

OCEAN KAYAKER



NEWSLETTER OF THE
INTERNATIONAL SEA KAYAKING ASSOCIATION



**An international & independant sea
canoeing association open to all
interested in this aspect of canoeing
with the objective of promoting safe
sea kayaking for everyone**

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Whether you kayak regularly or hardly ever you must have something to say. Share your views, information, trip reports and opinions with us. Like what you read, - say so. Don't like what you read - then it is even more important to say so

EVENTS

Please note that we are not including a guide to events within the newsletter itself. As we only produce this letter once every two months we have decided that a current list of pending events is best kept on our web site <www.seakayak.co.uk> So keep Chris Bolton informed of all your events by emailing him at :- seakayak@cjbolton.plus.com
Ensure you include WHAT, WHERE, WHEN and WHO (i.e. contact details). There is no charge for this service.

EDITORIAL

I have just returned from the BCU Sea Touring Committee AGM and Symposium, this year held on board the 'Egremont' moored in Salcombe harbour. This ex-Liverpool ferry was an inspired choice as a venue. We were made very welcome by members of the Island Cruising Club and facilities were excellent. We enjoyed Graham Dores' slide show on kayaking north Norway. He makes it sound so easy - just pack a bag or two, sling the kayak on the car and go for it. Peter Bray told us, in his inimical style, about his recent circumnavigation of Newfoundland where for much of his time he was chased around by his mistress called Gayle. The AGM itself was very routine. We were reminded that this committee now looks after the interests of English paddlers and as yet the Welsh have not convened such a committee. Let this not beg the question as to whether we actually need a specialist committee to look after the interests of sea paddlers. WE DO, particularly when ever there are any contentious issues around. It just so happens that at this time all is well. Apart from which, who is going to organise our symposium!

It is that time of year again - time to renew your subscription to ISKA. Early renewal would be much appreciated. I have enclosed a form for this purpose. I look forward to hearing from you.

Fancy paddling Belize, Cuba, Vietnam, Nicaragua? SeaKunga.com are offering ISKA members 10% off their prices.

LATE NEWS

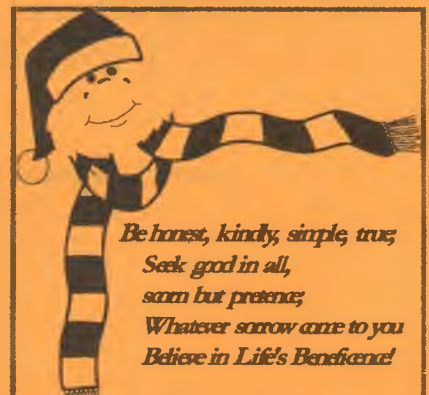
Have just heard from Chris Lansdale, newly appointed PR man to the Scottish Canoe Ass. that the Paddles Sport Festival is going ahead next October in Perth.

ISKA SHOP

I still have a few T shirts, L and Extra L, grey with the ISKA logo, for sale @ £6.00 and now have some short sleeved polo yellow shirts, again with the ISKA logo for £8.00

CONTENTS

Editorial.....	Page 1
Buying a Kayak, Pt 3 <i>Timothy Williams.....</i>	Page 2
Tragedy of a foolish teacher <i>John Ramwell.....</i>	Page 5
7th Jersey Symposium	Page 6
The Lone Voyager of Millport	Page 6
Coastguard Changes <i>Arne Yang.....</i>	Page 7
Paddling with your back to the wall <i>Ted Williams.....</i>	Page 8
History The Eskimo Kayak <i>Prof F Debenham.....</i>	Page 14



*Be honest, kindly, simple, true;
Seek god in all,
scorn but pretence;
Whatever sorrow come to you
Believe in Life's Beneficence!*

have a wonderful
festival season and
great paddling 2004 1

Buying a Kayak, Part Three.

By *Timothy Williams*

My last rambling diatribe dealt with some basics of kayak selection, including some definitions and the materials commonly used to construct boats. This installment will treat stability, rudders, and skegs with equal verbosity and instability.

If you read this series, study it, and have a clear idea of your paddling demands, you'll be more likely to purchase the boat that will meet your needs. This series is geared to help with the decision making process in a more practical sense, based on personal experience, research, observation, and interviews with paddlers of many skill levels.

Stability

There are three different types or planes of stability referred to when describing a kayak. Lateral, (primary + secondary), longitudinal, and directional are the most discussed. I will rather briefly describe these types of stability and how they apply to boat handling.

Some of the features that appeal most to a beginning paddler are the very same that might prove to be limiting factors as the paddler develops more skill. The subject of boat design is a complex one, and beyond the scope of this written work in terms of engineering and hydrodynamics. Chapters in books are devoted to this subject, and I will not attempt to treat this subject as an academic one.

The best treatment, in my opinion, has been written by British designer **Frank Goodman**, architect of the world-renowned Nordcapp design. Goodman peppers his well-written treatise on boat design with the reminder that conditions are ever-changing when kayaking, and will affect the handling of a boat. Its loading, the paddler's size and weight, the current wind and sea conditions, and the friction on the hull will affect the stability. As I'll reiterate, there are many interconnected factors that make up a boat's stability and handling characteristics. A sea test with a skilled paddler is the only real way to determine the performance characteristics and therefore, the suitability of any design for a paddler. There are some relative constants, though, which deserve some explanation.

Beginners are most often impressed with a kayak's lateral initial or primary stability, a factor which may have negative effect on the boat's handling characteristics in adverse conditions, and result in the purchase a boat that will rapidly be outgrown. Initial lateral stability, simply, is a boat's tendency to be stable or resist rolling over while at rest. When entering the craft, sleeping, fishing, or bird watching, this quality is much praised.

Secondary stability comes into play when a boat is edged or leaned to one side. Skilled boat designers and paddlers

favor strong secondary stability in their craft, realizing that this design factor is more important for optimum boat handling in all conditions. Unfortunately, a new paddler might only feel this lack of strong primary stability as an unsettling "tippiness" rather than responsiveness.

This is the primary reason I question the validity of first-time boaters properly evaluating a kayak; they will probably not be able to effectively sense the stability of the boat during a test session. Again, this applies to true sea kayaks that are designed to be paddled using appropriate edging

Kayaks will have width, called beam in nautical circles. Real sea kayaks should be less than 25 inches in beam. The highest-performance kayaks are typically in the 19-22 inch range, but are limiting: some paddlers just can't fit into them! As beam increases, so does initial stability. This sounds great until the boat must be called upon to handle rougher water.

To imagine an extreme case, think of a round log and a sheet of plywood both floating on the surface of a calm sea. Initially, the plywood sheet would seem to be the preferred place to be, as it is quite stable. As the sea builds, though, becoming more active and wavy, the log maintains its stability and literally lets the wave action roll through it. The plywood, however, must follow the shape of the wave. Waves may break over the top of the plywood, as its width forces it to remain in contact with a large percentage of the sea's surface. As the wave height increases, the plywood must follow its shape until it eventually rolls completely over.

In general, kayaks will have some form of chine (angled sidewall), ranging from a round form to a more squared-off shape. Hull cross-section is of a few general types. A round-bilged (bottomed) hull will not have a defined keel line or V-bottom. It's a somewhat stable design and will generally be a nice roller. Semi-hard chined boats employ a definite chine or edge, usually coupled with a V or semi-V bottom to improve tracking. These boats generally provide increased stability. A hard-chined boat will be more stable in the secondary mode, and usually employ a V-bottom. Most sea kayaks use a chine system that allows the boat to handle lateral forces (i.e. a beam sea) well, yet be turned onto a stable edge to promote increased maneuverability or specialized techniques, such as those executed in Greenland-style paddling. The most "performance" stable of designs, with all other factors being equal, will be the hard-chined, V-bottomed boat. That is, this design will generally provide very good secondary stability for its beam.

The Canadian manufacturer Necky is releasing some interesting designs that paddle beautifully, incorporating a **2**

stepped, multi-chined hull that transitions more subtly between upright and edged attitudes. Wilderness Systems has also attempted to use a design of this type on some boats, but I've not paddled them nor have I heard any reports from skilled paddlers who have.

To understand the difference between hard and soft- (or non-) chined hulls, imagine the following. A square block of wood will be very stable on a calm pool of water. When turned on its side, it will come to a rest squarely on the next side to contact the water. The transition between sides may be abrupt and unsettling (a crude hard chine). A perfectly round log will be unstable, even in moderately calm waters. It will spin or roll freely when any significant pressure is applied to a side. There will be not discernable point the log will come to rest upon.

Gunwales (pronounced, "gunnels") will affect the secondary lateral stability of a kayak. High gunwales will give more freeboard, or height from the waterline; a shorter gunwale will submerge sooner, decreasing stability. This will also affect a kayak's "rollability." A lower gunwale will enter the water sooner and more smoothly, which will ease the opposite gunwale's exit from the water during a roll recovery.

Directional stability is the ability of the boat to track, maintain a straight line, and transmit a stroke into efficient forward motion of the boat. Again, there are tradeoffs here.

Imagine an eight-man racing shell used for rowing. This is a long boat, very narrow and built for speed. It is steered by a small rudder at the stern, but will not be capable of great maneuverability. It's made to go straight and fast. A stroke made on one side of the boat will translate into a great amount of forward motion, and very little off-axis (turning) motion.

Now imagine a truck inner tube, used for rafting on relatively calm waters. Any paddling activity on one side of the boat will immediately transfer to a spinning motion of the boat, with little or no forward progress.

