and I wonder if the present rules account for this. It seems that if there are not at least 3 competitors those taking part cannot score championship points although they may race for a medal or local trophy. If there are not 3 entries this is alright as the Ladies know beforehand that they must race in Junior sections. However, if there are 3 entries and one does not start the other 2 have had a wasted journey - point wise. In a situation like this is it not possible that ladies who might enter do not do so as they fear that on the day of the race they may be unable to paddle for points. Would it not be more encouraging to rule that if 3 Bona Fide entries are made any competitor starting can paddle for points even if one or two others do not start. If necessary, only award points if the winner or only competitor completes within 120% of the course record for the section. As it stands, two competitors can travel many miles only to be told at the starting line that they cannot gain points because another entry has scratched. It may be suggested that Ladies sections should not carry points in any case - I would not agree - but at least it would present a clear situation to would-be entrants and competitors.

Yours faithfully,
Brian Webb,
Hereford.

Dear Sir,

Never Take Your Buoyancy For Granted

We read Brian Skilling's article 'A Matter of Buoyancy' with considerable interest and a little concern. We would suggest that buoyancy, being a matter of some importance, should never be taken for granted. Whether you use a beachball or any of the more expensive, but not necessarily more efficient, media, it is worth checking from time to time.

Recent experiments have proved to us that Polyurethane Foam is not as commendable as your article would infer. We have found that the cells of this foam are liable to break down and become absorbant under pressure. Even to the extent that when a canoe is being emptied of water the rush of the water from one end of the canoe to the other is sufficient to cause cell breakdown.

Canoeists who rely on Polyurethane Foam should check the

weight of their canoes. Chances are they will find a considerable weight increase and have probably been carrying around a few spare pounds of water. We should perhaps add that it has been our practice to include Polyurethene Foam in all our models, taking it for granted that this was the Supreme buoyancy. Alas we can't always be right.

What now? Back to beachballs?

Yours faithfully,
M. Macdougall,
Streamlyte Mouldings (Marine) Ltd.

(We are most interested to learn of this breakdown in polyurethene buoyancy and we would be glad to hear of other experiences with the same material. Also, is polystyrene foam affected in the same way? It would also be interesting to know whether polyurethene breaks down only when the cell content is very high, as we have seen this material in use without any apparent signs of breakdown. Ed.)

Dear Sir,

L.D. Racing and the Services

While I fully agree with Brian Webb's views as expressed in his letter published in your July issue, perhaps I might be permitted to make a few points in the Services' defence.

The Devizes - Westminster race receives strong support from the armed forces, particularly from young servicemen's units, mainly because it demands those qualities, both physical and mental, which it is our especial concern to develop: technique is somewhat less important than in a shorter race. Unit Commanders tend, therefore, to see in the race an extension of normal training, and, while they strongly support participation and render such financial aid as is possible, problems do arise which may be overlooked.

Most units suffer from frequent changes in personnel and consequently, in minor policy. There is, therefore, a lack of continuity in our Canoe Clubs whose fortunes are subject to marked fluctuation. The Services offer a very large number of sports, each of which must have its bite of the (limited) financial cherry: thus a unit which has brought K2's for the "D/W" is unlikely to be able to purchase L.D. class canoes - at least for some time. Often, no suitable water is available; and transport is frequently a very real problem.

However, it seems likely that the benefit of Service competition will soon be felt in L.D. racing. An Army Canoe Union has this year been formed, and Canoeing is now recognised in the Army as an official sport, publicity for which is one of the A.C.U.'s first aims. So far some success has been achieved in this direction: Army L.D. Championships, in which 110 crews competed, were recently held at Walton-on-Thames. Style was generally poor, but, with increased competition, this should improve. One Army unit has purchased a K⁴, and other units are also buying L.D. class canoes. In the recent Hartlepoons ranking race, 21 civilian and 24 Service crews competed; at Chester there were 54 entries, of which 23

were from the Services. Army Slalom Championships were held at Shepperton in June, and we hope to hold a Paddle Racing meeting in October.

We should like to see introduced into L.D. racing a Class V (b). This would enable our Junior Servicemen to race the considerable number of K2's now available, in Haslar Trophy events in their own class, and would entice more units into L.D. racing. In the future, we hope to organise a ranking race and take our full part in the sport.

