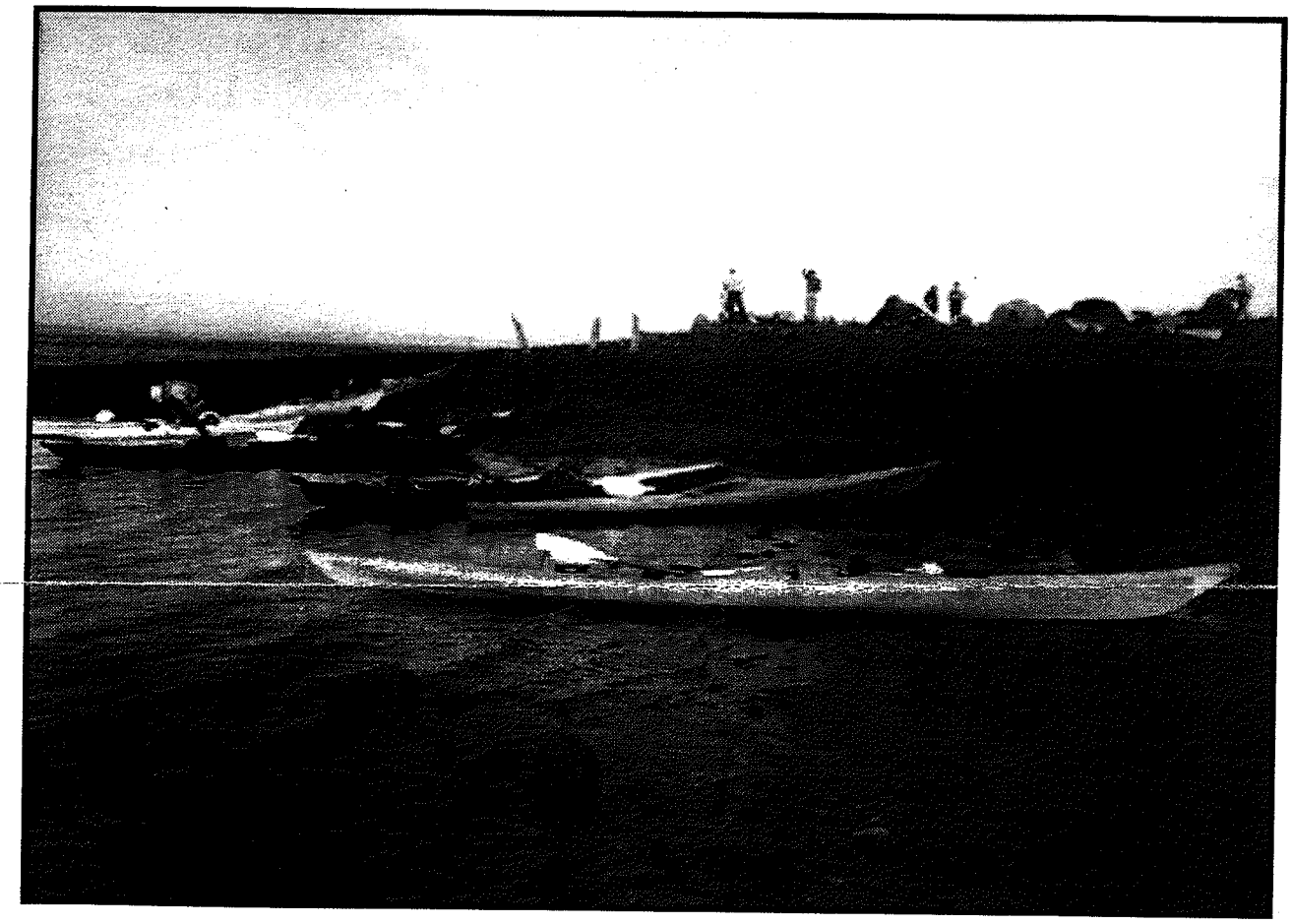
Sea Trek

Official Newsletter of the Victorian Sea Kayak Club inc.



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MAY 1996

ISSUE 23

DEADLINE FOR NEXT ISSUE: JULY 26 1996

VICTORIAN SEA KAYAK CLUB INC.