A properly designed sea kayak will transmit a sufficient amount of the paddle stroke to the forward motion of the boat, yet will allow itself to be turned quickly and easily when needed. Obviously, this is an imperfect situation, with increasing length adding to overall tracking and speed, but limiting quick response in a turn.

For those who enjoy touring in varied conditions, sometimes carrying a few days worth of supplies, a general recommendation would be to choose a boat in excess of seventeen (17) feet. For those who wish to do day touring, play in the surf, or who enjoy more flexibility in maneuverability, a boat in the fourteen to sixteen (14-16) foot range will be a better bet. Keep in mind, however, that a fourteen foot will have difficulty keeping up with 16-18 foot craft

on a many-mile paddle. Conversely, exploring surf areas will be more difficult in a longer craft that cannot easily spin to avoid rocks or catch breaking waves.

Longitudinal stability is a boat's ability to remain in contact with the water, resisting pitch-poling. This is a situation where the bow submerges and dives under the boat, slowing its speed, while the stern continues at wave-speed, leaves the water, and flips forward. This will happen in steep waves, and boat loading is a critical factor in its occurrence. The boat's bow design and displacement are critical in the avoidance of this condition.

Rudders and Skegs

Directional stability can also be influenced by the integration of a V hull, the integration of a skeg, or the use of a rudder. Rudders are available on most polyethylene and fiberglass boats. Rudders are usually mounted on the transom of the boat, and stored on the rearmost part of the deck when not in use. Many beginners and some more seasoned paddlers are convinced that a rudder is a wonderful device. This assertion is based, I feel, on the abundance of films, magazines, TV shows, and display boats with rudders mounted or in use, coupled with a lack of available professional instruction. For a novice or beginner paddler, the use of a rudder will allow the paddler to steer the boat. Unfortunately, that's not what it's designed to do.

I think that rudders are a good way for a new paddler to slow his or her progress. Did you ever, as a child, attempt to ride your bicycle backward? Steering from the rear is an invitation to a wild ride. Steering a car in this manner will be a similar experience and is great fun until the authorities arrive or one crashes into a fixed object or the aforementioned authorities.

My first official day as a kayaker I took my boat to the water, set the rudder, hopped in, and proceeded to attain a high forward velocity. I then pushed hard on the left foot peg/pedal, turning the boat sharply. This felt really good, and probably looked pretty cool, I thought. I did this a few times before coming to the realization that I was becoming very tired. This was because each time I applied the rudder the drag on the boat slowed it greatly, forcing me to accelerate up to a normal cruising speed again. I was relying on the rudder to turn the boat instead of developing the skill to turn the boat using the paddle and my body.

The rudder also comes with a free subscription to Murphy's Law Journal. That is, it will surely fail when most needed, placing the paddler in a position which may jeopardize enjoyment or safety.

Rudders are a safety concern during rescues. Most rudders are of steel construction. Many resemble knives or scimitar when retracted into their resting positions atop the after-deck of a boat. linkages for rudders are usually of cable, and are attached using steel fasteners.

In the event of capsizing the rudder becomes a factor in the rescue. After a wet exit the swimmer must remain in close contact with the capsized boat. A swimmer in rough water will have to contend with and avoid the stern of the boat, with its waving rudder blade threatening. This may force the swimmer to momentarily lose contact with the boat, which could complicate the rescue attempt. Even the linkage may snag or cut the paddler or their equipment as it touches same. It also affects the ability to roll safely, creating an amount of drag which may thwart the beginning roller's attempts at self-rescue.

Rudders are found on many boats for three reasons, in my opinion. Their original intent is to allow a boat to maintain a heading in wind and tidal current conditions that otherwise might be extremely difficult or impossible. Another reason is that they may compensate for poor design, such as a boat's tendency to weathercock or turn strongly upwind in quartering or beam conditions. When promoted by unscrupulous manufacturers who do not promote the benefits of professional instruction, they will allow an unskilled paddler a sense of control of the direction of the boat. This sense of control, as demonstrated above, is a false one, inefficient and possibly placing an unrealistic expectation upon a mechanical device that may fail when needed most (see Murphy, above).

Another difficulty with most rudders is their control mechanism. Most are angled through the use of the boat's footrests or pegs. A left rudder application results in the left foot sliding forward. This means that one cannot fully angle the rudder without losing the contact needed in the cockpit. This is of increased concern in conditions of wind-driven waves or high currents that may require the paddler to edge the boat on a precise angle to avoid capsize.

The design of most footpegs is such that they have a mushy feel. This may be compared to a boat with well-designed fixed footpegs, which should be rock-solid. The sliding style of rudder-controlling peg also has a tendency to break when under pressure with the rudder in the fixed or "up" position.

A few companies have designed footpegs that operate independently of rudder-controlling pegs. Again, I've not used them, so I don't know how efficient they are.

Dagger has made a rudder that sticks out from the bottom of the stern, leaving a low profile rear deck. This mini rudder is plastic and functions in a manner similar to a skeg, although it's steerable. I think this is the closest thing to a useful rudder; an oxymoron in my usual vocabulary. I also believe they've stopped making it. Figures.

Skegs are a different story. Basically fixed keel extensions, skegs usually deploy from the underside of the kayak.

They increase the effective depth of the keel line, helping a boat to track more efficiently in wind or adverse currents. Skegs can be deployed at different depths, limiting the lateral drag on the boat to the minimum required to maintain heading.

I happen to like sheet (rope)/ bungee actuated skegs more than the cable-controlled variety. The reason for this is that on many skeg-control systems, the sheet type is able to be serviced easily in the field. I've also seen too many of the cables kink when skegs were deployed while they were under strain or resistance.

The design of a boat, the prevailing conditions, and the skill of the paddler determine how often a corrective device will need to be used. My personal favorite boat, the Nigel Dennis Romany, is very responsive yet neutral in handling. This has translated to the use of the boat's skeg only twice in the last four years: once in a hurricane, and once while towing an injured paddler in a strong tidal current. Despite the infrequent use of the skeg, I would order my next Romany with it as an added safety factor.

In kayaking, to paraphrase a few very experienced and intelligent observers of life, one should always expect the worst, yet hope for the best. Be prepared. To have and not need is better than to need and not have. Always look on the bright side of life. Time flies when you're having toast.

Summary

Boats are available in many different shapes and basic designs that influence their stability. There are so many interconnected factors that make up a boat's design that the actual performance must be judged by paddling the boat in question. In general, shorter boats are more maneuverable; longer boats track more efficiently and are faster. Wide boats usually have higher initial stability, while kayaks with less beam will often have a more secure secondary stability, prized by more experienced boaters. Chineses increase secondary stability; the softer they are, the more easily a boat may roll. Rudders can break; a well-designed boat may not need one. A skeg is often a better bet.

To clarify your demands and expectations, read all that you can on the subject. Talk to lots of boat owners after you've assessed their skill level and experience. If practical, test-paddle boats in conditions that will realistically simulate those you'll encounter. If those conditions are beyond your current level of experience or comfort, enlist the aid of a competent friend or professional instructor who will test the boat for you.

TRAGEDY OF A FOOLISH TEACHER - OR THERE BUT FOR THE GRACE OF GOD GO I

During my time as a paddler I have spent countless hours, weeks, months coaching and leading others less experienced than myself. During this time I have had some close shaves. The very 'law of averages' says that there is going to be the occasional 'near miss'. Fortunately the closest I have been to a tragedy has been a near miss and I thank my lucky stars that this is the case. A few others have not been so fortunate.

Max Palmer, the 10-year-old boy who died in the cold waters of a beck in the Lake District last year was not a near miss. The man responsible for his safety was a teacher, Paul Ellis. He is now serving a year in jail for manslaughter. There is no doubt that Ellis made a terrible mistake. He had taken his party to the beck, where there is a plunge pool that children have been enjoying for years. But there had been a lot of rain and the current in and out of the pool was unusually strong. Another teacher had decided against letting his party jump in. Ellis thought that was a bit overcautious. That was his first mistake. His second was not to take a rope with him.

The first child - a 12 year-old, had no problem. But then Max jumped. He landed in a spot where the current was not strong enough to carry him to the side. He panicked in the bitterly cold water. Ellis jumped in to rescue him, dragged him to the side, but lost his grip. Then Max's mother - who was a supply teacher at the school, also jumped in.

The details of what happened next are tragic enough to break anyone's heart. Max clung to his mother and begged her: "We're not going to die, Mummy, are we. Don't let me die." She did her brave best, but the water - as cold as a February sea - got to her too. And she lost him. Ellis was responsible for his death. He was a fool. But was he also a criminal who deserves to be in jail?

It goes without saying that, he had no criminal intent. But then, neither does a driver who stupidly loses his concentration for a moment and knocks down a child in the street. Lack of intent is no defence. Nor should it be. That is why we have the offence of manslaughter. This is not a question of a guilt but of the punishment, of how we calculate that it is in the best interests of society to send someone to jail.

There are four classic reasons for doing it. One is simple punishment: the wrong-doer must pay a price for what he has done. Another is to stop him doing it again. The third is to get him to mend his ways. And the fourth is to deter others from doing the same. Not one of those is remotely relevant in the case of Ellis or many others we send to jail. It is obviously ludicrous to suggest that other teachers need the deterrent effect of going to jail for manslaughter if they are to behave responsibly with their little charges when they take them on trips.

Either they are responsible or they are not. It is for their employers to make that decision.