Yours faithfully,
D. Braund,
Captain, RAEC
Secretary,
Army Canoe Union.

News Flashes

GLASS FIBRE CANOES FROM SOLENT

We hear that Solent Canoe Centre have been testing the prototypes of a glass fibre single and a glass fibre double kayak in local races. Their success in these events and general all round performance means that these boats will be on the market very shortly.

FIRST UNIVERSITY CANOE CLUB IN NEW ZEALAND

A canoe club has been established at Auckland University. New Zealand, and is evidence of the rapid growth of our sport over there. Membership already stands at fifty members and continues to grow.

B.C.U. BOOKLET No. 6

The British Canoe Union will shortly be publishing Booklet No. 6. The subject will be 'Long Distance Racing' and the text has been prepared by the Long Distance Racing Committee. In view of the rapid increase in popularity of this branch of our sport, it is expected that this will be one of the most popular titles in this series.

BRITISH CANOE UNION A.G.M.

This will be held at Leamington Spa on 30th January, 1965 at 2.30 p.m. It will be followed in the evening by a social gathering. Accommodation will be available in local hotels, youth hostels and private houses.

RIVER WYE YOUTH HOSTEL

Canoeists using the River Wye will be interested to learn that Welsh Bicknor Youth Hostel have now provided a special landing point for canoeists and that hostel and camping facilities are available. Enquiries to The Warden, Youth Hostel, Welsh Bicknor Rectory, Goodrich, Ross-on-Wye, Herefordshire; or to Y.H.A. Trevelyan House, 8 St. Stephens Hill, St. Albans, Herts.

Book Reviews

GUINNESS BOOK OF OLUMPICE RECORDS by N.D. and A.R. McWhirter
(Oak Tree Press, 7s. 6d.)

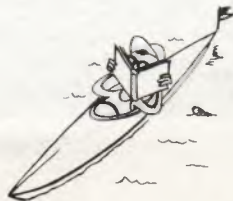
Beginning with a short account of the Ancient Olympic Games followed by one of the modern Olympics, this book then goes on to list the Gold, Silver and Bronze medal winners since 1896 in the twenty current sports.

It is perhaps unfortunate that the programme of canoeing events since 1936, when it was introduced into the Olympic programme, has changed several times. Unfortunate because this book only lists the medal winners and times of those events which are being contested in the current Games. Thus there are no details of the early 10,000 metre events nor of the 1936 Folding Kayak events nor any reference to them. This omission means that the book cannot be regarded as a complete historical record, but nevertheless at 7s. 6d. it provides in convenient form comparative tables for the current Games.

TOURIST MAP OF THE CAIRNGORMS Scale 1" to 1 mile
(Ordnance Survey, Paper flat 7s. 6d., Paper folded 10s. 6d.,
Cloth folded 15s.)

This is the seventh of the new Ordnance Survey Tourist maps to be issued, and like the others it covers a particular area of special interest regardless of the National Grid which conditions the areas covered by the standard 1" maps. As with the earlier maps, tints and hill shading give a three-dimensional impression of the contours of the country. A new feature is the introduction of symbols to pinpoint centres of particular interest to tourists and these include CANOEING.

Such recognition of our needs is to be welcomed, since every serious touring canoeist makes use of the 1" Ordnance Survey maps when setting out for fresh waters. The use of an occasional symbol, however, is not sufficient for the canoeist since his is not a static sport, and if this idea is to be fully exploited by the Ordnance Survey then what is needed is an indication of the normally accepted highest canoeable point on a river together with an indication of its International Grading for Difficulty. This is a field in which the B.C.U. Touring Committee could do some really useful work, and no doubt their assistance would be welcomed by the Ordnance Survey staff.



National Championships 1964

REPORTED BY MIKE CLARK

The 1964 British Canoe Championships were held 25th/26th July, at Pangbourne on the Thames, in ideal conditions. The Basildon Reach above Pangbourne has a fine 1000m straight of deep water and provided an excellent course for the championships. Access to the River was from the grounds of the Child-Beale Trust, which also provided camping facilities for the competitors.