The Victorian Sea Kayak Club exists to provide a loose bond for a disparate bunch of individuals, with exploration of wild places as common philosophy
- Earle Bloomfield

COMMITTEE - 1996

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SEA TREK ISSUE 23 MAY 1996

Deadline for AUGUST issue: 26 JULY 1995

Keep sending the articles. If sending a 31/2" floppy disk please have it formatted as Claris works or Microsoft works (Apple Mac) or on a DOS disk. If DOS send either standard double-sided disks in 720K format, or high-density disks in the 1440K format.

VSKC
P.O. Box 426
Seaford 3198

We are receiving a number of interstate and overseas newsletters. If anyone is interested please give Ray musgrave a call on (059) 75 2414. speaking of newsletters, is any person interested in reading the German seakayaking magazine Seekajak 50 Magazin der Salwasser-Union written in German please contact Ray Musgrave on the above number. The person who was reading and translating it decided to leave the country. "The cad." So please do not hesitate to contact me as from what I have been told and translated it is an excellent magazine well worth reading.

Occasionally the club through the mail receives flyers about races, triathlons, marathons, etc, run by various clubs and persons. By the time we print them in the magazine the expiry date has passed. So anybody interested please contact Ray Musgrave (059) 75 2414. I will pass the information on when I receive it.

The club has purchased a couple of videos from the Maatsuyker Canoe Club. They are: Maatsuyker Island Trip 1994 and Sea Canoeing Trips.

These videos are available to club members at no charge (The only cost involved will be return post if all other methods fail). The club will purchase more, if members could let me know what they would like to view or have seen a worthwhile video please let us know and we will see if we can obtain it.

NEW MEMBERS

On behalf of the club I welcome the following new members:
Neal Plummer 13 Clive Ave Healesville 3777 (059) 625 848 H
Bill Fordyce PO Box 39 RAAF Base, East Sale 3852 (051) 494 634H (051) 494 884W
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CHANGE OF ADDRESS

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Fabrice Pierre 40 Gnarwyn Rd Carnegie 3161 (03) 9593 1554 H

To Chris Sewell Sea Trek 6 March 1996
from Paul Caffyn

Thanks for the latest 'Sea Trek". May I had a few comments on rudders, skegs and pumps in response to Peter Carter's article on fins (Feb '96 No 22).

During my very first sea kayak expedition around Fiordland in 1977/78, Max Reynolds and I used small retractable skegs that were attached to a 'shoe' or fibreglass sleeve that slid over a Nordkapp stern. Only the size of a cigarette packet, it was rotated into position in deep water by the other paddler. It evolved during the south Island trip into a deep shark fin shaped skeg, with a cord from the cockpit. shock cord, from the stern to the skeg, allowed the skeg to retract out of the way for landing. For following, or quartering seas from the stern, the skeg improved the kayak's tracking in a straight line. For the start of the Australian trip I used a HM Nordkapp, with the extended keel stern, but after a gripping experience of being unable to turn up-wind on a flat sea in gale force winds, I cut the extended bit off and reverted to using my shark fin skeg.

Prior to the trip I was intrigued by the deep draught, overstern fibreglass rudders that the Tasmanian paddlers considered not as optional extras but as integral parts of their boats. Photographs of the seas they paddled and the accounts of long distances achieved with rudders in diabolical conditions, led me to thinking about trialling a rudder. When I broke the skeg blade off south of Brisbane, a friend helped me build a sturdy Tasmanian style rudder out of aluminium. Still with a mind set about kayaks and rudders, we mounted the rudder on a fibreglass 'shoe' or sleeve, that slid over the Nordkapp stern, and was held in place by the decklines. Well, the mind set disappeared with the first long surfing run north of Brisbane, and the rudder stayed in place for the rest of the trip. It saved my life on several occasions, the most crucial being the overnighter along the Baxter Cliffs.

The statistics show the benefit gained:
Melbourne to Sydney: HM stern - 30.6 miles per day
Sydney to Brisbane: Skeg - 34.3 miles per day
Brisbane to Cape York: Rudder - 39.23 miles per day

Contrary to Peter Carter's notion of a rudder being "...not for steering, but to trim. Sea kayaks are steered with the paddle, like all kayaks and canoes." I use my rudder for steering - the paddle for forward propulsion. When a paddle is use for corrective steering strokes, either sweep or paddling on one side, forward propulsion suffers and the normal paddling cycle is upset. I must qualify this and state the design, structure and mounting determine the difference between inefficient and efficient rudders. My rudder blades project 12" below the keel line, I have never broken a rudder - bent the blade one off North Queensland in a big surf, but straightened it out over my knee on shore and it was good for another 6,000 miles.