There will be one deterrent effect though. Schools, already intimidated by high insurance premiums, will be forced to think yet again about allowing adventure trips. That is clearly not in the interests of society. It is good for children - essential even - to be exposed to risks in a responsible way. All praise to that appeal court judge who overturned a compensation claim last week in favour of a boy who fell off a swing and broke his arm. He'd been awarded more than £4,000. The judge said it defied common sense - and so it did.

Will a jail term help Ellis to be rehabilitated? Hardly. He had been regarded as a model teacher. He made one terrible, fatal error of judgment and nobody is more aware of that than him. Rehabilitation is not an issue. Will a jail sentence stop him doing it again? That question answers itself too. The idea, that he would ever be in a position to do so is plain silly. Which leaves the question of punishment.

Of course he should be punished for what he did. He already has been. He has lost his job and his career and the respect of the community. But his real punishment is that he will have to live the rest of his life knowing that his own stupidity caused the death of a child. It will be forever on his conscience. That is a truly terrible cross to bear. His life has been destroyed.

The parents of Max Palmer argue that their lives have been destroyed too, that they are serving a life sentence. So they are. A parent never fully recovers from the death of a child. They may feel a one year sentence is not enough for Ellis. But what would be? Two years? Five? Ten? There is no practical calculus that can measure it. A more primitive society would demand full retribution: an eye for an eye; a life for a life. But we are supposed to have grown beyond that. We are more civilised. We know that justice is not meant to avenge the wronged; it is meant to serve society. It is hard to see how society has been served by sending a teacher to prison because he made a mistake. Yet we constantly send people to jail when the sentence clearly meets none of those four tests. And the reason we do it is that we cannot think of anything better to do. It is the easy option.

The judge told Ellis he had been "unbelievably foolhardy". Just as I have been in on occasions during my time 'in charge' of others on the water. The only real difference between us is that I was lucky and Ellis was not.

John Ramwell, Editor

7th Jersey Sea Kayaking Symposium

This established and popular Symposium is being held again over the weekend 28th -30th May 2004. Three days of lectures, paddles and workshops will be led by paddlers from the island and further afield. Speakers at the present time are confirmed from Scotland, England and France.

The emphasis is very much on the practical aspects of sea kayaking and as well as the old favourites a number of new sessions are planned such as "Lobster Pot Fishing from Sea Kayaks" and "The Role of the Seaside Cafe in the Development of Sea Kayaking".

Travel: There are a number of methods of travelling to the island. The most convenient is by car ferry with your own kayaks. For those people with limited time or travelling from further afield there are flights from most UK airports and there will be a number of kayaks available for use.

Accommodation: Most people stay on a campsite but because Jersey is a tourist destination there is a huge range of alternative places to stay. Ask for further advice.

Programme: There is a comprehensive programme for the first three days, both during the day and in the evening. The final session on the Monday evening is a sea kayak slalom. From Tuesday morning onwards there is an extended paddling programme with the opportunity to visit some of the offshore reefs and other islands as well as explore Jersey's superb coastline in greater detail. In addition to the sea kayaking, surfing and tidal race sessions will be available. A new development for 2004 is that a number of courses leading to a BCU qualification will be available during those four days.

Numbers: Every effort is made to make visitors to the island feel welcome, therefore numbers are limited so please book early to ensure a place. Non paddling partners and family members are encouraged to attend, there is always plenty to do.

Cost: It has been possible to hold the cost at the same level as two years ago, £85. This includes the Symposium and the paddling the following week. There may be an additional charge if people are participating in a BCU course but more details will follow later.

Further Information: Contact Kevin Mansell at kevin@seapaddler.co.uk or by phone on 01534745936.

We look forward to seeing many old friends and some new ones in Jersey in 2004. Book early to avoid disappointment. You will not be disappointed!

Extract from the "Largs & Millport Weekly News" of Friday 11 th September 1897.

The Lone Voyager at Millport.

Mr. John Ross Brown, who has achieved fame by sailing some 3500 miles round the coasts of Scotland in a canoe 15 feet long, and who gives lectures at the various coast place he calls at on behalf the newsboy, is to appear at Millport to-night (Friday).

Mr. Brown, who is a surgeon dentist in Greenock, takes a two months' holiday every year and proceeds to voyage in his little craft, delivering his lecture as stated -all this being done on account of the newsboys.

He has already been entirely round Scotland, going up all the lochs in the Firth of Clyde round the Mull of Kintyre, in and about the Hebrides, round Cape Wrath, and Dunnet Head, through the Pentland Firth, into the Firths of Moray, Tay and Forth, down to the Tweed and the Tyne, overland to Carlisle, down the Eden, up the Solway Firth,

and up to Firth of Clyde again.

This a synopsis of Mr. Brown's 10 years' cruises" and he has given his lecture in very many places on these routes. His lecture itself is bright, instructive, and amusing and besides being an able pleading for the cause which Mr. Brown has at heart, is a most enjoyable affair. Mr. Brown, it is perhaps unnecessary to mention, voluntarily spends his holiday in this matter, and all his "takings" go to the Mission of which he is the missionary canoeist. The Rev. Archd. Grierson, M.A., is to occupy the chair to-night, and Mr. Brown received the countenance on the platform of the Revs. A. Walker, Jas. Frame, Jas. Black, and Dr. Sinclair, Provost Allan, Messrs A. C. Steven, A. M. Wright and Jas. Wallace.

Thanks, yet again, to Duncan Winning, OBE who sends me these little bits of history to remind us that there is little new under our sun. J.R. Ed

Coastguard Channel 16 Dedicated Headset Watch No Longer

I have written a few articles regarding how Coastguards and the Maritime and Coastguard Agency (MCA) can assist canoeists, particularly sea kayakers. One of the points I have stressed is the dedicated headset watch on VHF Channel 16, the distress frequency, which was due to end in February 2005. Recent upgrades to equipment and legislation for commercial vessels, mainly relating to Global Maritime Distress and Safety System (GMDSS), have meant that this change to VHF listening procedures has started to change sooner and I feel that not all canoeists will be aware of this fact.

Below is a copy of the official press release. If you have any queries about this press release, contact either the Press Office on the number given below or contact your local Coastguard Station. Other press releases from the MCA can be found at www.mcga.gov.uk

Regards.

Anne Young,

Aberdeen Maritime Rescue Co-ordination Centre
Monday, September 8, 2003

COASTGUARD ANNOUNCE CHANGE TO VHF LISTENING

Her Majesty's Coastguard has been responsible for the integrity of the international VHF distress, safety and calling frequency, namely VHF Channel 16, for 30 years.

This task has included the maintenance of a continuous distress watch on VHF Channel 16 which has traditionally been carried out via a headset watch. The United Kingdom Coastguard has been alone worldwide, in maintaining such a headset watch on the emergency VHF Channel.

The introduction of more reliable and automated methods of distress alerting by vessels at sea, via satellite communications and digital selective calling (DSC) and the increasing use of mobile telephones, which is not recommended, in coastal waters for alerting purposes is now requiring Coastguards to keep an ear to these differing methods. Having a Coastguard tied into just one way of communication does not allow Operators to monitor other activities.

Therefore, as from 00:01 on the 22nd September 2003, Coastguards may now maintain this distress watch either via headset or loudspeaker, but this will be dictated by the risk and operational demand at the time.

Peter Dymond, Head of Search and Rescue said:

"The increasing range of other tasks now undertaken by Coastguard Rescue Co-ordination Centre staff and the flexibility generated by the establishment of operational partnerships between linked co-ordination centres now requires a different approach to managing an Operations Room which is not helped if an operator is continuously tied to a single task.

Open Letter to ISKA (taken from 'Across the Waves', with thanks)

Dear sir,

I would be grateful if you would publish this letter in your magazine and convey my concerns to your members otherwise I will have to pursue alternative methods to get my point across and these will not be pleasant for you all. An incident occurred on Saturday 20/7/02 which caused some consternation, turning later to amusement involving one of your members and one of my group. We were dining in a favourite haunt of ours, the channel between Inishblacken and the mainland, and we observed some kayakers making very

"However, our Operations Room Managers can still undertake a headset watch on VHF Channel 16 if the risk; current operations, noise levels or other circumstances demand it.

"Our state of the art Integrated Coastguard Communications System (ICCS) also provides an instant playback facility for VHF Channel 16, and additionally, equipment shortly to be installed in every co-ordination centre, will provide instant playback on all VHF Channels and will also be available to the Coastguard Operator.

"Despite these changes, HM Coastguard will continue to be responsible for the integrity of VHF Channel 16 which means ensuring that the Channel is only used for distress, urgency and brief safety communications including the announcement of maritime safety information broadcasts, and for establishing other communications which should be transferred to a suitable working channel.

"We also continue to recommend the installation of effective suitable equipment on vessels and would remind seafarers that mobile phones cannot be totally relied upon when at sea for distress and other emergency calls."

-Posted by: Mark Clark

For further details contact: The Maritime & Coastguard Agency Duty Press Officer Office hours: 023 8032 9401

poor efforts at fishing. One of them managed to hook a fish and started to pull it in. One of my proteges who was also after said fish, unaware of your clumsy ways, also caught and held the fish.

Now the trouble started. My protege swallowed the fish and attempted to swim off but kayaker would not release it. Very frightened and in some discomfort, he got angry, [much against the way he was reared] and swam off at speed dragging the kayaker with him.