The Senior singles was again dominated by Alistair Wilson of the Kyle Canoe Club, who won the K1 500/1000m for the third year. Pete Lawler of Richmond showed fine form by chasing Alistair for second place in both races, closely followed by Tom Shenton of Royal. The times of both Senior and Junior events were comparatively slow, but the Junior paddlers produced some very close finishes which made exciting watching.

The Hatfield Youth Centre had almost a field-day in the Juniors, by winning every event except the 500m Relay. M.Mean put up a fine time of 2min 06.0sec to win the 500m K1, and B.Wade and S.Hollier pulled off a double win in the K2 500/1000m. Marianne Tucker for the fifth time in seven years won the Woman's K1 500m well ahead of Miss Jackson, who was 8.4sec behind.



BRITISH NATIONAL CHAMPIONSHIPS 1964

SOUTHAMPTON WATER L.D. RACE.

Held on Sunday, July, 26th. 1964.

Senior K1 500m Men	Kyle	1min 59.6sec.
1 A. Wilson	Richmond	2min 04.0sec.
2 P. Lawler	Royal	2min 04.6sec.
3 T. Shenton		
Senior K1 1000 Men		
1 A. Wilson	Kyle	4min 22.8sec.
2 P. Lawler	Richmond	4min 28.2sec.
3 T. Shenton	Royal	4min 31.2sec.
Senior K2 500m Men		
1 R. Lowery/E. Cronk	Royal	1min 56.0sec.
2 D. Maycock/J. Marshall	Viking	1min 57.2sec.
3 M. Sowman/D. Sims	R. Lea Spa	1min 57.7sec.
Senior K2 1000m Men		
1 P. Lawler/R. O'Keefe	Viking	disqualified wash-hanging
1 A. Edwards/G. Palmer	Worcester	
2 D. Maycock/J. Marshall	Richmond	NO TIMES AVAILABLE
3 R. Lowery/E. Cronk	Royal	
Junior K1 500m Men		
1 M. Mean	Hatfield	2min 06.0sec.
2 B. Wade	Hatfield	2min 07.2sec.
3 S. Hollier	Hatfield	2min 08.4sec.
Junior K1 1000m Men		
1 B. Wade	Hatfield	4min 33.8sec.
2 C. Evans	Royal	4min 37.0sec.
3 M. Mean	Hatfield	4min 38.8sec.
Junior K2 500m Men		
1 S. Hollier/B. Wade	Hatfield	1min 53.8sec.
2 C. Evans/B. Watkins	Royal	1min 55.3sec.
3 M. Mean/R. Stevens	Hatfield	1min 57.0sec.
Junior K2 1000m Men		
1 S. Hollier/B. Wade	Hatfield	4min 16.8sec.
2 C. Evans/B. Watkins	Royal	4min 17.5sec.
3 Parker/Oliver	Lincoln	4min 18.2sec.
Woman's K1 500m		
1 M. Tucker	Richmond	2min 19.0sec.
2 S. Jackson	Royal	2min 27.4sec.
3 D. Rabjohns	Richmond	
Novice K1 1000m Men		
1 T. Thomas	Hatfield	
Youth K1 500m Men		
1 T. Thomas	Hatfield	
2 J. Rowell	Kyle	
Novice K1 500m Men		
1 T. Thomas	Hatfield	
2 J. Rowell	Hatfield	
N.C.K. 1 1000m Men		
1 K. Pereira	Royal	
Senior K4 1000m Men		
1 Wilson/Edwards/Palmer/Shenton	Birmingham	
Junior K4 1000m Men		
1 Hollier/Mean/Wade/Stevens	Hatfield	
Senior 4x500m Relay Men		
1 Wilson/Palmer/Edwards/A N Other	Birmingham	
Junior 4x500m Relay		
1 Lawler/Tucker/Salter/Cavanagh	Richmond	

