NEWSLETTER of the

Advanced Sea Kayak Club

AN INTERNATIONAL SEA CANOEING CLUB

OPEN TO ALL INTERESTED IN THIS ASPECT OF CANOEING

ADVANCED SEA KAYAK CLUB

ADVANCED SEA KAYAK CLUB

ADVANCED SEA KAYAK CLUB

NEWSLETTER NO.91

MAY 1992

John J. Ramwell
7 Miller Close
NEWPORT
Isle of Wight
PO30 5PS

EDITORIAL

Well, that's another Canoe Exhibition over. It was great meeting with those of you who were able to show up. This could well be the last year at Crystal Palace. Next year it is to be in Sheffield and then back at Crystal Palace in 1994. Somehow I doubt it will ever come back to Crystal Palace. We'll see.

As for what was new at the Exhibition, an interesting kayak meant for sailing with removable out-riggers, known as the TRIAK and made by McNulty, Tyne and Wear. Nigel Foster's new kayak THE LEGEND. Details of both these kayaks are to be found within. There were other new designs. Plastic kayaks and vivid colours are coming to the fore.

Don't forget the Symposiums, details of which appeared in the last ASKC newsletters; the Nordkapp Trust Anglesey Symposium with our star speaker Dr Mike Watts: The Jersey Symposium, both in May. May 1st to 8th and Jersey May 22nd to 23rd. The Shetlanders are laying on an attractive event in July, from 3rd to 6th.

I have recently received another consignment of the book QAJAQ by David Zimmerly If only remotely interested in the origins of sea kayaks and their historical use by Inuit then send me your order with £12.50p (inclusive of postage and packing). It is a beautifully illustrated book with an excellent text.

Many of you will have read Stuart Fisher's Editorial in the latest edition of his magazine CANOEIST in which he comments on the plethora (as he sees it) of organisations of interest to the sea kayaker. In particular he focuses on the new organisation SKGUK or Sea Kayak Group U.K. The man behind this group, Peter Clark - himself an ASKC member - is of the opinion that paddlers want a U.K. based organisation that will provide direct kayaking opportunities.

More power to him and his fellow club members elbows. Time will show whether Peter is filling a need. As Stuart says in his editorial "It is early days for the SKGUK but if their on-water leadership stands up to the scrutiny to which it will undoubtedly be subjected and if they can establish a suitable training scheme they could become a potent force".

I have included brief details of SKGUK within this letter.

SOLD OUT all previous Symposium Reports.

FOR SALE

Ties @ £6.50p each
ASKC Stickers @ 35 pence each
ASKC Letter headed paper @ 50 pence per 10 sheets
T-shirts - Small/medium/large/X large @ £6 each (in yellow or black)
Sweat-shirts - Small/medium/large/X large @ £12 each (in yellow or black)
ASKC Ski-hats @ £3 50p each
QAJAQ - The book by David Zimmerly @ £12 50p.

WANTED - A JUNIOR KAYAK. Can you help? If so - telephone Brian Jones on (0983) 522195. Brian manages the Medina Valley Centre here on the Isle of Wight. Collection can be arranged.

NAVIGATING SMALL CRAFT

Taken from an article by David Page in the January 1992 edition of the Journal of Navigation

David starts his article by suggesting that the basic wherewithal for efficient small craft navigation in the 21st century already exists and that the main problem will be that of application. He continues:

"I would propose to restrict my remarks to small marine craft and light airfract used for recreational purposes The very nature of the tasks of patrol or inshore fishing boats will ensure that they are well provided for navigationally. The same will apply to most small military aircraft.

There are a few other special exceptions amongst the recreational craft. For example, the type of yacht currently participating in the single handed Round the World Race is hardly representative of the average yacht. Endowed with vast amounts of sponsorship money and crewed by exceptional people, these yachts are often at the leading edge of technology and help to develop equipment which may come into general use in future. A recent account of a typical night aboard such a yacht competing in the Round the World Race is instructive. One of twenty-five different alarms wakes the skipper to alert him that the apparent wind speed has dropped by three knots. A glance at the radar shows that the competitor 13 miles astern has caught up by 1.3 miles in the hour that he has been asleep.

The computer performance programme shows the boat to be eight per cent down on her predicted performance for the existing conditions. It also shows that there needs to be two knots less windspeed before the increased thrust from shaking out a reef will exceed the drag caused by the extra heel. The skipper therefore goes on deck and winds on the mainsheet winch grinder, having been assured by the computer that the sail (250 hours use) will stand the predicted clew loading of four tons. Back down below again, the computer shows the performance to be within three per cent of optimum. Setting his alarm for half-an-hour's time, the skipper goes back to sleep in his padded chair. The only thing missing would seem to be an automatic medical check on the skipper to ensure that he too is functioning at peak performance.

All this technology demands an experienced operator of at least above average ability. If a future navigational system is to be worthwhile for small recreational craft, it needs to be capable of efficient use by the inexperienced with the minimum of training.

Under the right conditions small marine craft can be navigated effectively in a very basic manner - virtually by compass and lookout - but this does require some skill and experience, the experience probably being most needed to recognise the conditions when the basic methods are no longer adequate. If the craft is being navigated as a pastime and there is no requirement for absolute operating efficiency or for high navigational accuracy, the basic traditional ways of navigation are probably the most satisfying. There is a great deal to be said for being self sufficient.

The sextant is, or perhaps I should say was, a favourite tool in a skilled craftsman's locker. But navigation is changing and the logic for that change is quite inescapable. In the first place, we have highly accurate fixing systems available to us at a cost which is getting to be less than the price of a good marine sextant.

We have reached the point where it is both practical and possible for small craft to have accurate positional information available at all times. In the second place, the need for the navigator to tackle the task with a variety of skills acquired through extensive training and long experience is reduced. In larger craft we have a systems approach to the entire operation, and the navigation system is just one of a number of systems in the particular craft which, in its turn, has to fit in with other craft in a particular traffic system.

It would appear that, if in the future small craft are to have the greatest possible freedom of operation, a similar philosophy will also have to apply to them.

This is not to suggest that they will require the elaborate navigation systems carried by the larger crafts, but that the minimal inexpensive systems of small craft in the future must meet the requirements of the traffic systems in busy areas. The navigation equipment now available for small craft is more efficient - and, most importantly, more consistent - than the older traditional methods.

What is now required is a good systems operation with the equipment being used as laid down by its designers. Unless the system fails or meets a situation that has not been envisaged by the designer, there is little opportunity for the navigator to use his traditional skills. Sadly, much of the fun in navigation is moving from the navigator to those who design, develop and prove the new systems.

Recreational craft ought to be allowed as much freedom as possible, so long as they do not inconvenience or endanger anyone else.

It is unreasonable to require that all those small recreational craft are crewed and equipped to the same standards as large commercial craft, or that they are restricted to some designated safe and remote 'play area', and so some other solution is required. It is also necessary to bear in mind that the skill and experience of those operating small craft will vary considerably and that they may well be adverse to spending too much time learning about navigation, which may not be a principal interest.

We require a cheap, reliable, accurate navigation device that is simple to operate and is, as far as possible, blunder-proof. A tall order perhaps, but well within the capacity of technology. Recent developments in small computers and data handling have produced a number of very effective small navigational devices utilizing signals from navigational satellits. All are lightweight and capable of operating on internal batteries when required. With competition and a large potential market, prices are falling and there are reports of a GPS (Global Positioning System) receiver planned to retail at around £400.