Now the amusement started. We heard the kayaker call out to his friends for help and watched him panic as he did not know whether to hold his paddle or the fishing rig. We laughed till we cried (not that you would notice) because he had tied the line to his kayak and could not reach it to untie it and ha ha, he did not have a knife to cut it. My protege started to really enjoy this despite his bellyache and entertained us all for a while before snapping the line when the second kayaker got involved the look on that mans face will be remembered for generations.

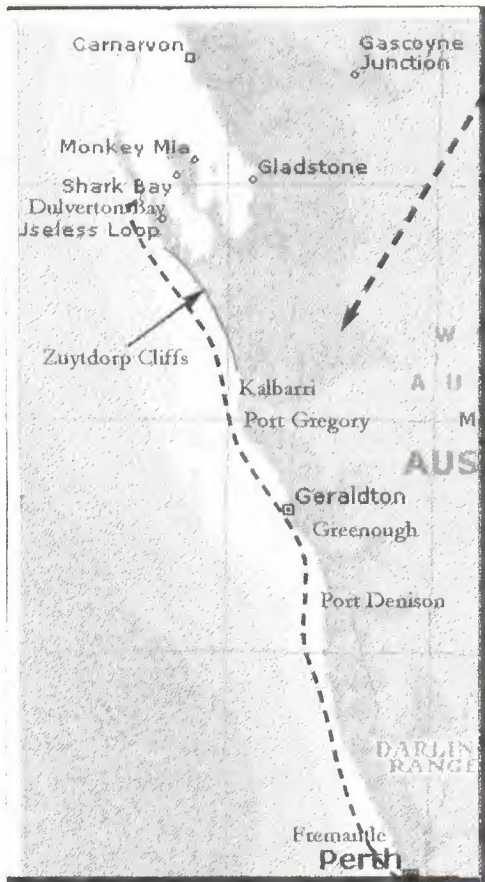
We are currently considering taking a case against you for allowing such inept people to be on the sea and will be seeking compensation for the discomfort suffered and the cost of curing the bellyache. Your kayaker should also learn 2 lessons. Do NOT tie gear to his boat unless it can be undone quickly and always have a knife handy. I trust you will inform the above person. We lookforward to seeing you all again [purely for entertainment sake]. Take care and be considerate. Yours sincerely S.L KEY

PADDLING WITH YOUR BACK TO THE WALL

by Tel Williams

The following article first appeared in Feb. 2003 issue of SEAKAYAKER and is an absorbing account of an expedition along Western Australia's treacherous Zuytdorp Cliffs. I enjoyed this read, I know you will too. JR. Ed

For a few minutes, I would succeed. The adrenaline shock of each near capsized helped to keep me awake, and I was able to control the kayak in its wild rides down the ever-increasing swells and waves. Then my fatigue would take over, I would fall asleep again and the experience would repeat. It was only 9:00 P.M. I couldn't imagine how I could possibly survive paddling another eight hours in darkness and eight hours more to safety.



We were somewhere off the treacherous Zuytdorp Cliffs in Western Australia. The weather forecasters had got it all wrong. The mild favorable conditions predicted had turned into a constant howling 30-knot-plus wind, with an increasingly turbulent sea. Clouds threatened to obscure the moonlight we were so

thunderous impact of the waves crashing into the 300-foot cliffs silhouetted on our right like some ancient fortress against the night sky. We were attempting to complete a nonstop paddle of the 175 kilometers of unbroken cliffs that stretch north from the small fishing town of Kalbarri to the desolate, uninhabited Dulverton Bay. I was tired, struggling to concentrate and doubting our chances for survival, much less success.

For years, I had dreamed of this night I would spend at sea. I had trained and prepared for it, but nothing could have prepared me for how it turned out. I was unable to appreciate where we were. I despaired at letting my paddling companions down, and the threat of impending doom clawed at my thoughts. I had made a disastrous mistake and feared an outcome that I would regret all my life. I had lain awake the night before, and the sleeping pills I should have taken remained unopened in my first aid kit. I was halfway into a 30-hour paddle, in appalling conditions, and had not slept for 40 hours. This sleep deprivation was beyond any physical pain I have ever felt. It was nearly unbearable.

The Zuytdorp Cliffs define the boundary between the harsh, windswept desert of Western Australia and the relentless assault of the turbulent Indian Ocean. The weathered limestone cliffs, in places reaching a height of 600 feet, form one of the most isolated and treacherous coastlines in the world. They are named after the

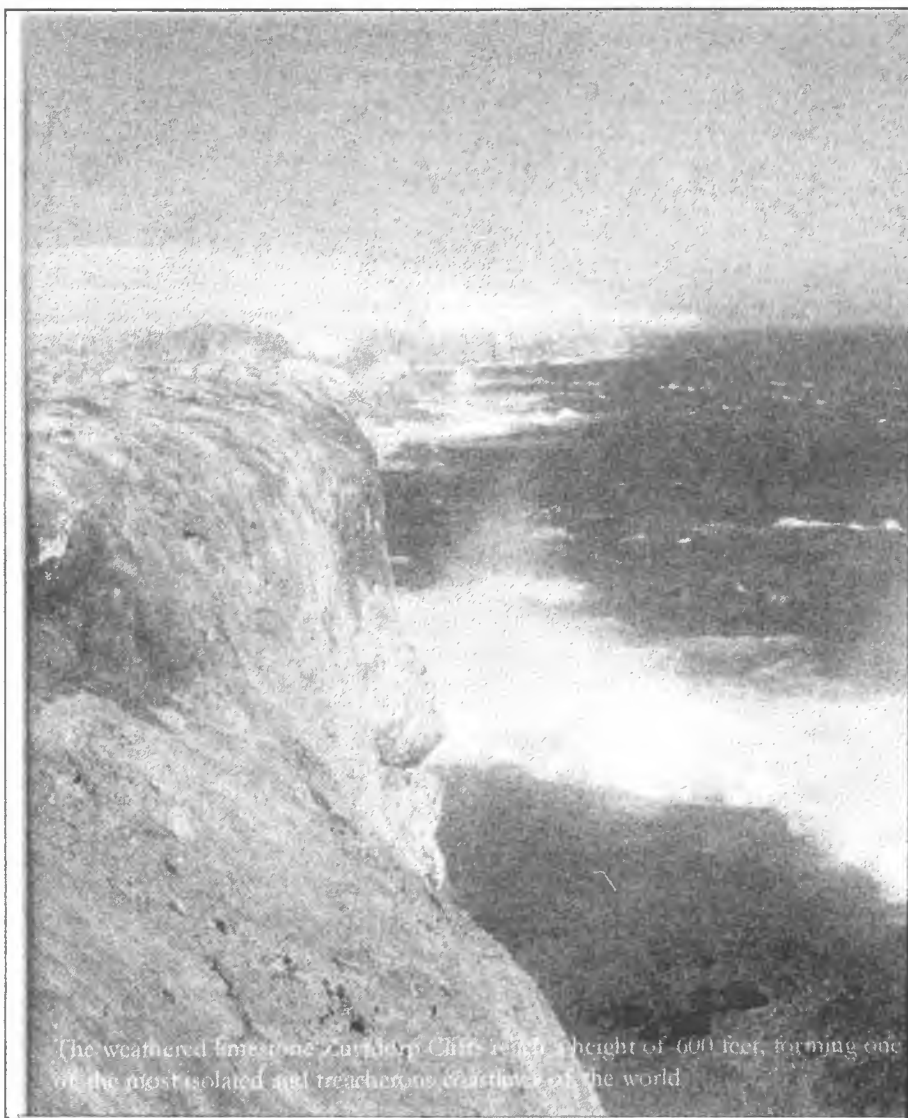
dependent upon. It was cold, and we were constantly drenched. Above the roar of the wind, we could hear the

sailing vessel *Zuytdorp* an Indiaman, as the ships of the Dutch East India Company were called—wrecked on the jagged rocks in 1712. Some survivors managed to scale the cliffs, only to perish in the barren waste-land above. Only scattered pieces of equipment, coins and bones marked their passing. These cliffs had come to represent an impossible barrier for me: the Everest of sea kayaking.

Each time I went paddling, my mind would drift, eventually coming to dwell on the cliffs. I spoke about them with my paddling companions. We planned ways to tackle them and always wondered if we'd ever actually attempt it. On two separate expeditions, I paddled to the cliff's northern and southern ends, respectively. Their sheer magnitude stretching into the distant horizon was both intimidating and awe inspiring. They instilled in me the same feelings I imagined mountaineers felt when they first gazed on unconquered Himalayan peaks. The adrenaline would flood my veins and my skin would shiver with fear. Gradually, as my paddling partners and I tackled more and more arduous expeditions, survived some harrowing moments at sea and developed skills and confidence, we began to seriously contemplate an assault on the cliffs. Finally the decision was made to do it, and so began a long road of preparation, training and mental conditioning.

For three and a half months, I paddled 15 to 20 hours a week. During virtually every moment of those training paddles, I was thinking of the cliffs and constantly assessing the average speed, food and equipment we would require as well as safety and emergency procedures. After hard 8 or 10-hour training paddles, I would assess my physical condition, and at times, despite my increased stamina and strength, questions and doubts would chip

away at my confidence. How could I paddle another 20 hours after the first 10? What if we encounter headwinds, injury or kayak damage?



The weathered limestone Zuytdorp Cliffs reach a height of 600 feet, forming one of the most isolated and treacherous coastlines of the world.