Result Sheet

Class	Club	Time
Class 1.	McGuinness, D.	Blue Waters 2. 05. 0
	Duffield, D	Bradford-on-Avon 2. 16. 15
	Overton, J.	Blue Waters 2. 32. 50
Class 2.	Hastings, P.T.	Cambridge Univ. 2. 20. 15
	Reed, H.	Blue Waters. 2. 33. 10
	Lewis, D.	Eastbourne 2. 40. 0
Class 3A.	Fish, R.	D.T.C. 2. 18. 15
	Stoney, A.	Cambridge Univ. 2. 33. 10
	Walden, M.H.	Bradford-on-Avon 2. 42. 0
Class 3B.	Littlewood, J.	Bradford-on-Avon 1. 27. 25
	Jones, I.	Norton School 1. 25. 30
	Fountain, M.	" " 1. 38. 0
Class 3C.	Reilly, Miss J.	Blue Waters 1. 30. 40
	Jenkins, Miss V.	Southampton 1. 51. 30
Class 4A.	Gledhill, H.	R.A.S.C., J.L. 2. 20. 30
	Lancefield, R.	Bradford-on-Avon 2. 49. 30
Class 4B & 4C.	Orchard, R.	Southampton 1. 19. 40
	Dalrymple, D.	" 1. 19. 43
	Buckett, Miss G.	" 1. 50. 45
Class 5.	Jock & Warren	63 Para Sde. 2. 8. 45
	Gill & Simpson	" 2. 18. 15
	Pearson & Moore	Eastbourne 2. 19. 30
Class 6A.	Smiles & Smiles	Southbourne Sea Scout 2. 29. 0.
	Burton & Gilbert	" 2. 33. 10.
	Barr & Larvie	63 Para Sde. 2. 54. 30.
Class 6B.	Clark & Riding	R.A.S.C. J.L. 1. 58. 45.
	Burry & Avery	Waldenhead 2. 25. 45.
	Tipper & Mann	Titchfield 2. 37. 15.
Class 7A.	Thorpe & Davies.	Southampton 2. 26. 40
	Hayhurst & Rogers	63 Para Sde. 2. 38. 0
	Coyle & Moss	Bradford-on-Avon 2. 41. 45
Class 7B.	Masters & Rudierham	Southampton 1. 36. 30
	Hartin & Booth	" 1. 48. 0
	Vincent & Grey	R.A.S.C. J.L. 2. 20. 15.
Class 7C.	Baldwin & Collins	Sholing Girls 2. 24. 45.
	Clayton & Vear	" School 2. 28. 35.
	Briggs & Aarden,	" 2. 35. 0.

At the Queenborough regatta a distance sea race was held, the results being as follows.

Course:- Queenborough harbour to Sheerness harbour and back, distance 5 1/2 miles.

Conditions:- Strong winds and force 6 - 7, sea rough, multiple waves in Sheerness harbour due to current at Sheerness point.

Senior events

- 1) D.J. MacGuinness, Blue Waters Canoe Club, in a K1, time 39 min. 10 secs.
- 2) C.J. Lloyd, Junior Leaders Regt. R.E., Dover, in a MKJ Viking.
- 3) H.C. Reed, Blue Waters, N.C.K.1.
- 4) D. Pound, Woolwich, C.C., K.1.
- 5) D.W. Burgess, Sheppey C.C., Klepper 63.
- 6) T. Beecroft, J.L.R.E. Dover, Sports dipper.

Juniors

- 1) D.H. Williams, J.L.R.E. Dover, MKJ Viking.
- 2) M.B. Chamberlon, Blue Waters, K1.
- 3) C. Maybank, Woolwich C.C., Eskimo.
- 4) D. Evans, J.L.R.E. Dover, Sports dipper.
- 5) W.G. Walton, J.L.R.E. Dover, P.B.K.

Ladies

- 1) J. Reilly, Blue Waters, N.C.K.1.

SCOTTISH CONFINED SLALOM

1. Allan Sharples. Forth 215 pen.
 2. John Roberts. Forth 220 pen.
 3. Brian Palmer. Forth 307 pen.
- There were 18 entries for the event.

ROUND CUMBRAE SINGLES RACE

NAME	POSITION	CLUB	TIME	CANOE
John Rovall	1st	K. C. C.	1hr. 56mins. 42secs.	N. C. K. 1.
Brian Broekie	2nd	K. C. C.	2hr. 06mins. 15secs.	N. C. K. 1.
Duncan Winning	3rd	S. H. C. C.	2hr. 09mins. 53secs.	Canoeing Plywood Sea Touring Kayak
J. Reid	4th	S. H. C. C.	2hr. 37mins. 51secs.	Modified Kestral Type Slalom
Jim Macintyre	5th	A. C. C.	2hr. 45mins. 22secs.	N. C. K. 1.
R. Houghton	6th	E. U. C. C.	3hr. 03mins. 47secs.	Klepper SL. 59. Slalom