At present, the weak point of all these admirable devices appears to be the presentation of position in latitude and longitude coordinates and in the use of the waypoint systems evolved in the navigation computers of the fifties and sixties.

The need to insert quantities of digits into a computer is simply asking for errors. Experienced, well trained and highly motivated professional crews manage to produce this type of blunder with monotonous regularity despite elaborate cross check procedures.

To date, one of the most effective ways of preventing such blunders has been by the use of a simple chart on which the planned track

is drawn and the crew plot at regular intervals the position as given by the raw data provided by the navigation system. One picture is worth a thousand digits For this reason most commercial navigational systems are moving towards some type of electronic map display. This would also seem to be the right move for small craft navigation. If the presentation of position on an automatic map display is thought to be advantageous for the professionals it must be of even greater value for the relatively inexperienced and less well trained small craft navigator.

Inexpensive, small electronic chart displays suitable for use in small marine craft are now well within the current state of the art. If these are combined with the precision of satellite navigation, we are well on the way towards providing effectively for the navigational needs of the small craft operator.

With such an effective means of navigation backed up by the continuing improvements in the provision of weather information and navigational warnings, the small craft of the future should be capable of operation with minimal interference with larger commercial craft.

The greatest problem will perhaps be that of educating the small craft man to make full use of the facilities available to him. This, I would suggest, should NOT be by legislation, which is best kept to a minimum. The best solution would be for the small craft operators to keep their own house in order. The Royal Yachting Association already does a great deal to encourage education and self-regulation amongst their members (The British Canoe Union must do the same for its members. Ed.).

There is a need to decide, at least in general terms, how small craft navigation ought to develop, always bearing in mind the need for simplicity and reliability and the fact that a number of operators are not going to be navigational enthusiasts. Development and training plans could then follow."

SEA KAYAK THE QUEEN CHARLOTTE ISLANDS
BUTTERFLY TOURS 1992

Join Gord Pincock on a journey through the land of Haida Swaii.

Exclusive guided tours of Moresby Island. Previous kayaking experience is not necessary.

For more information please contact:-

Kallahin Travel Services, P.O. Box 131, Queen Charlotte City, B.C., Canada V0T 1S0. Tel. (604) 559-8455, fax (604) 559-8

Guide: Gord Pincock, 3218 W 31st Avenue, Vancouver, B.C., Canada V6L 2AF. Tel. (604) 263-3444

Gord Pincock has kayaked and guided extensively throughout the Charlottes for over a decade He has excellent instruction and rescue skills and is trained in advanced wilderness first aid. He enjoys travelling quietly and safely.

Butterfly Tours provides fully equipped single touring kayaks for groups of up to five people. Also included are tents, food and cooking as well as float plane transportation departing from and returning to Sandspit B.C., where all of our tours begin.

Price per person (Canadian dollars)

$1395.00 for an 8 day experience, departing July 12, August 17, August 24.

$ 1795.00 for a 14 day experience, departing June 29, July 19, August 4, August 31.

Butterfly Tours offers the opportunity to journey as a small nomadic tribe and to feel the moods of these mysterious, powerful islands. We realise the simplicity of freedom and motion while paddling through the hereditary home of the Haida Nation.

From: Nigel Hingston

You may recall from our last meeting of the STC in London I was intending to make a crossing from Start Point to the Channel Islands by a double sea kayak (four canoeists, two doubles). The trip is still on.

I understand a passage was made from the Channel Islands to Weymouth and included Kevin Mansell, who I've been in contact with. As yet I have been unable to establish whether a similar trip has been made from the South Devon coast. Would you or any members of the ASKC have knowledge of a previous trip? If so, any information would be appreciated.

As a new member to the ASKC may I express my thanks for the recent Newsletter and back issues, all of which I've found very informative.

NIGEL DENNIS and ROUND THE HORN

I met with Nigel at Crystal Palace Canoe Exhibition last weekend and got the story on his expedition with John and Rebecca Ridgeway. A full account will soon be available, suffice to say their expedition was, though not without incident, successful. As an appetiser I now publish an account from the January 18th 1992 Telegraph which describes their adventures up to this time.

"Well, here we are in the sleet at Puerto Williams, and not without incident. After canoeing 85 miles in three-and-a-half days we are already three men down.

For 30 hours we motored aboard the 50ft steel yacht Compass Rose, through the narrow twisting channels linking the Straits of Magellan with the Beagle Channel. The pale light from towering glaciers, creaking their way down from cloud-wreathed mountains towards fiords 1500 ft deep, highlighted our situation: 12 soft Europeans heading for the most miserable place at the end of the earth.

Slipping the seven pencil-slim canoes into the waters, we paddled hesitantly towards the tottering, contorted face of a glacier in a place we named Blue Thunder Bay. Once ashore, we pitched camp on ice-scoured rock, high enough to escape backwash from ice tumbling from the glacier.

Nigel Dennis (35), the first man to canoe round Britain, his huge eager nephew Chris Unsworth (22) and our boisterous ITN cameraman John Boyce (30) shared one tent; full of fun, drive and noise they paddled their canoes with thrusting surges, heavy on the wrists. One of my young instructors, Hoppy Hopking (20) shared a tent and double canoe with Igor Asheshov (28), our flamboyant Peruvian interpreter. Our two bearded and despectacled but unrelated introverts, John (28) and Aled (24) Williams, meticulously stacked rocks on their tent valances against a turn in the weather.

Rebecca (24) and myself (53) raced to keep up with the others: while I put up the tent she cooked dehydrated mince for supper. We passed a restless night, both nervous, Rebecca for her comparative lack of strength and me for my age and stiffness.

Early next morning we got under way in our canoes at last. Desperately hot, smeared with white sunblock, our eyes shielded by special sunglasses, we paddled hopefully towards far distant Cape Horn, wondering if all this talk about the hole in the ozone layer might not, after all, be true.

Tenosynovitis - first time I ever had it, snapped Nigel during our lunch break on a sandy beach, pointing to a painful lump on his right wrist.

"Might be a poison arm," I replied. "That cut on your thumb is infected."

"I'll splint it solid so I can paddle" was all he said.

Later, as he had to be helped from the canoe and put into his sleeping bag, I remembered what his friend Aled had told me that afternoon: "Trouble with Nigel is, he'll just keep going; he'll never admit he's in pain."

Up at 0430 next day, we made 31 miles. Rebecca and I camped among tall southern-beech trees, some distance from the others. Having paddled with them all day, I valued privacy in the evenings to appreciate my presence here, close to the southern ocean again. Already we were seeing the wandering albatross, gliding over the Beagle Channel. Whiskered brown sea lions stitched the black water around us. There were a few dolphins, but as yet no sign of the killer whales we all feared.

Chris Unsworth's wrist gave up on him next morning and John Boyce was violently sick: their red double kayak was shipped aboard the Compass Rose to join Nigel Dennis's single. On the water we were now led by Aled Williams, European supremo of the squirt-boat (a tiny kayak which allows you to perform gymnastics on and below the water's surface). He seemed to notice neither people nor wildlife: he was totally absorbed as he surfed among us lesser plodding mortals. Still, we were pleased enough to be still going, after our tutors had been forced to give up.