One thing that spurred me on was that it had been done before, so I knew it was possible. Well-known New Zealand expedition kayaker Paul Caffyn and I had been in contact with each other via e-mail since our 1,200-kilometer Esperance-to-Perth paddle in 2000. He had paddled the cliffs in 1983 on his epic 10,000-mile circumnavigation of Australia. He, too, had expressed his concern about the cliffs and saw them as the barrier that could have shattered his dream of completing the circumnavigation. His 36-hour, No-Doze-assisted paddle and near disaster of being smashed onto the cliffs in

the dark added to our concerns, as did his account of the headwinds he experienced and the likelihood of being unable to land in Dulverton Bay because of the massive surf at the rockshelf that protects the beach. Paul offered encouragement and put me in contact with Ken Wilson, a Scotsman who lives in Kalbarri. Ken offered to host us for a planned rest day before our 175-kilometer nonstop paddle.

Les Allen, John Di Nucci, Terry Boland and I finally departed from the Perth City foreshore, on the Swan River about nine kilometers inland from the coast, at 7:00 A.M. on January 10, 2002. The 600-kilometer paddle from Perth to Kalbarri was to be the final stage in our training for the assault on the cliffs. Previous expeditions had taught us that there was nothing like an extended time at sea to condition mind and body for extended periods in the kayak cockpit. The 500-meter-wide waters of the Swan River looked gray and calm under over-cast skies, as yet unruffled by the city ferries and fishing boats. The sky-

scrapers across the river from us looked serene but somehow foreboding in the early gloom.

The reality of finally embarking on an 800-kilometer paddle that would end in a nonstop push of 175 kilometers made me feel different about this expedition's start. There was none of the usual banter and lighthearted exhilaration I usually felt. Instead, I felt uneasy. This was a quest in which the outcome was not assured. This feeling was contrary to my usually optimistic nature, and I kept thinking it was not my normal response to the start of a trip.

After three hours of paddling into a 15-knot headwind, we entered the harbor port of Fremantle, where our kayaks were dwarfed by the massive steel hulks of container ships. Another half hour passed before we finally reached the open ocean, where a 3 meter swell was running, and turned north. With the wind at our backs, Les as usual was pushing the pace, and we quickly established the paddling formation that would hold true for most of the next 600 kilometers: Les in front, followed by me, with John and Terry bringing up the rear.

Terry, who has accomplished numerous marathon paddles in his 30 years of paddling, has developed the most consistent and tireless paddling stroke I've ever seen. He has earned the nickname "Everterry" after the Eveready batteries that advertise long life. He was a late addition to our group, joining only about four weeks before departure. His profession as a kayak instructor and his experiences of long and arduous expeditions left no doubt that he would be a valuable asset to our team.

Les is 6 feet, 3 inches of pure power and driving energy. He feels happiest when he is pulling hard on the paddle and surging ahead toward the next headland. He is a master organizer, and with his detailed plans, high-tech equipment, incredible strength and natural tendency to lead, he sometimes drives us crazy, but he is the person you would most want on your side in a crisis. I have hiked and paddled with Les on numerous expeditions, and we have an implicit trust and understanding of each other and easily work together as a team.

John is the person I have paddled with the most. He is tough, and at 51, despite never going to a gym, looks as if he has been training in one his whole life. He is an incredibly skilled paddler and is one of the most caring and humble persons I have ever met. On numerous occasions, we have assisted each other in very dangerous circumstances. Our shared experiences in some of the most hazardous situations imaginable, plus hundreds of hours training together, have forged a very strong bond between us. I

couldn't think of any other paddlers I would have wanted to undertake such an expedition with.

Late in the afternoon of our first day, with a high tide, a 3-meter offshore swell and 15 knot winds resulting in a strong shore break, I managed to work my way inshore to look at a likely campsite. Launching over the crest of an outgoing wave, I caught a 4 to 5 foot wave at full speed and had to violently maneuver the kayak on the foaming white water between jagged, exposed rocks. I was relieved to have beached without going over or damaging the kayak, but the cleft between the coastal dunes proved unsuitable, with no flat area in which to pitch camp or shelter to escape from the wind. Having been wet for most of the day and having paddled for more than 11 hours, I was cold in the wind and did not relish the thought of putting back out to sea, but there was nothing else to do. I signaled to the others and prepared to launch.

Twice the kayak tumbled, and I had to climb out and point it back to the surf. On the third attempt, I caught the surge out over the rock shelf. The force of the oncoming wave smashed into me and knocked the wind out of me, and I thought I had damaged my back as the water

Twice the kayak tumbled, and I had to climb out and point it back to the surf. On the third attempt, I caught the surge out over the rock shelf. The force of the oncoming wave smashed into me and knocked the wind out of me, and I thought I had damaged my back as the water bent my spine against the cockpit rim. I thought my expedition was over.

After a few minutes, the pain subsided enough for me to realize nothing was broken. Besides a sore back for a few days, I was no worse off for the experience, except that I felt pretty battered both physically and emotionally. It had been a long, hard day, and I was a little annoyed that my expedition had come so close to disaster so close to home.

Over the next 10 days, paddling between nine and 10 hours a day, we continued northward. An 11 hour paddle into a headwind between Port Denison and Greenough resulted in an old shoulder injury of mine becoming inflamed, and again I experienced the touch of fear that I might not succeed in conquering the cliffs. After a rest day the next day, I was to suffer no serious consequences. Not everyone in our party was so lucky, however.

At Port Gregory, Les told us that his wrist was aching and he was concerned that he wouldn't be able to continue. He took some tablets, and we agreed to wait for an hour or so to let him rest his wrist. I didn't want to think about the implications of forfeiting our goal.

As there was no way to quit the expedition without meeting up with our support crew, Les decided he would continue on for the next 55 kilometers into Kalbarri. He would paddle slowly, keep his wrist tightly strapped and hope the injury would not deteriorate. During our

two-day rest in Kalbarri, he would have some time to assess the injury and perhaps decide to proceed. We only had 14 kilometers to paddle that afternoon before we landed and set up camp in an isolated place called Sandalwood Bay. The whole way there, I saw Les carefully nursing his wrist.

Late that afternoon as we sat high in the dunes, Les told us that his wrist was very painful and that it would be too much of a risk and not fair to us for him to tackle the cliffs. He would paddle the 40 kilometers into Kalbarri the next day and then would join Marion Mayes on our support crew for the remainder of the expedition. Marion, the secretary of the West Australian Sea Kayak Club, acted as support on our way up the coast. We kept in contact with her via radio while she motored up the backcountry to meet us at Dulverton Bay.

Les was visibly disappointed. I felt desperately sorry for him but was at a loss as to what to say. I definitely wanted him to still be a part of the expedition, but would accept any decision he made. I knew there could hardly be a better, more resourceful and capable person than Les to have on the support team, and this was the only positive thing I could make out of the disaster. There was not the same light hearted feeling that usually prevailed during our evening camps, despite a determined attempt to lighten our kayaks of their load of wine.

The next morning on a calm sea, we encountered the first 18 km stretch of towering, weather-scarred limestone that forms the southern end of the Zuytdorp Cliffs, which extend northwest for a total of 250 km. Except for the break at Kalbarri, where the Murchison River cuts its way through to the ocean and an exposed, uninhabited beach at Dulverton Bay, there is no safe landing. We paddled within meters of the towering columns of rock and peered into vast gaping caverns at their base. We marveled at the sheer imposing beauty of the ancient cliffs. The northern cliffs we had set out to conquer came into sight before the mouth of the Murchison River, which marks the fishing and tourist settlement of Kalbarri. The cliffs stretched northward into the endless midafternoon horizon. The year before, John and I had paddled to Kalbarri from Port Denison and had spent two days staring at the cliffs, wondering if it would be possible for us to paddle them. Almost exactly a year had passed. We had come to tackle unfinished business.

During our two days in Kalbarri we rested, and prepared our kayaks and equipment to the smallest detail. There wasn't going to be an easy beach to land on, so we had to be able to find equipment or supplies easily and in the dark. I had fitted a deck bag on top of and under the front deck to carry supplies that could be readily accessed. Food, flashlights, chemical lights, radios, EPIRBs, flares, satellite phone, cags, thermals, water and the hundred other things we might need had to be checked and rechecked. We did

radio and phone trials and made sure we could reach lights, food, water bottles and safety equipment from our cockpits. There was to be no stopping for as long as 36 hours. I went into Kalbarri to talk to fishermen and boat captains about the prevailing and expected weather and sea conditions, the possibility of radio contact with long-line fishermen and, in the worst case scenario, rescue. We checked weather reports endlessly, wind speeds, swell sizes, tides, the cycles of the moon and sun. We keyed in waypoints on our two GPS units, coordinated radio schedules with Marion and Les, and notified the authorities of the paddle and our expected times of departure and arrival. The weather remained unseasonably calm: 15 to 20 knot south-to-south-westerly winds on a 2-meter swell. We would have moonlight until 1:45 A.M., and our support team would travel by truck 175 kilometers north to meet us at Dulverton Bay.

Ken, the Scotsman who had hosted Paul Caffyn on his expedition 20 years earlier, had met us at the beach and extended the same hospitality to us. His house in Kalbarri overlooks the Murchison River mouth, the ocean and the Zuytdorp Cliffs, and from there we could watch the changing moods of the ocean and the cliffs. I felt my eyes drawn to them constantly over the days of preparation, and I felt a burning impatience to be on our way.