HARTLEPOOL'S 'KAYAK CLUB'
TEES RIVER RACE 1964

TIME SHEET

Race No.	Name	Club	Time	Pos.	Points
Class 1					
1	120% of winner's time =				
2	P. Hansen	H.K.C.	2-7-33	1st	
3	C. Harkesworth	Leeds C.C.		Scratched	
4	C. Hare	H.K.C.		Scratched	
5	A. Murgrove	H.K.C.	2-19-35	3rd	
6	P.S.J. Morris	A.A. J.L. Reg. C.C.	2-10-45	2nd	
7	C. Robson	H.K.C.	2-23-56	4th	
Class 2a					
11	T. Gibbins	S.C.C.	2-31-2	3rd	
12	H. Gledhill	RASC J.L. C.C.	2-33-47	4th	
13	P.J. Hastings	C.U.C.C.	2-7-50	1st	
14	Taylor	A. App. Sch.		Scratched	
15	P. Phytsson	H.K.C.		5th	
16	M. Pawlow	AGONY AND SWIM	2-27-49	2nd	
Class 3a					
21	Deakins	Lincoln C.C.	2-19-41	2nd	
22	J. Graham	H.K.C.	2-41-41	4th	
23	H. Harrison	A. App. Sch.	Retired		
24	R.S.H. Pumphrey	C.U.C.C.	2-19-41	3rd	
25	S.J. Smith	M.G.C.	2-3-4	1st	
Class 4a					
34	I. Williams	H.K.C.	2-41-7	2nd	
35	J. Footley	R.I.S.C.C.	2-30-43	1st	
36	K. Simpson	J.K.C.	2-55-42	3rd	
Class 4b					
42	Courtney	RASC J.L. C.C.	2-2-57	7th	
43	F. Pletche	Harlow C.C.	1-17-15	2nd	
44	R. Fletcher	H.K.C.	1-30-3	5th	
45	H. Franklin	Harlow C.C.	1-18-25	3rd	
46	Levitt	RASC J.L. C.C.	2-11-24	8th	
47	A. Gworthy	A. App. Sch.	1-26-46	4th	
48	G. Wickham	S.C.C.	1-37-51	6th	
49	A. Miller	Harlow C.C.	1-17-7	1st	
Class 5					
52	Rhodes/Blamley	RAF Cramwell	2-2-51	2nd	
53	Lowe/Fyke		2-26-54	5th	
54	Wood/Fairminer	A. App. Sch.	2-1-40	1st	
55	Nicholson/Agilina	3 R.R.T.C.	2-6-9	3rd	
56	Bailey/Crossland	A. App. Sch.	2-11-11	4th	
Class 6a					
61	Smith/Campbell	Lincoln C.C.	2-3-17	1st	
62	Cousins/O'Callaghan	3 R.R.T.C.	2-16-19	2nd	
64	Owen/Baker	R.I.S.C.C.	2-31-20	3rd	

Class 6b

Race No.	Name	Club	Time	Pos.	Points
71	Hughes/Weilopoleki	A.A. J.L. C.C.	1-18-55	3rd	
72	Chandler/Frazer	RASC J.L. C.C.	1-16-17	2nd	
73	Jupp/Hickings	RASC J.L. C.C.	1-30-9	4th	
74	Barnett/Vent	"	1-17-24	4th	
	Storey/Davis	A. App. Sch.	1-13-59	1st	

Class 7b

Race No.	Name	Club	Time	Pos.	Points
81	Atkins/Darling	A.A. J.L. C.C.	1-16-7	3rd	
82	Plescy/Hillier	"	1-15-15	2nd	
83	Hanson/Sweeney	"	1-17-24	4th	
84	Coverley/Lawson	"	1-18-22	1st	
85	Vincent/Grey	RASC J.L. C.C.	1-22-3	7th	
86	Clark/Gieves	"	1-21-45	6th	
87	Mazur/Oxley	RAF Cramwell	1-21-0	5th	