The still warm sun of late afternoon saw us camped below a yellow dirt coast road skirting the north shore of Navarino Island, close to an old burial ground. I lay face down in the sweet clover, and in that beautiful scent I felt close to the Indians, wiped out in 100 years by the white man's religion and greed.

The wind rose quickly, beyond gale force to storm. This was our first big blow, and our best lesson for the future. From a zip slot in our tent, Rebecca and I watched admiringly as Xonrado shipped his anchors and slipped his stern ropes, taking Compass Rose further up the creek to safety.

Half a day more and we reached the pastel-coloured tin cabins of Puerto Williams, southernmost township in the world. Wood-smoke on the breeze reminded me of the more pungent peat smoke of our croft home on the north-west coast of Scotland.

Nigel was rushed into hospital. He'd had a narrow escape, his life probably saved by the prompt correct diagnosis (blood poisoning, which had nearly reached his heart) from his doctor at home in Anglesey via the miraculous BT System C satellits link, which has been such a help to us.

We need a few days here to re-group and wait for Nigel to mend. We amateurs have had a good solid start, but we'll be relying heavily on the professions once we reach the open seas to the south of Navarino Island and head for the Horn.

Everything will then depend on our correct interpretation of the weather."

*Storms ahead: on Thursday the Meteorological Office was predicting very rough seas for at least five days in the Cape Horn area.

NEWS OF NEW EQUIPMENT

MACPAC MOSQUITO £119.96p.

This is a super lightweight sleeping bag. The difference between this and other bags is that it has no down filling in the underside. Instead MACPAC have made a sleeve to take your sleeping mat - so considerably reducing both weight and size.

I wonder why I wander: some aspects of directional stability in sea kayaks

Peter J. Carter

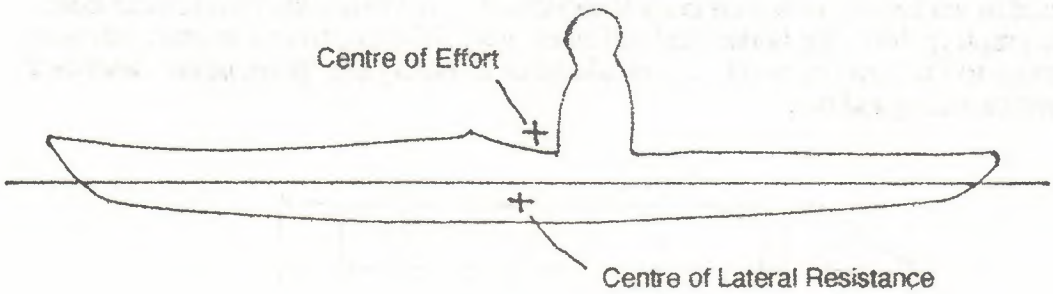
Perhaps the most frustrating aspect of learning to paddle is that of making the kayak go in a straight line, especially downwind. Watch any group of beginners and you'll see them wandering all over the place. For the sea kayaker the problem continues; the boat tries to round up and the paddler must resort to continual sweep strokes on one side to maintain control. Not only frustrating, but fatiguing, and fatigue has a bearing on safety.

Yet none of the recognised canoeing texts explains the hydrodynamics and aerodynamics involved in directional stability. All you will normally find are a couple of lines describing the differences between Swedish and Fish form hulls. Whether that is a reflection of the writers' perceptions of their readers' understanding and ability, or their own comprehension of the dynamics I am not certain, but I suspect the latter. Even the most recent article (Winters, 1990), while an excellent and comprehensive overview of design aspects of sea kayaks, offers not one word of explanation, despite correctly explaining the purpose of rudders.

Naval architecture texts, being concerned with rather larger vessels, are not much help, and the only useful material I have ever been able to find comes from a book named *Ships in Rough Water* (Kent, 1958). This is perhaps not surprising: bearing the scale in mind, sea kayaks are always in rough water.

The Problem

The problem with kayaks, as with ships, is the relationship between the centre of lateral resistance[1] and the centre of effort or pressure:



With cardboard cutouts it's not hard to find the static centres shown above. But things are not so simple, of course, because we are dealing with a dynamic situations. Water and air are being accelerated, and that, as Bernoulli explained, involves changes of pressure, the generation of forces, and the movement of centres of pressure.

Kent describes the results of model experiments. The first graph shows the positions of the centre of effort on three types of ships in relation to wind direction (p 139):

[1] I use the word 'centre' advisedly. More correctly, it is the locus of the centre, because it is in constant motion through the effects of waves, gusts, etc.

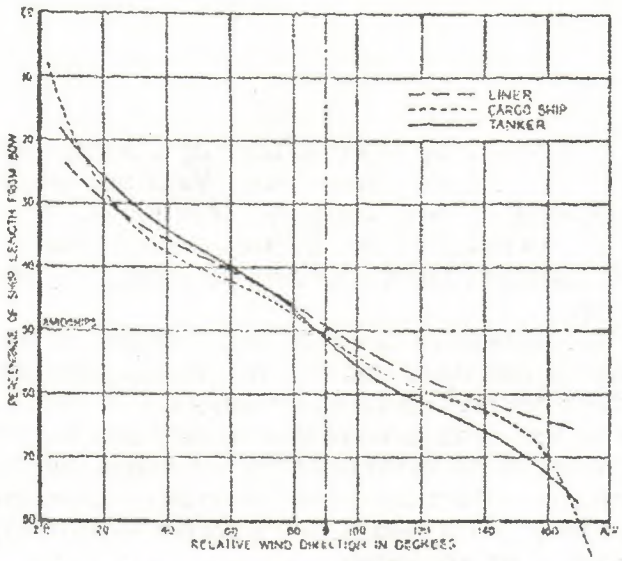


FIG. 40. Loci of centre of wind pressure with change in wind direction

Interestingly, they all behave similarly, although their superstructures are very different. In our situation, I suspect things are a little different because of the prominence of the paddler's body. For a low volume slalom kayak, the centre of effort will move very little because virtually all the windage comes from the body, but we can expect pronounced changes with a Greenland style kayak with its raised bow and stern.

The centre of resistance of the hull moves forward according to the speed of the hull, and also in relation to the angle of yaw (ie. sideways drift), and the angle of heel[2]. The shape of the hull will also have a significant bearing, with greater movement expected in sea kayaks with their deep V sections than in the rounded whitewater boats. In this graph (p 140), the tanker had full lines, very different from our craft, but note how close to the bow the point is, even ahead of it, hardly the 'pivot point' described by some canoeing authors:

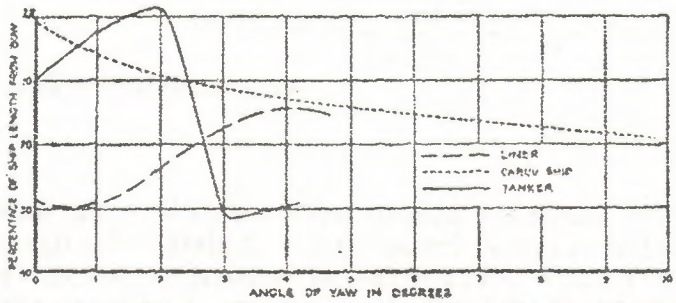
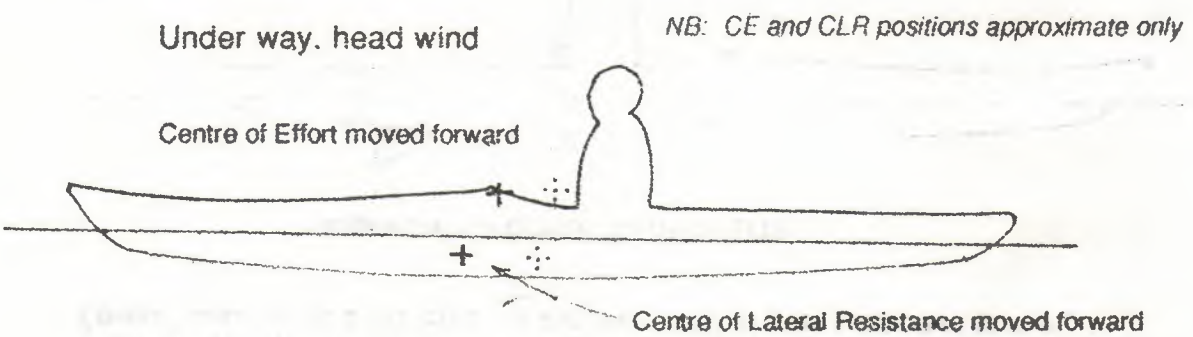


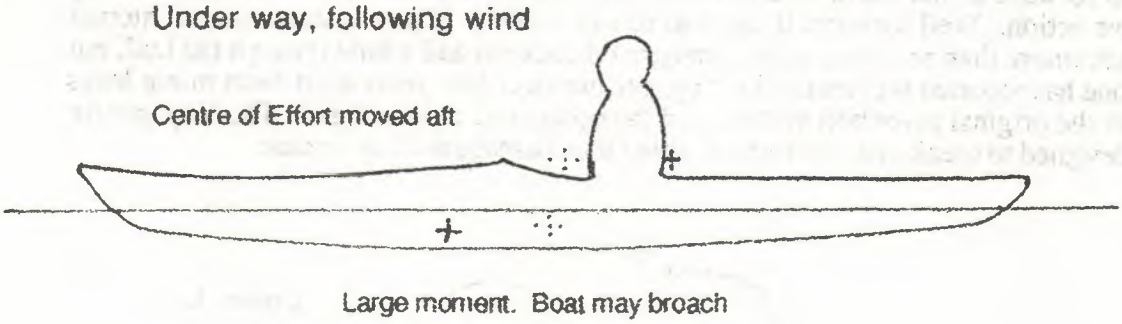
FIG. 41. Loci of centre of lateral resistance with change in angle of yaw

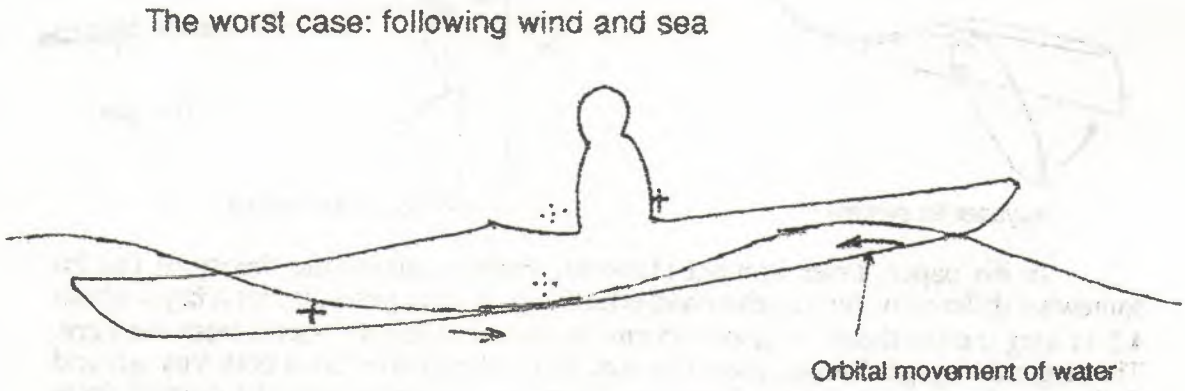
Upwind, the CLR and CE are relatively close to each other and the forces are not great. Downwind, the two are widely separated and the yawing moments are therefore much greater, particularly in the worst case when the bow buries. Not only does the wind have an effect here, but the waves also, through the orbital motions of water. The stern of a kayak may be moving, relative to the water, in reverse. This

[2] I suspect that the tendency of a Swedish form hull to 'lean steer' has as much to do with the shift of CLR as it does to 'lifting' forces generated by the asymmetric hull shape.

effect can be serious in powerboats moving slowly with little power, because the rudder can become ineffective. Broaching may result.



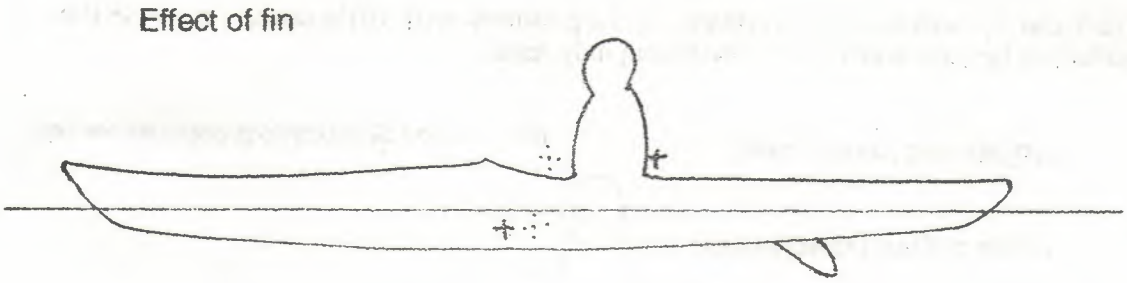




Control Methods

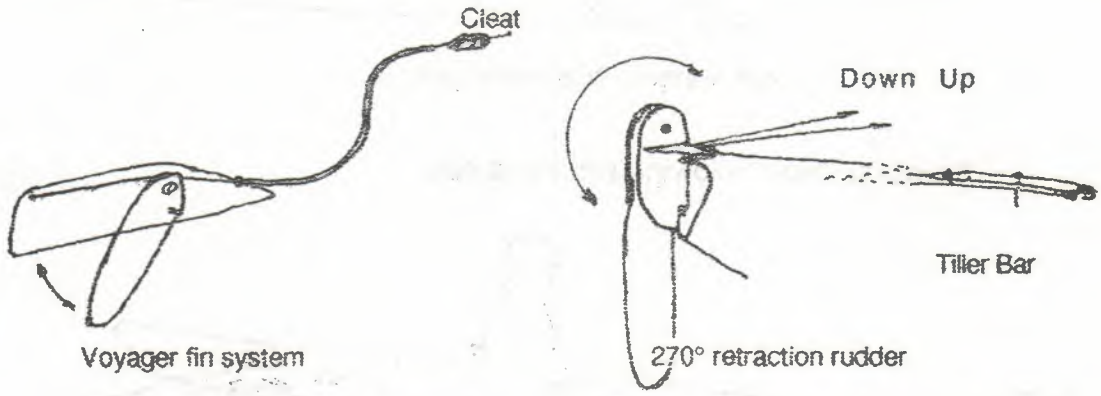
Ships control their directional stability with rudders, manually directed by the helmsman, and considerable skill is needed to maintain course in rough waters. It was resonable to follow ship practice and fit rudders to sea kayaks, and control them the same way. But the rudder does not solve the problem. The kayak is still directionally unstable, and the rudder simply allows one to correct the symptoms of excess yaw. To do that, it must be turned one way or the other, and that creates drag, and the less well balanced the boat the more drag will be created. As well, there is the mechanical complexity of the rudder itself and the tiller bar or pedals.