During our day of packing and preparing, I felt no apprehension about the paddling ahead. I had, as usual, awakened at 4:00 A.M. It had been a pretty hectic day, so I was sure sleep would come easily that night. Unfortunately, this was not the case. The time quickly went from 9:00 P.M. to 10:00 P.M. and still sleep eluded me. I was becoming increasingly concerned. I considered taking a sleeping tablet, but scrapped the idea when I remembered they were in my first aid kit in the kayak, and I didn't want to disturb the others by trying to retrieve them. Rather than getting anxious about the paddle, I became increasingly annoyed that I couldn't sleep. At 4:00 A.M., I decided to abandon the effort and got up and dressed in my paddling gear.

When the rest of the group had awakened, I mentioned that I had not slept at all, but in their preoccupation with getting ready, they either didn't register what I said or felt no need to comment. We seldom if ever needed to discuss our approach to the day ahead because of the total faith we had in each other's ability to self-assess our fitness. In hindsight, knowing what occurred that night off the cliffs, it is easy to realize that I should not have launched that day. However, at the time, there were so many factors in play, not the least of which was my burning desire to conquer the cliffs, I barely hesitated in going about my pre-launch routine and taking to the water.

It was still dark at 5:15 A.M. when we headed down to the beach. Ken had erected a life-sized piper at the front of his house that played melodies over a loudspeaker.

We could hear the wailing of the bagpipes like some ancient call to arms as our small party prepared the kayaks for this great human challenge. As the first gray light of the coming dawn began to unveil our presence to the world and the black cliff tops could be discerned against the sky, I had a deep sense of our insignificant role in the universe. I said a silent prayer, bid farewell to Les, Ken and Marion and climbed into my kayak.

ASSAULT ON THE CLIFFS

The darkness receded to the encroaching dawn as we slid the kayaks out onto the Indian Ocean and headed for the cliffs. It was 5:50 A.M., and we had a day and a half's worth of paddling ahead. We paddled in silence. I would pick a distinctive mark on the cliffs and set it as my next goal. I was monitoring my physical state and my food and liquid intake. There was a light following wind. The sea remained relatively calm, and we were making good time.

All signs of human activity soon disappeared, the fishing boats we had sighted were no longer in evidence. As the cliffs stretched endlessly toward the horizon, I became acutely aware of our isolation. The point of no return had been reached after only five hours of paddling, as it would have been impossible to return to Kalbarri before dark, pushing into the gradually strengthening wind. By the time we reached the site of the Zuytdorp wreck, about 65 kilometers from Kalbarri, the wind speed and swell size had increased significantly, eliminating any possibility of paddling close inshore. The constant spilling in white caps kept us wet, and by 3:00 P.M., we had already put cags on. By 6:00 P.M. and our scheduled first radio contact, the sea was rough enough to require us to raft up to use the satellite phone. It was becoming increasingly difficult to access food and equipment as any opening of the spray deck resulted in huge volumes of water flooding the cockpit. By nightfall, the sea had reached such a state that setting up nightlights and putting on additional gear for warmth was difficult. I was cold despite all my gear, and to top it all, I was feeling very sleepy.

The setting sun was hardly noticeable in the wind and spray. The moon that was to be our night guide was soon in sight above the faint cliffs, now barely visible in the windswept spray that enshrouded us. The eerie light cast by the moon was insufficient for us to discern the approach of cresting waves, and more and more, we had to rely on sound and instinct to keep ourselves upright as we paddled on. There was no possibility of relaxing our concentration. I began to struggle to keep my eyes open, and within a couple of hours, I was in a state of mental anguish trying to stay awake. Time and again I would wake with adrenaline shock as I felt the kayak going over. It became impossible to keep my eyes open for longer than a

few seconds at a time, and given the conditions, it was an absolute miracle I did not capsize. I was paddling purely on instinct and somehow remained aware of the position of Terry and John and the inhospitable cliffs. It reached a stage where I simply could not endure another moment, and I called for John to raft up with me. He did so, and the relief I felt at being able to shut my eyes and not concentrate was enormous. I couldn't sleep, as it was a physical effort to hold the kayaks while being buffeted by the seas, but after a few minutes rest I was able to continue paddling for awhile.

We continued this stop-start process for a couple of hours. After 15 or 20 times, we had the exercise down to a fine art. The wind was blowing at well over 30 knots, and with the ever-increasing swells and turbulent sea, we were constantly being engulfed in breaking, foamy water. At times, our kayaks would hurtle down the face of unseen waves at incredible speed and either bury us up to our waists in the ink-black ocean or slew sideways and threaten to topple. Both John's and my electric pumps had ceased to function, and with waves continually washing over us, huge amounts of water had leaked into our cockpits.

Suddenly I got a second wind. I felt the fog lifting from my eyes and my brain clearing. I announced to the others that I was OK and began paddling with newfound energy. I am certain no drug on earth could produce the same sense of euphoria I felt. The wild surfing rides and tossing ocean were exhilarating, and I felt in control. My relief was short; after about an hour, I felt the clutches of fatigue taking over my mind again, and the sheer horror I felt was unbearable. The fatigue I felt actually generated a feeling of intense physical pain. I could not bear to think about the distance we still had to cover, and the length of time I would have to endure. I was devastated by the

thought of the predicament I had placed all of us in by embarking on this leg of the challenge with such low reserves of energy. I hated the thought that I was letting the others down. Some primitive survival instinct was generating a support stroke each time I started to go over. The adrenaline shock was diminishing each time,

and I found that, despite the intense pain and seriousness of the situation, I could not stay awake. For the first time, thoughts of disaster entered my mind. I had obviously used up my final reserves. I was floundering along, unable to open my eyes, and realized that I was in a serious predicament, with the possibility of capsize increasing with every passing moment.

For a short while, John and I repeated the earlier pattern of snatching rest, but I knew it was only a matter of time before I capsized. My consciousness was drifting as if I were in a drunken haze. Every so often while rafted

up, John would order me to paddle on the right hand side and push my left rudder so that we could work away from the cliffs. We tried to eat, but it was impossible to keep our food from getting swamped, and salted, soggy rice was not too appealing. When we saw the lights of a fishing vessel in the distance, I considered the implications of abandoning the expedition. However, the thought had scarcely entered my mind before I decided against it. Paddling to the vessel in those conditions would have been extremely difficult. It was virtually impossible to judge the distance - the boat may have been anywhere from 2 to 5 km away, and the difficulties in trying to board in the conditions would have been nearly insurmountable. My intense desire to succeed in what we had set out to do took hold, and we continued on.

Throughout the night, Terry maintained his station with us despite a bout with seasickness. He finally joined our raft, and for the last few hours of darkness we drifted at the mercy of the wind and waves. On a few occasions our raft formation was herded down waves and nearly turned over. We reacted instinctively, throwing our body weight to balance the raft, all the while ensuring that our paddles and fingers were not caught between the kayaks. It was impossible to actually sleep because we had to fully concentrate on each coming wave. With the first lifting of darkness, I began to calculate our distance to safety. Considering the state I was in, the distance was discouraging, and I dreaded the hours ahead; however, the few hours of relative rest from not having to paddle had bolstered my energy. The others were surprised when I said, "Let's try to paddle."

Terry cleared our raft and I followed. I had only paddled a few strokes, struggling to adjust to the effect the waves had on my released kayak, when I heard Terry shout. I didn't hear him clearly as the wind whipped the words from his mouth, but I could see him looking behind me. I turned just in time to see John miss an Eskimo roll and exit his kayak. Immediately I began back paddling. John's kayak began blowing away from him. I knew immediately that he had no chance of catching it in this wind. Terry managed to power himself downwind of the kayak to intercept it. Stretching over the kayak, Terry began using a draw stroke to guide the kayak toward John, who quickly returned to his cockpit and started bailing. John was visibly shaken. The incident magnified the enormity of the challenge we were undertaking and underscored our growing fatigue.

Fifty hours of sleep deprivation coupled with grueling paddling began to take its mental toll. I hit, splashed, bit and chastised myself continually. I ate, drank, screamed and constantly moved to try to stay awake. A few times, my mind simply shut down, and I would only wake when the kayak was going over or John had seen my paddle blades slowing and, from his station behind and to my right, caught me before I capsized. Even the sudden starts as I woke failed to revive me for more than a few seconds

and the agony of trying to stay awake continued. At least with daylight, I could judge waves and swells better and was able to brace at appropriate times. After another few hours, I began to feel drugged and felt my reactions slowing down.

Finally, after 30 hours at sea and 56 hours since I had slept, we rounded the rugged headland that marked the entrance to Dulverton Bay and entered the sheltered waters that extend for nearly a kilometer inland. We met our support crew and staggered up the beach. I didn't feel any great sense of achievement. Instinct took over and we carried the kayaks up the beach and sorted out some gear much the same as always. Somehow I stayed awake another half an hour while Les interviewed me on film. We recounted the experiences of the paddle to Les and Marion and listened as they described their own sleepless night full of concern about us exposed on the open ocean, even as the wind threatened to rip their tents apart. Finally, I collapsed in Les' tent. Two hours later, I awoke feeling completely dehydrated and drugged and had a raging headache. The temperature was nearly 90 °F, and the tent was like an oven.

Unable to sleep in the heat, we took a walk in the howling wind to the top of the 200-foot-high cliffs. The sea was extremely rough with hundreds of white caps littering the tossing surface, and it was hard to imagine our little kayaks out there. As I returned to camp, fatigue hit me like a tidal wave, and I hardly remember entering the tent. I never woke when the howling wind lifted the tent pegs and virtually suffocated me in the nylon fabric. I slept like the dead for 11 hours.