120% of winner's time = 1-29-50

TRANSFORD SEALION 20TH JUNE 1964

RESULTS

MEN'S DIVISION

Pos.	Name	Club	1st Run Time	Pen.	Tot.	2nd Run Time	Pen.	Tot.	Best	Age
1	B. Horn	Manchester	140	30	170	30	159	30	159	61.60
2	R. Wilson	R.I.S.C.C.	129	60	189	125	40	165	165	63.95
3	R. Young	Denston Co.	135	90	225	142	30	172	172	66.65
4	D. Willis	Coventry	145	50	195	155	20	175	175	67.81
5	G. Gray	Ind.	161	30	191	158	30	188	188	72.85
6	B. Dabberley	Woro.	155	40	195	168	50	218	195	75.56
7	B. Dadey	Kennet Vall.	176	30	206	170	30	200	200	77.50
8	V. Kirby	L.A.O.C.	126	110	266	151	50	201	201	77.89
9	C. J. Stirling	Bham	157	0	157	182	40	202	202	78.27
10	M. A. Martin	Sear Vall.	164	50	204	166	40	205	204	79.92
11	C. J. Place	Denston Co.	158	50	208	165	60	226	208	80.99
12	T. Place	Denston Co.	139	70	209	181	30	211	209	80.76
13	R. Crane	Ludlow	154	90	244	171	40	211	211	81.76
14	J. Andrews	Woro.	181	90	271	145	70	215	215	83.31
15	A. Acton	Wolverhampton	139	80	219	148	70	218	218	84.47
16	D. Rushforth	Manchester	163	100	263	138	80	218	218	84.47
17	H. Chapman	Denston Col.	139	80	219	138	90	228	219	85.65
18	B. Smith	Coventry	197	110	307	150	70	220	220	86.24
19	M. Powell	Woro.	162	70	232	161	60	221	221	86.53
20	M. Powell	Woro.	162	70	232	161	60	221	221	86.53

LADIES DIVISION

Pos.	Name	Club	1st Run Time	Pen.	Tot.	2nd Run Time	Pen.	Tot.	Best	Age
1	J. Battersby	Manchester	156	40	196	151	80	231	196	52.01
2	M. Pinder	R.I.S.C.C.	194	50	244	165	90	255	244	64.75
3	F. Andrews	L.A.O.C.	178	80	258	177	120	297	258	68.46
4	F. Squires	Coventry	176	160	336	199	90	289	289	76.69
5	E. Sewall	R.I.S.C.C.	194	170	364	143	100	314	314	83.32
6	F. Finch	Kennet Valley	180	180	360	214	100	314	314	83.32
7	J. Dadey	Kennet Valley	182	200	412	165	280	385	385	102.16
8	A. Quife	Bham	176	220	396	187	230	417	396	105.08

TEAM EVENT

Pos.	Club	Time	Pen.	Total
1	Wolverhampton	167	160	327
2	Woro. B.	170	200	366
3	Kennet Valley	197	167	367
4	L.A.O.C. A.	199	190	424

6, THE MALL, BRENTFORD, MIDDX.

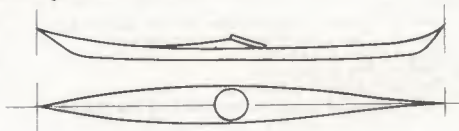
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Length 17'6 $\frac{3}{4}$ " Beam 18 $\frac{1}{2}$ "

Construction: lath-and-canvas

A reconstruction of a Greenland kayak in the British Museum collection adapted by John Brand. Suitable for paddlers up to 5'6" in height.

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FOR SALE:

Eskimo kayak 18' x 18" canvas skin on aluminium frames, 1 pair racing aluminium paddles, trolley, spraydeck, buoyancy bags. Offers, between £30 and £40. Maclehose, Lyne House, West Linton, Peebleshire.

FOR SALE:

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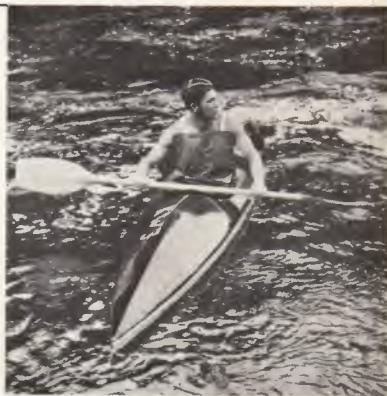
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