What is needed is a means of maintaining a balance between the CLR and the CE, by moving one or the other. The retractable fin restores balance and control by moving the centre of lateral resistance aft.



CLR moved aft. Yawing moment reduced.

Several overseas kayak designs now use the retractable fin as their primary means of control, the Sea Tiger being perhaps the most notable example. The fin has a number of advantages. It is mechanically simpler, with only one control cable and no pedals or tiller bar, and less 'draggy' because it is always in line with the hull. Being well forward of the stern, it remains immersed when a rudder may be lifted clear by wave action. Well forward, it can also reduce leeway. There is some loss of internal space (more than regained with an integrated cockpit) and a hole through the hull, but noone has reported problems with Voyager fins over four years apart from minor leaks with the original pivot bolt system, and the occasional sand and grit. The Voyager fin is designed to break in a side impact, rather than damage the hull or case.



In his paper, Peter Lamont (Lamont, 1986) explains the theory of the fin somewhat differently, but cogently and effectively, and suggests that for a kayak about 4.5 m long the fin should be about 95 cm^2 in area, and about 1 metre from the stern. The original Voyager fin was about that size, and certainly worked in both Voyager and Selkie. In heavier conditions, however, it was less effective, and the present fin is somewhat larger, and the fin for Voyager D (6.07 metres long) is even bigger yet.

A fin equipped kayak has a different 'feel' from a rudder craft. It yaws about a bit on passing waves, but holds its course without any control input from the paddler. Instead of correcting each movement by pedalling, one simply paddles ahead. With a little practice, it's easy to set the right amount of fin for the load and conditions.

The fin is not the answer for all kayaks. The longer and less rockered types are less amenable to fin control, while slalom boats need much more fin than is practicable to give good control in a seaway. (Nevertheless, a detachable fin on such craft is useful for beginners whose reactions to yawing and broaching have yet to develop.)

It is also possible to restore stability by moving the centre of effort forward, with a sail. Sailing a kayak also saves energy, although it does introduce other problems, especially in gusty crosswinds. Note that a rudder is not necessary for sailing. If the rig is properly balanced, the craft will hold its course without rudder, and any lee or weather helm is a sign of energy being wasted, as well as instability.

The best example of rudderless sailing is the sailboard, where control is entirely dependent on rig balance.

A third possibility is fore and aft movement of the centre of gravity, by moving either the paddler(s) or some of the internal load[3]. The only kayaks I know of to vary trim by this method are designed by Matt Broze in the US, and use sliding seats. There are no extra surfaces in the water, but cockpit design, and presumerably the spraycover, are made more complicated. The minimum volume cockpit essential for safety would be very difficult to achieve.

Overall, the fin is the most effective means of balancing the forces and allowing the paddler to be in control.

Summary

The essentials are well known, qualitatively if not quantitatively: noone seems to know where the CLR and CE are for any kayak but we know how they behave. It would be interesting and worthwhile to do some research into this, and have the findings properly written up, a task that would require considerable tank testing time. The problem will be money, of course. Naval architects can earn rather more designing the next America's Cup challenger or oil rig tender than investigating the behaviour of a disparate set of sea kayak designs. Perhaps it might make a thesis project for a naval architect to be.

Acknowledgement:

I am indebted to Howard Peachey, of Alan Payne and Partners, for his comments on a very early draft of this paper.

References:

Kent, K. L., *Ships in Rough Water*, T. Nelson & Sons, 1958

Lamont, P. 'Variable profile hull- Skeg or variable geometry rudder?' in ASKC Newsletter No 56, June 1986 (Reprinted in *Sea Canoeing* No 11, March 1987)

Winters, D. 'Cause and Effect in Sea Kayak Design' in *Sea Kayaker*, Vol 7 No 2, Fall 1990

[3] Supersonic aircraft such as Concorde solve the trim problem caused by centre of pressure movement by pumping fuel from forward to aft tanks.

IN THE WAKE OF THE VIKINGS by ERIC B. TOTTY

I had an urge to go where the Vikings had been centuries ago, and the Eskimos before that, where there were no reports of other expeditions to draw upon and where making new routes through an uninhabited region would be necessary. The opportunity to fulfill my dream presented itself in the form of an invitation to join a kayaking expedition to South Greenland.

We flew to Narsarsuaq, the "Great Plain" of Greenland, located on one side of a fjord dotted with drifting icebergs. On the other side lay Brattahlid, settled by Eric the Red in 1000 AD. This was the first, but not the last, outpost we would encounter of those hardy seafarers. The airstrip and the Arctic Hotel were outposts of more recent antiquity, refurbished remnants of a World War II military base.

There are no highways in Greenland, as rugged mountains and a widely scattered population only 5300 prohibit road building in one way or another. Transport is by coastal steamer or by air. We chose the steamer. The six hour voyage to Julianehab (Oaqortoq) took us among drifting icebergs of every size and colour, from pure white to emerald green and turquoise. The scarred hull of our steamer attested to many close encounters. One immense floe, larger than a football field stood at least 30 feet out of the water. We learned that large floes like this float down from the polar region on the East Greenland current which rounds Cape Farewell and then proceeds up the west coast of Greenland, whereas the smaller bergs of fantastic shapes are carved from the glacier faces at the head of each fjord.

Julianehab (Oaqortoq), a village of gaily painted wooden houses, perches precariously on a rocky hillside Nearly half of South Greenland's 8,000 inhabitants live here We enjoyed three days there waiting for the ship bringing our kayaks and tents from Europe. When it finally arrived, the weekly coastal steamer had already departed. Undaunted, we chartered a fast cutter, the Arctic Pax, to take us to our put-in at the northern end of Tasermiut Fjord, about 120 miles away, in the region of Cape Farewell.

A new friend, Mathaeus, accompanied us with his traditional custom-fitted sealskin kayak. His native paddle, about two inches wide, was tipped with whalebone held in place by small seal teeth. His kayak was a work of art and ingenuity built entirely from sealskin, driftwood and walrus or whale ivory. As one of the most important tools in the Eskimo's fight for existence, the kayak has the distinction of being one of the few Aboriginal craft whose basic design is retained in modern boats. Nonetheless, there was a world of difference between Mathaeus' sleek little craft and our less airy craft.

Our first adventure started with a 500 yard portage up a rushing boulder-strewn river to Lake Tasserssuaq. We paddled six or seven miles across it into the very heart of the steep-sided and sharp-edged mountain. Our destination beyond was the Quinguadalen Valley, reputed to have the mildest climate in Greenland, and home to its only trees - a grove of stunted birch. None were more than 20 feet high, and twisted and warped by gales sweeping down from the head of the valley. Mathaeus was amazed. In all his 53 years, he'd never seen a living tree.