Other situations where a rudder out performs a skeg are:
*manoeuvring on ice
*ferry gliding across channels with fast tidal streams
*coping with boils and eddies in overfalls
*steering when the wind is too strong to paddle
*fast manoeuvring in congested shipping lanes
*hugging a reef fringed coast when paddling into a strong tidal stream flow

I have included an article from 'The Sea Canoeist Newsletter" on how to fine tune a rudder. (See technical tips)

Lastly a comment on pumps. To optimise buoyancy and dry storage capacity, and minimise the amount of water entering the cockpit in the event of a capsize, in 1985 we changed the Nordkapp seat into a third bulkhead, akin to the Puffin style pod, with a third hatch just aft of the cockpit. With the forehead bulkhead just in front of my rudder pedals, the cockpit volume was thus minimised. This then obviated the need for a pump, as a sponge was only necessary to mop out the water resulting from an 'out of boat' experience.

Surf Skills Weekend 24/25 Feb 1996
Report for Sunday 25 Feb - Lyndon Anderson

After a successful Saturday under the expert instruction of Derek Wigley we decided upon a gentlemanly hour start on Sunday at Point Lonsdale. The plan, the night before, had been to find a beach with some decent surf and expand upon the skills learnt the previous day. However, the one weekend we really wanted some wind to create that surf just didn't eventuate.

After some discussion on what to do next it was decided a crossing of the RIP from Point Lonsdale to Point Nepean was the order of the day. With varying skills among the group, only four game kayakers set out for the crossing. With the RIP soon to start 'pumping', as Derek put it, we needed to hit the water in record time to make the most of the current conditions. Derek must have still been asleep as he actually expected the game four to hit the water in under an hour! Even to my amazement it was achieved in approx 35 minutes.

After some more discussion on the best way to attack the crossing it was decided to ferry glide across using the ebbing tide to assist us. With the crossing just over a kilometre wide we aimed for Queenscliff before heading into the main current. All was going well and we were aiming to stay within the heads and finish up on the bay side of Point Nepean. The force of the tide however was soon to show its full effect. A slight lack of concentration for about five minutes saw us move very quickly seaward and south of a line drawn between Point Lonsdale and Point Nepean.

Having heard many a story about the RIP, I can now believe most of them. The whirlpools and mushrooms created in the middle of the RIP need to be experienced to be believed. And this was a calm day with little or no wind or swell.

We reached the Point Nepean side just seaward of where we would have like to have been and it took a little bit of effort and determination to paddle up the 'rapid' created around the point. Once up the rapid the paddle was much easier and we could actually take time to look at the scenery. The crossing took about one and a half hours.

Now that we had achieved the aim of crossing the RIP, we followed the coastline to within sight of Portsea before again aiming for Queenscliff and the return paddle. By this stage the tide seemed to have eased, however was still enough to assist with the crossing and place use back exactly where we started much quicker than it took us to get across.

From a novice point of view the instruction given on both the surf skills and the crossing of the RIP by Derek was first class. Many thanks from all that attended.

26-28 January 1996 French Island -Westernport Paddle ~ Mike Cromie

Trip leader - Ray Musgrave		Ray Lendrum	John Basemore
Glen Cant	John Hyndman	Katrina Graham	Julian Smith
Rex Brown	Gary Smith	Leigh Brennan-Smith	Mike Cromie

The great circumnavigation of French Island as scheduled for the 26-28 January did not happen. Our sagacious trip leader Ray Musgrave advised the interested paddlers that due to a bad weather forecast we would instead put in at Corinella and do a triangular trip over the 3 days. E.g., Corinella - Spit Point - Stockyard Point - back to Corinella.

We met, packed and started to take off from Corinella Friday morning but were pushed back to shore by very strong winds. After waiting a couple of hours we went on our trouble free way to our first campsite at Spit Point on French Island.