The training and conditioning obviously worked because when I woke the next day, I felt fine except for bruised hands and raw patches on my back and sides. We debated at some length the possibility of completing the last 32-kilometer section of cliffs to Shark Bay; however, the wind howled unabated at over 30 knots and with the seas still rough, we felt we would be taking an unnecessary risk. We had a relaxing day, walking the cliffs, taking photographs, fishing and playing beach golf with an old tennis ball and some drift-wood for a club.

Watching the ocean from the cliff tops at dusk, I was able to picture my small fiberglass kayak on the relentless turbulent swells, and for the first time, I felt a sense of achievement. The cliffs disappeared endlessly into the growing darkness, a timeless bastion of nature, and the ever-pounding waves and scouring wind were a testimony to the magnificent challenge. I thought of Paul Caffyn standing here 20 years ago, and knew it would be a long time before another sea kayaker would stand here again.

HISTORY

THE ESKIMO KAYAK

By Frank Debenham

Professor Frank Debenham was founder of the Scott Polar Research Institute. Debenham, who was born in Australia in 1883 and educated at The King's School Sydney, accompanied Scott on his final expedition to the Antarctic and was a valuable supporter to Gino Watkins.

Seal hunting by means of the kayak and harpoon is an essential feature of Eskimo culture, especially in those regions where the occurrence of moving pack-ice renders other forms of hunting the seal difficult or impossible. Their ability to construct and manage this type of boat has long been a source of wonder to Europeans, who have been content until quite recently to consider the art of kayaking as unattainable by them, and indeed unnecessary.

The successful use of kayaks on the two Watkins expeditions to East Greenland has now introduced a new element in arctic exploration, and has made the ability to use a kayak a useful addition to the qualifications of a polar explorer.

It has been found that Europeans can become as expert in the management of a kayak as the Eskimo, and that by making use of the native method of hunting, it is possible to "live off the land" to an extent never dreamed of by earlier explorers. But the experience gained during the British Arctic Air Route Expedition has shown that it takes a long time to learn kayaking in cold water, and it also takes a long time to have a kayak built. The purpose of this article, therefore, is to give instructions for the building and management of the kayak for the benefit of those making use of that form of boat for expeditions in the future.

Before the British Arctic Air Route Expedition (1930-31) demonstrated the value of learning the art of kayaking, the only Europeans to attempt it had been Nansen and his companions after their crossing of Greenland in 1888, whilst waiting at Godthaab for transport back to Norway; however, they never mastered the art of rolling, and when hunting always made use of an outrigger, to prevent any possibility of being overturned. Kayaks were also used by Nansen and Johanssen during their famous journey from the Fram in 1895-96. These were built on board the Fram, bamboo being used for the framework. They were covered with sailcloth, caulked with crushed pastel and train oil and finished off with stearine, pitch, and resin. Food was stored in bags inside the kayak, raised slightly on bamboos. These kayaks were 12 ft. long, 3 ft. wide, and 18 in. deep. They were carried on the sledges by the two men until they were forced to continue the journey by water. Usually the two kayaks were lashed together, and a sail set, and the sledges lashed broadside across the two.

The first mention of the Eskimo in European literature occurs in the *Islendingabok* of Ari Thorgilsson inn Frodi (1067-1148), in the account of the discovery of Greenland by Erik Raude as quoted by Dr Nansen in "In Northern

Mists: "As early as Erik's first voyage to Greenland they found at once dwelling places both in the eastern and western settlements, and fragments of boats and stone implements, so that from this it can be seen that over the whole of that region there had been present the same kind of people who also live in Wineland and who are the same as those the Greenlanders call Skraelings." In the sagas there is little mention of the Eskimo, from which it has been deduced that the Norsemen did not actually meet with the natives of the country, until later, when on longer journeys to the north, they encountered them in the neighbourhood of Disko.

Eskimo kayaks and the method of rolling them were first described in modern times by Hans Egede in 1745:

"Now as to the Greenland boats, there are two sorts of them; the one, of which the men alone use, is a small vessel, sharp and pointed at both ends, three fathoms in length, and at most but three quarters of a yard broad with a round hole in the midst, just large enough for a man's body to enter it, and sit down in it, the inside of the boat is made of thin rafts tacked together with the sinews of animals, and the outside is covered with seal-skins dressed and without hair; no more than one can sit in it, who fastens it so tight round his waist, that no water can penetrate it. They do not fear to venture out in them in the greatest storms... though they may happen to be upset, yet they easily raise themselves again with their paddle; but if they are upset unawares (as it often happens) and the boat be not close and tight about their waist, they are inevitably drowned."

It is believed that the kayak has changed very little for many centuries. Few relics of kayaks are ever found, however, and we are thus ignorant of the different stages of their evolution. Possibly the earliest complete specimen of a full-size kayak now extant is the one taken in the North Sea in the eighteenth century, and now in the Anthropological Museum of Marischal College, Aberdeen. Its capture is described in **A GENERAL DESCRIPTION OF THE EAST COAST OF SCOTLAND**, by Francis Douglas, published in Paisley in 1782, as follows:

".....a canoe, taken at sea, with an Indian man in it, about the beginning of this century. He was brought alive to Aberdeen, but died soon after his arrival, and could give no account of himself. He is supposed to have come from the Labrador coast, and to have lost his way at sea."

The occupant of this kayak and other men like him, who occasionally appeared on the shores of the Orkneys and the north coast of Scotland were given the name of "Finnmen" by those who saw them, but it is now proved by an examination of the kayak and the hunting equipment taken with it, that it must have come from the east coast of Greenland, somewhere along the stretch between Angmagssalik and Kangerdlugsuak. This is proved

beyond doubt by the harpoon, which is of the type used to this day by the older generation of hunters at Angmagssalik.

The kayak varies very much according to locality. The Labrador and South Baffin kayak is very big and heavy, with a broad level stern and a long peaked stem; some of the older models have the stern slightly turned up. The Mackenzie River model turns up in a half moon shape at stern and stem, which is said to be also a characteristic of the old type of East Greenland kayak. The Alaskan kayak turns up at the stem, but slopes down a little at the stern. The paddles vary also according to locality. The double paddle used by all Eskimo east of the Mackenzie was probably developed from the Indian single-blade paddle, a pattern still used by the Eskimo of Southern Alaska. In the Yukon district both forms of paddle are to be found.

The kayak is still used by the sea-hunting Eskimo throughout the Arctic, although along the Alaskan and part of the Canadian coast, it is giving place to the various types of wooden boats which have been introduced by Europeans. It is in the comparatively ice-free waters inhabited by some of the eastern Eskimo that the kayak has reached its highest state of proficiency both in construction and use.

The best kayak men are to be found in Greenland, possibly those inhabiting the country in the vicinity of Cape Farewell, in the extreme south of the island. These men spend the greater part of the year in their kayaks, exposed to the bad weather and stormy seas of the North Atlantic. They have, therefore, evolved a different kayak technique from the people inhabiting the more northern parts of the Eskimo territory, where the kayak can only be used for a short part of the year, and where big seas, like those of the North Atlantic, are not common. The rest of the people of Greenland, except those of Thule, are not far behind the southerners in their skill.

Although the kayak is still used extensively on the west coast, it is no longer the main part of the material culture, as it is on the east coast. The west coast people have been in constant communication with Europeans ever since 1721 when Hans Egede and his wife Gertrud Rask made their home not far from the place where Godthaab now stands. These people, under the careful administration of the Danes, have gradually adopted European civilisation and have, to a certain extent, given up their old hunting methods. But the east coast people did not come in contact with the Europeans until the arrival of Lieutenant G. Holm at Angmagssalik in 1884. As this article is dealing with the utilisation of the kayak in exploring, it is these people of South and East Greenland and their modern use of the kayak, who are most interesting, as their methods of seal-hunting and travelling in summer could be modified to meet the conditions met with in other parts of the Arctic, whereas the more northern kayaks and hunting methods could not be so readily adapted to deal with varying condi-

tions.

While the present form of administration continues in East Greenland, the art of kayaking can never die out, as the people are not allowed to become dependent on the importations of the Europeans; they are still self-respecting hunters, supporting themselves and their families by hunting by their old methods, which are very much better adapted to their particular conditions than anything which they can learn from the white man. The only modern addition to their hunting equipment is the rifle. This is not nearly as important as it sounds, when dealing with summer hunting, although it has had a great influence on the winter hunting methods.

All the Eskimo carry rifles on their kayaks, but in the summer a seal will sink as soon as it is dead. The hunter must therefore get within harpoon range before attacking it, and many of the more expert hunters will harpoon their seals immediately without shooting them first.

Seals are nearly always too shy for it to be possible to get within harpoon range from any kind of boat other than a kayak. This of course is coastal hunting in open water, and not to the hunting of bladder-nose seals while lying on the pack-ice, as is done by Norwegian and Newfoundland sealers.

As any person proposing to live off the country in the north will meet with the coastal conditions rather than the pack-ice conditions, it is absolutely necessary for him to learn the use of the kayak and Eskimo hunting methods. The advantage of this is made apparent to any person reading the history of exploration in the north, with its long list of tragedies and sufferings, most of which could have been avoided if Eskimo living and hunting methods had been adopted.

THE CONSTRUCTION AND MANAGEMENT OF A KAYAK.

There appears to be nothing in literature on the art of making and using a kayak, but owing to an interesting series of events in Cambridge, The Polar Record is able to print instructions on these points.