The Vikings found this valley too. On a knoll which commanded a view of the entire valley, we found the stone ruin of a Viking homestead. The ruin was not striking in itself, but in what it represented - and for its dramatic setting at the head of this isolated valley. It

was protected to the rear by a formidable barrier of precipitous mountains and the inland ice which stretched unbroken for a thousand miles, almost to the North Pole itself. How did they ever find this place?

I entered by what had been the doorway and became aware of the walls, not as ruins, but as a home. I thought of the family who had built it as protection from the harsh Greenland winter and I began to understand what this ruined building meant. I sat on what might have been a stone bench imagining them doing the same while they recounted legends which stretched back into the mists of time, of past deeds of valour, and of difficulties encountered and overcome.

Our subsequent paddling was unhurried, and we marvelled at fantastic rock spires rising to over 6000 feet from the water's edge. On either side of the fjords were incredible mountains where the snow could gain a foothold only in the crevices. The windswept ridges at four or five thousand feet were always clear and sharply defined against the blue of the sky. We camped in delectable surroundings wherever we could find a small area of level ground. We sought no endurance records or lengthy mileage, but were content to enjoy long, sunny days of steady paddling.

As much as possible we lived off the land, to supplement our rations and add variety to our diet The mussels we found at low tide were plentiful and wholesome as the water was unpolluted. We even found minute 'pearls' in many of them Blueberries grew in profusion around most of our campsites - ripe and sweet. The crowberries and bearberries, though not sweet, were excellent thirst quenchers. We found large brown mushrooms of the boletus variety, with pores instead of gills. These, when cooked with our daily ration of meat, were truly delicious. Water for drinking and cooking was obtained by melting pieces of iceberg, the glacial streams being rather silted.

Then one evening, just as we were getting adjusted to this idyllic life, the old enemy of all headland and fjord paddlers, the katabatic wind sprang upon us. During the nights we fully expected the tents to take off in spite of the boulders we had used to weight them down. The fjord was lashed by hurricane force winds and waterspouts spiralled upwards. By the next day the wind showed no sign of abating. We resigned ourselves to sitting it out - while feasting on gourmet delights of mussels, mushrooms and blueberry deserts.

The wind never did let up. We ultimately made our way to the take-out rendezvous by hauling the laden kayaks like sleighs across the necks of headlands, launching them on the more sheltered side, then creeping around the bay close to the shore to the next headland. The wind searched us out in every indentation as though determined to destroy us. Several times the wind caught my paddle blades and jerked them aloft, almost causing a capsize. I felt fortunate to arrive at our rendezvous without disaster.

This trip showed us the endless possibilities for kayak travel in South Greenland It is ideal for exploration. Magnificent knife-edged mountains and glaciers, waterfalls and glacier-fed rivers, pristine landscape, colourful, hardy people - all of these make it a country worth visiting again and again.

Getting there

Your source of information on Greenland is the Danish Tourist Board which shares offices with Sweden, Norway, Finland and Iceland.

They're most pleasant, helpful and co-operative, but the notion of sea kayaking in Greenland just may be a bit foreign to them.

Air travel - Greenland is on the way to everywhere, but like the old Maine State joke goes, "You can't get there from here".

There are regular connections to Sondre Stromfjord and Narsarsuaq via SAS from Copenhagen - which is sort of going from Toronto to Montreal by way of Halifax, but that's okay. Copenhagen may be the best city in the world in which to spend a layover. SAS also flies from Toronto, Neward, Chicago, Seattle and LA. SAS information 800-221-2350.

Icelandair (remember the great piston-engined cheap flights to Europe, with a layover in Reykjavik?) flies to Reykjavik from JFK and Baltimore (BWI). No Canadian flights. From Reykjavik, air service to Greenland is available from Greenlandair and Helgi Jonsson Air Taxi.

First Air (Canada information 800-267-1247; U.S. information 613-839-1247) flies into Nuuk (Godthab), the capital of Greenland, twice a week from Frobisher Bay, connecting via Montreal.

Language - Greenlandic is an Eskimo language with no relation to any other tongue It's a polysynthetic language, of words formed of various parts as suffixes to a root word. Most Greenlanders speak Danish English is not commonly spoken. But a smile, some creative hand-waving, and those magic words Vennligst (please), Tusen takk (many thanks) and Vaer sa god (you're welcome) will break a lot of ice - even if they're Norwegian!

Designs of experience - The Legend
by Foster Rowe

The Legend is a speedy sea kayak intended as a more stable and more easily turned companion to the Vyneck It has expedition capacity, but handles well empty as a day boat.

The sleek lines and clipper bow give the Legen its remarkable speed, whilst the flattened curve on the hull section gives a comfortable degree of initial stability. A single chine to each side gives excellent secondary stability for tilted and leaned turns.

The Legend surfs well with a following sea, and is manoeuvred easily even in strong winds.

The cockpit is roomy inside for leg and foot comfort, with a comfortable seat. We recommend the sloped front bulkhead is tailored to your leg length for the extra comfort and control of a full-plate foot-rest, and for the safety of the reduction in cockpit volume.

Our standard deck is fitted with oval VCP hatches, front and back, with a round VCP hatch offset to one side for easy access to a smaller compartment whilst on the water.

Length - 18 feet. Beam - 21 inches approximately. £799 fully fitted.

ON TOP OF THE WORLD - IN THE BLEAK MID-SUMMER

When John Driver joined his local kayak club, little did he think it would be the first step in a journey that would take him to the top of the world. DAVID LLOYD reports.

As part of a six-man team, John Driver has kayaked along the most northerly coastline in the world - the Taymyr Peninsula in Northern Siberia.

"This was one of the few real expeditions left that anyone could undertake on the world's surface, because it really contained an element of going into the unknown," explains John, the expedition's co-founder, from West Kirby, Wirral.

The expedition, which took place late last summer, was to take the team in two-man kayaks on to Siberia's most northerly point, Cape Chelyuskin - a route so far north that even the native 'Eskimo' tribes had not ventured into its icy wastes.

"Until recently, no-one knew there was a sea passage to Chelyuskin, as everyone assumed the seas this far north to be under permanent ice, but, surprisingly, during the brief Arctic summer it is possible to travel through these waters," explains John.

The leader of the team, Colin Craig from Northern Ireland, had hoped to be the first man to have kayaked around both the most southerly and the most northerly land masses in the world, having successfully completed a journey around Cape Horn four years ago.

"It was after Colin had returned from Cape Horn that we set about discussing the next expedition. I was determined to be part of it," recalls John.

During subsequent discussions in the Soviet Union, Colin and John met Gennady Yezhov, a correspondent with the Soviet news agency, TASS, also a canoeist, who was very keen to get involved in the expedition.

"After the Soviet authorities realised we weren't just a bunch of British eccentrics they agreed to let us continue with our plans. It was definitely a case of Glasnost at its best," admits John.

Three years later, the team of six - including Mike Bartle and Allen Wearmouth from Bedford and Tom Turner from Jersey - found themselves in Moscow, ready to be flown out to deepest Siberia to begin their route. But even the best laid plans are at the mercy of the Arctic weather, and when the team arrived in Khatanga, a remote northerly outpost of Siberia, they learned that the chosen westerly route was completely frozen over.

"We frantically obtained charts and maps of the eastern side of the peninsula. We'd decided that as we'd got this far, it was too late to simply turn back," explains John.

"Nobody was very happy about the proposed new route, as it involved two open sea crossings, far more dangerous than routes hugging the coast, but as far as we were concerned it was the only way to Cape Chelyuskin."