In January, 1933, Mr Augustine Courtauld of the British Arctic Air Route Expedition kindly presented his Eskimo kayak to the Institute, and a few days later an undergraduate of St John's, J. I. Moore, asked if he might take measurements of it in order to make one of his own. He had finished it by mid-February, using oiled canvas instead of seal-skin.

There was no one in Cambridge who could teach him how to roll it when made, so he proceeded to interpret the short description of rolling, printed in Northern Lights (narrative of the British Arctic Air Route Expedition), as best he could. Constant practice in the Cam, in the

arctic weather of Lent Term, assisted by B. B. Roberts and C. Bertram, enabled him to devise a means of rolling, not quite the same way as the Eskimo use, but efficient enough. They went further still, and taught themselves to execute the roll with the throwing stick instead of the paddle, and finally with the hand alone, a feat which only a very few of the Eskimo can manage.

In October the returned members of the late Mr Watkins' Lake Fjord Expedition, who are skilled kayakers, were in Cambridge, and were much interested to hear of the local developments. They brought their Eskimo kayaks and, together with Moore, they spent many hours on the river, comparing styles. "Slow motion" films were taken of the different methods and of the trick rolls, and as these were mostly taken from a high diving board, they show, better than any diagrams or verbal description, the movement of the paddle in the process of rolling.

It is from the notes and drawings of Moore, in consultation with Mr John Rymill, that the editor has compiled the following instructions on building and using the kayak.

BUILDING A KAYAK

The Eskimo builders, dependent as they are on what drift wood they can find, use some very skilful jointing, and as few lashings as possible, the framework being held together to a large extent, by the tautening of the sealskins which are put on wet, dried to secure contraction, and then treated with blubber and fat. They use no measurements, all the dimensions being estimated by eye, and on account also of the comparative scarcity of wood, no two kayaks are exactly alike. The best kayak made for Mr Rymill was made from the wood of a large packing case. Since the kayak must be a close fit for the user, it is always made for a certain man, and for this reason also the ordinary European, larger and more rigid of leg than the Eskimo, cannot get into one made for an Eskimo, and has to have one specially built for him.

The details of the construction of Moore's kayak from the measurements of the Eskimo one, are too long and technical for printing in full, but are available for consultation and copying at the Institute. It must suffice to say that it followed closely the Courtauld kayak. This kayak, however, was built by a young Eskimo in Sermilik Fjord, and is not a very good example. There are now four other kayaks at the Institute of much better modelling. Moore's kayak cost just over £3, for materials, hire of boatbuilder's quarters, use of tools, etc. The lines of a better kayak, as drawn by Moore, are shown in the accompanying diagram.

ROLLING THE KAYAK

It must be explained at once that the term "rolling the kayak," used to describe the action of setting the kayak upright again after a capsize is an unfortunate one, implying as it does that the process consists of the man sweeping round under the water, and using such momentum as

might be attainable to aid in righting himself.

In practice the property of momentum does not come into the matter at all, and it is actually easier to pause in the upside-down position before making the motions for righting oneself, and it should be possible to come up in the same direction as that from which the capsize took place.

It is very easy to forget that the art of rolling the kayak, so often practised as a trick, is indeed the essence of kayak hunting, since without ability to right the kayak, the hunter would be drowned at the first accidental capsize. Strangely enough, many of the Eskimo themselves never learn to roll, and need always to hunt in couples, one man to rescue the other if necessary. It is estimated that more than half the deaths among the Eskimo men in East Greenland are due to drowning in kayaks.

The secret of successful rolling appears to be to regard the kayak as part of oneself and to keep one's head in whatever position one gets into. A good example of this ability is shown by an occurrence witnessed by J. Rymill last summer. He had lent his shotgun to a skilled hunter, who was accustomed to a rifle, but had never used a shotgun before he went out in his kayak and took his first shot at a bird, at an angle which would have been safe for a rifle, but which was too wide for the kick of a shotgun, and he immediately capsized. When he found himself upside down, he unbuttoned the special bag on the kayak for the gun, slipped it in and buttoned it up again, and then took the paddle from its fastening, and rolled himself upright again, not in the least disturbed, except that the lighted pipe, which had been in his mouth, was, naturally enough, extinguished.

Before attempting to learn to roll, it is as well to become accustomed to paddling the kayak about, getting used to the "feel" of it, and experiencing its comparative stability when the paddle is held resting on the surface of the water, or clipped under the thongs in front of the ring, and sticking out at right angles to the line of the kayak.

The actual movements during the roll are decidedly difficult to put into words, and they can be varied within limits, but an attempt will be made here with the aid of the diagrams, to describe the method used by Moore, with an appendix by Rymill on the Eskimo method.

The position before the roll is commenced is shown in Fig. 1, (see following page) the paddle held at or near the end with the left hand, and at the centre with the right hand. The left hand is kept close to the left hip in this and the later positions. The body is twisted round with the right shoulder well forward so that the kayaker is facing sideways.

The kayak is then capsized by leaning to the side, and the position of body and hands remain the same until

the kayaker is completely upside down and the paddle is at or above the surface at the other side. The paddle is then turned in the hands so that its broad face is parallel to the surface of the water as in Fig. 2, and then, pivoting it in the left hand on the hip as before, it is swung out from its position until it is at right angles to the kayak. The body is still twisted to face the paddle side. The paddle is then pulled sharply downwards and slightly backwards, through the water, with the right hand, the body at the same time being turned to face the front of the kayak.



Fig 1

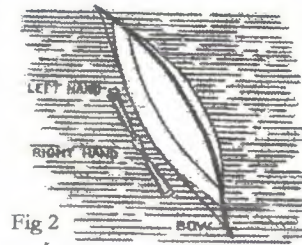


Fig 2

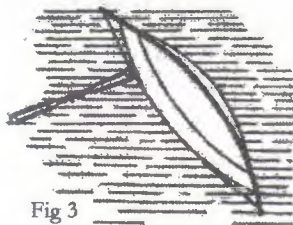


Fig 3

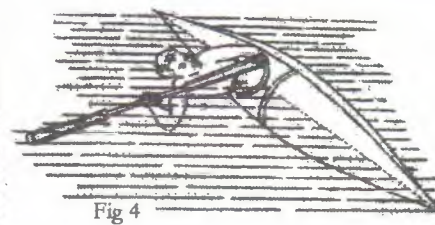


Fig 4



Fig 5 ROLLING POSITIONS

Perhaps a better description of this movement would be to say that the paddle, with its temporary resistance against the water, is used as a support by which to hoist the body round into the vertical position. As this sweep is carried out, the body is thrown backwards as in Fig. 5, so as to lessen the resistance to the water about the point of buoyancy.

THE ESKIMO METHOD

The roll just described is the easiest to learn, but is not steady when the kayak is capsized in a big sea. The best way of righting the kayak in this case is the "storm roll," which is done as follows.

When the kayak is upside down, the body is bent as far forward as possible until the head is a few inches from the deck of the kayak, and this position is kept until the kayak is upright again. The paddle is held near the end in the left hand, and at the centre with the right hand, the paddle lying flat against the side of the kayak and parallel to the surface of the water. The left hand is then pushed as far forward and upwards as possible, while keeping the back of the paddle flat against the kayak until the fingers of the left hand rub against the bottom of the kayak. While the left hand is being pushed forward, the right hand is brought back over the head. This may all be described as the first movement. The second movement is pulling the paddle sharply to the right with the right hand, and raising the left hand until it is level with the deck of the kayak. The kayaker should then be in an upright position with the body bent well forward.

Besides these utilitarian rolls there are a number of trick rolls, which may be rarely or never used, except as a form

of competition, but the achievement of which must all add to the sense of security against any form of capsize. The most difficult of these is to right the kayak by using the hands alone.

It is not generally realised how extraordinarily seaworthy a kayak is, and that it can survive weather too bad for ordinary boats, provided the kayaker himself is capable of the necessary endurance, and has a reasonable degree of skill. A few instances are therefore appended in proof of this fact. The most compelling evidence is the journeys of Eskimo from East Greenland to

the Orkneys and Aberdeen in the seventeenth and eighteenth centuries. Food and water for at least ten days can be easily carried, although the kayak weighs only thirty or forty pounds. Rest is obtained by inserting the outer end of the paddle in a special fastening of the bladder used in harpooning seals, and using it as an outrigger, or even using a second piece of wood like a paddle at the other side. This arrangement renders the kayak steady enough for the man to recline. In a heavy sea the waves wash right over the kayak itself against the man's body, but beyond wetting his face, this does not seriously inconvenience him.

Two anecdotes to confirm this seaworthiness can be cited. In 1931 when at Cape Farewell, H G. Watkins met an Eskimo who had just returned from being blown out to sea for four days in a phenomenal storm. he was much exhausted, because he had to roll constantly due to capsizes from waves which were curling so high that they threw him over endways.

A better instance still is a journey from Cape Dan to Angmagssalik last summer by two Eskimo and F. Spencer Chapman in kayaks. The sea was so high that a 100 ton Norwegian vessel put into the fjord for shelter, and the sea-going motor-boat belonging to the expedition could not attempt the journey. It took the kayaks a longer time to do the distance than the normal six hours but, except for the endurance required, there was no danger. Chapman had to roll once during the period, but his capsize was little more to a defective glove than to the particular wave which threw him over.

There is, therefore, a great deal to be said for the partial adoption of the skin kayak as an accessory to polar exploration in certain areas of the Arctic.



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