John and the team had expected the weather to be bad, but they hadn't expected one of the severest Arctic summers on record.

"The worse thing was that the weather could change dramatically in a couple of minutes.

"The average temperature throughout the expedition was -10°C," says John, "but it felt a lot colder The air is constantly icy, and the water is so cold that if you were to fall in you would lose the ability to grip after only a few minutes."

Before too long into their journey, the weather became so bad that the team had to stay in their tents for four days.

"We had planned to do a lot of our cooking on open fires, and had only brought a limited amount of petrol, but because of the weather, there was no way we could eat outside so, very soon into the journey, our supplies were depleting."

When the weather eased, the team set off again and passed the only sign of life for hundreds of miles - a remote early warning military base.

"Because the weather was so changeable, we were completely at its mercy," recalls John. "We had been paddling for eight hours when we arrived at the first open sea crossing, and the weather was still calm so we decided to keep going.

"As soon as we turned the corner of the headland we hit the most horrendous weather. The entire sea was iced up and we had to wait for the winds to blow the ice away before we could get back to the coast."

The team had now reached what it considered to be the point of no return. They had to go on.

"Nobody at the base knew we were there," says John, explaining that, as the route had been changed when they arrived in Siberia, not even the British Embassy knew of their whereabouts.

The team was about three days' paddle from Cape Chelyuskin, with another open sea crossing to go.

The weather, as usual, was appalling.

"We thought we'd break the final sea crossing into two stages by paddling first to an island half way across the open bay," explains John.

"We were running out of time - and supplies. We had been waiting a couple of days for the barometer to steady, when a slot of open sea appeared between us and the island.

"We had an 18-mile route abd the temperature was colder than ever, but this was our last chance to get to Chelyuskin."

As they set off, conditions were good. Huge icebergs - the size of lorries - on either side of them helped to weigh down the water and keep it calm. The deep red sun was hanging on the horizon, ready to start its climb into another endless Arctic summer day.

As the team was soon to find out, this was to be the calm before the storm.

Throughout the four hour journey, the wind began to freshen, and as the men paddled to within two miles of the island's coast, they

discovered that the water ahead of them was completely frozen.

"We started to paddle around the coast to see if there was a break anywhere, but the sea was just a solid mass of ice and the temperature plummeted," remembers John.

"We were 16 miles from the coast, and a storm was just about to break overhead," he says.

"The wind was hitting the side of the boat, the waves were between ten and 15 feet high and breaking, and we were being blown towards sheer cliffs of ice, as sharp as glass.

"The air temperature was -20°C. If anybody had capsized in the kayaks we would have had fatalities," he admits.

The wind, which had originally been blowing from the land outwards, moving the ice out to sea, had changed direction and was blowing huge chunks of ice towards the tiny kayaks.

"No matter how hard we rowed, all we could do was try to compensate for the wind pushing us sideways towards the ice."

It took the team eight hours to reach the shore.

"We hit the shore just 200 metres away from the ice cliffs. We were all incredibly knackered and no one said anything. We were all glad to be alive, and we all knew that the expedition was over.

"The next morning we knew we had to arrange alternative plans for our pick up point, so we paddled back to the military base," says John.

Knowing that foreigners would not be allowed onto the base, the team got to within two miles of it and sent Gennady on ahead.

"He was gone for hours, and we were getting quite worried," said John.

Gennady, however, had a lot of news to catch up on. While he had been paddling, his home town of Moscow had experienced scenes reminiscent of the Russian Revolution, as Soviet hardliners had attempted to take control of the Kremlin. The coup, however, had ended 11 days previously.

"The families at the base made us very welcome, we had barbequed reindeer steaks on the beach and opened up the bottle of champagne we had been saving for when we reached Chelyuskin," remembers John.

The team was expecting the helicopter to pick them up the following day, but because of the appalling conditions they were stranded for ten days.

"We had long since run out of food, and if it hand't been for the base we would have starved," admits John.

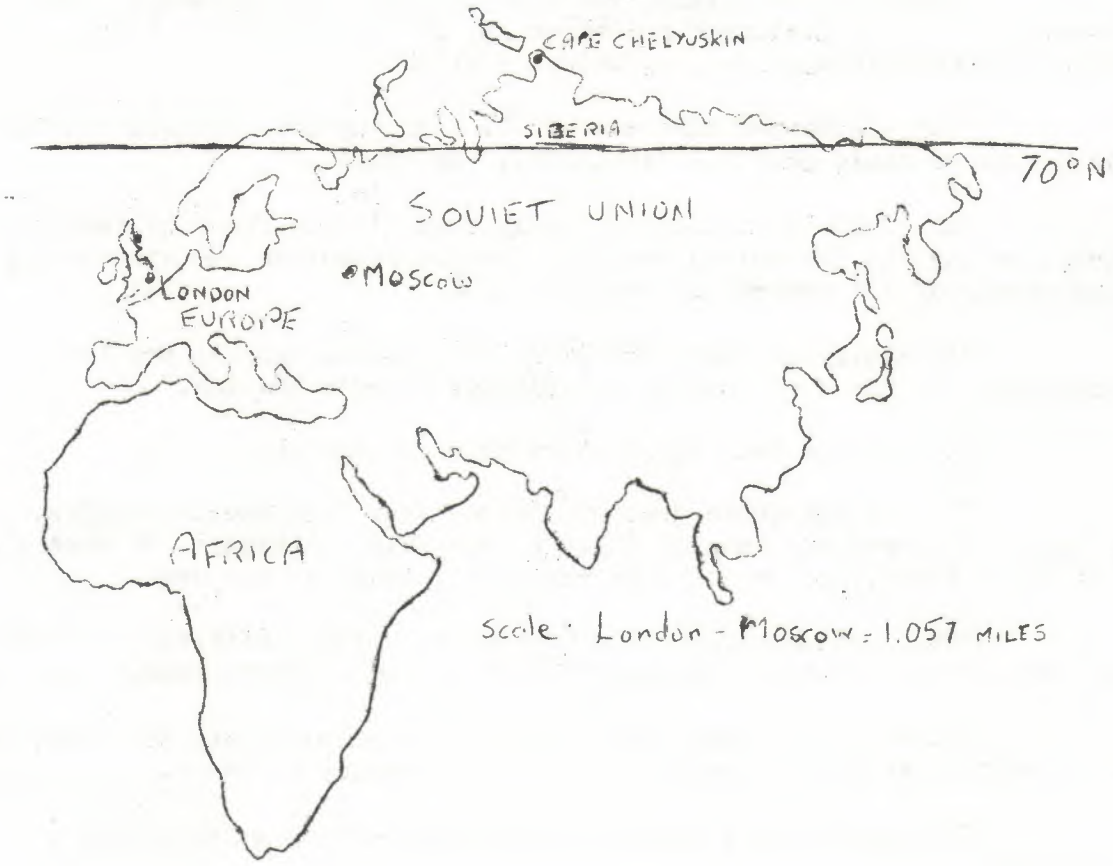
Despite the fact that the team hadn't reached its objective the men were far from downhearted.

"We were glad to be alive. The conditions we endured were far worse than any of us had imagined. It put things into a greater

perspective for me, and I was very keen to see my wife and baby son again.

"I'd never put my family through that ordeal again," says John, adding that the expedition was far from a failure.

"We've still been further north than anyone has ever been in a kayak before," he smiles.



DO YOU POSSESS SOME SEA KAYAKING EXPERIENCE?
OR
MAYBE YOU'VE PASSED YOUR BCU SEA PROFICIENCY TEST?
18+ IN MIND OR BODY?
WHAT NOW?
ARE YOU GOING TO BE A LONELY PADDLER?
YOU DON'T HAVE TO BE!

Join the Sea Kayak Group U.K. and enjoy the friendship of experienced sea kayakists. Explore the coastline in company. Share the scenery, with seals, the occasional shark, possibly a dolphin and there's the many varieties of sea birds.

There's a multitude of things to do and see when paddling in a friendly group, so don't be lonely any longer. Act now! Write requesting an application form, to :

Sea Kayak Group U.K., 8 Wiltshire Avenue, HORNCHURCH, Essex RM11 3DX or telephone 04024 50596 daytime or early evening.

From Dave Gardner, 3, Andrewstown Terrace, Lerwick, Shetland Isles, ZE1 OSY.
Telephone 0595 5096.

Dear John,

SHETLAND SEA KAYAK WEEKEND 3rd to 6th JULY, 1992.

On behalf of the Shetland Canoe Club we invite all kayakers (and families) to join us for a week of sea kayaking. The venue is to be PAPA STOUR which is just off the west coast of Shetland.

PAPA STOUR has a spectacular coastline of about 21 miles with a large number of sea caves which are among the best in the U.K. with subterranean passages where it is possible to paddle through sections of the Island. One of these caves is known as 'CHRISTIES HOLE'. We shall paddle through for some distance to where it becomes light as daylight comes through the collapsed roof. There is a waterfall cascading through this hole from a pool above. Around the Island there is a number of natural arches, stacks etc. The area has a big variety of sea birds and both common and grey seals. Porpoises are occasionally seen and if you are lucky you may see a sea otter or even a killer whale

The sea surrounding PAPA STOUR is subject to strong tides and it is an exposed area of the Atlantic Ocean. Consequently you should be up to sea Proficiency level to enjoy the experience.

There is Bed & Breakfast accommodation on PAPA STOUR. You can arrange this direct with Mrs. Holt-Brook, North House, Papa Stour, Shetland - 059 573238. She is happy to allow camping with options regarding food and facilities. She will also provide packed lunches. For those who may wish to be yet more independent there is a fresh water supply near the camp site. Another option is self catering accommodation run by Mrs Grey, Hurdiback, P.O. Papa Stour on Telephone 059 573 227. She is also happy for people to camp.
Both the houses and camp site are situated at Housa Voe which has a snady beach ideal for landing/launching/leaving kayaks. We hope to arrange a social with bonfire at the beach with barbeque. PAPA STOUR has only a small store and no pub so it would be best to pick up supplies in Lerwick which is Shetland's main town.

The general plan is to meet up with everyone in Lerwick and travel by car to Melby near Sandness which is 30 miles from Lerwick. From Melby we will paddle across to PAPA STOUR. The weekend would be spent paddling around the Island, visiting the caves and points of interest. For those who wish an open crossing there is a small group of islands known as Ve Skerries which are about 4 miles to the N W of PAPA STOUR.

Apart from the scenery and wildlife, Shetland as the added attraction that in mid-summer we have what is known locally as the 'Simmer Dim'. Being so far north means that it is possible to paddle in daylight conditions almost 24 hours a day.

I have spoken to John Ramwell of the A.S.K.C. and he plans to join us in which case we should be able to fit in some advanced sea Proficiency training for those interested.

For those who travel up to Shetland and want to extend their stay I know they would not be disappointed with all the sea kayaking opportunities. In addition to the mainland of Shetland there are over 100 islands of varying distances off and committeent. This includes camping wilderness style; camp sites with facilities; self catering, B & B and hotels. It would be useful to contact the Shetland Tourist Organisation, Market Cross, Lerwick, Shetland, Tel 0595 3434.

The P & O ferries, St.Clair and St.Sunniva, sail from Aberdeed to Lerwick fives days a week, leaving at 1800 hours and arriving 0800 hrs next morning. These are car ferries with accommodation if required.

If anyone wishes any information about any aspect of the Shetland Sea Kayak Weekend, they can contact me on 0595 5096.

We hope that some of you will be interested and come and join us for what we think will be a great weekend.

Dave Gardner.

* *

COLUMBUS - NORDKAPP TRUST - ANGLESEY SEA SYMPOSIUM

1992 is the 500th anniversary of Columbus's discovery of America. Canoeists should remember that if it had'nt been for him, there would have been no canoeing for us!

The Nordkapp Trust is putting on a second International Sea Symposium in Anglesey during the first week of May, and they have decided to celebrate Columbus and the New World in the keynote lecture on Saturday night.

MIKE WATTS, who is coming over from Canada especially to give the lecture, is actually an English doctor who moved across the Atlantic some twenty years ago. Much later on, he became interested in paddling, and started taking his summer holidays in a kayak rather than in a deck chair.

I heard Mike give a slide show about some of these 'holidays', and it did'nt take me two minutes for me to realize that what he called holidays would be classed as a major expedition by most people.

Don't get me wrong, Mike is'nt shy ....he's got a voice that disturbs nesting guillemots even when he whispers, and when he laughs .... ever heard of the Roarong Forties? But he is modest. When I rang him to see whether he'd come over and tell us about his trips, he really could'nt believe it. He was so surprised that he not only agreed to give the Keynote Lecture, but also said he would throw in another one on the Sunday night as well.

So we're getting everything in place for the Anglesey Symposium, don't forget 1st to 4th May and stay on for trips, B.C.U. coaching courses, etc. until the 8th if you wish. See you there.

Frank Goodman, Nottingham.

* *

From Mike Alexander, 30, Aymer Drive; Chertsey Lane; Staines, Middlesex, TW18 3LW. Tel; 0784 458660

Dear Paddlers,

I am a member of Westel Canoe Club based on the Thames. We are Marathon/ Touring canoeists.

Is there anyone out there who can advise on joining two touring canoes to make a low tech catamaran in the Wharam tradition, enabling sailing to estuaries and then dismantling for estuary and creek exploration?

Any information or addresses to contact would be very helpful.

Mike Alexander.

* *

From Peter Clark, Sea Kayak Group U.K.; 8, Wiltshire Ave; HORNCHURCH, Esses, RM11 3DX Tel/Fax 04024 50596

Dear John,

Many thanks for your support for our fledgling club, following our introduction by Martin Meling at the Sea Touring Committee.

We are inviting people to paddle with us on a daily basis, providing they are prepared to contribute £1.00 for B.C.U. members and £2.00 for others. All must satisfy our safety requirements and abide by our rules whilst on the water. Our rules will be explained several days prior to paddlers joining us. We also endeavour to encourage people to belong to the B.C.U. so that they can benefit from the services provided.

It is important to understand that the S.K.G. U.K. is primarily for recreational sea paddling. It is not with our remit to organise or run competetive events. The Club has been formed to encourage mainly coastal paddling, but we are willing to organise other trips as required. The people we hope to attract must be competent, safety conscious kayakers who wish to belong to a sea kayaking club. Should there be any further points you wish to raise, then do get in touch.

Sincerely, Peter Clark, Act. Sec.