Saturday morning John Hyndman and two others left early for Stockyard Point. The rest of us followed or now 'bushwalking' leader Ray along the beach, through the bush and got bushed trying to locate ancient building relics. We will find those ruins on the next trip Ray.

After lunch we pushed off towards Stockyard Point against a gently rising tide, stopping to view the old Macleod Prison Farm architecture. From Macleod the incoming tidal current was stronger - Ray had planned this purposely to build up our character. Julian Smith and Ray Musgrave gallantly gave Kate a tow for some distance as her hired kayak's rudder was 'short'. She had kept up a cracking pace until then and did a great job for a newcomer. We hope to see Kate on many more trips.

It was a great relief to finally come ashore for the night at Stockyard Point. John Hyndman casually mentioned that between his vantage point at Stockyard and our incoming group of paddlers he had observed a bronze whaler cruising around. We also found a recently discarded snake skin in the long grass between our tents. These items became the starting point of many tall tales discussed around the campfire.

Julian said the towing did not tire him in the least, but managed to sleep in rather late the next morning for some reason.

On Sunday morning we had a short trip across to Corinella - but against a rather strong and going tide this time. A pleasant way to use up spare energy. We all enjoyed the trip and it was good to again hear John Basemore describing his latest theories on skegs.

A note to fellow paddlers who may be put off by adverse weather reports - please check with the trip leader first - we can often charge venues and still get on the water and have a good time.

P.S. Most of the Western Port Bay paddle can be handled by the least experienced, so there is every reason to try and get along and enjoy this beautiful area so close to Melbourne.

Novice Days Paddles, Saturday 3rd February (Rickets Point) Sunday 4th February (Balnarring Beach) ~ Ray Musgrave

Saturday participants: Laurie Atkins (Greenlander), Leigh Brendon-Smith (Greenlander), Lyndon Anderson (Greenlander), Ray Musgrave (Greenlander), Gary Smith (Mirage 22S), Therese Pollard & Chris Sewell (Tasman Twin), Jim Harker (Pittarak), Rex Brown (Greenlander), Julian Smith (Arctic Raider), and apologies to anyone I missed. There were also four novices and a couple of white water paddlers trying out the different kayaks.

Laurie Atkins took a group on a paddle around to the Cerberus (about 6km away). the Cerberus is an old rusting hulk left from circa 1800. Whilst the others swapped kayaks, novices and old salts compared notes and equipment with everybody. A few interested people walking past stopped to have a chat. A good day was had by all. A couple of paddlers went for their basic award under the watchful eye of Laurie, all passed.

Sunday 4th (Balnarring Beach)

Participants: Therese Pollard & Chris Sewell (Tasman Twin), John Basemore (Dinosaur, John's boat, not him), Julian Smith (Mirage 19), Gary Smith (Mirage 22S), Karen Thornton (Q-Craft, model I don't know), Daryl Davidson (Pittarak), Ian Hill (Pittarak), Katrina Graham (Arctic Raider), Jim Harker (Pittarak), Ray Musgrave (Greenlander) and a gentleman from the Essendon Canoe Club whose name I can't remember.

Met at Balnarring Beach (Westernport Bay), calm seas and no wind warnings for the day, the forecast was spot on. We set off at a leisurely paddle, close to the beach, on smooth seas up the bay towards a place called Sandy Point. This was planed as an extension of the Saturday novice paddle. These are protected waters from the predominant North to Northwesterly that occur this time of year. Pulled close to sandy Point and had brunch. People tried different kayaks, experienced kayakers and novices debated the many and various aspects of sea kayaking, good to see people willing to swap kayaks and ideas, but then that's what sea kayaking is about, not becoming too opinionated.

After a stop of an hour or so we headed back towards Balnarring, there was a small surf running at the entrance to Merricks Creek due to the Southerly swells which enter via Flinders (what is called the Western entrance to Westernport Bay, sounds like a tautology, but it's not). the surf was running at about a metre. Those who wished to play in the surf did. One interesting point, when surfing the entrance of the creek on a wave about fifty metres off shore, a wave of some magnitude will come at you from the port side. This makes for interesting support strokes, an excellent place to learn in small surf. interesting to see the Tasman Twin handle the surf. It handled well from where I was positioned. Chris in the stern was having a ball, with yells of "Fantastic, you beauty!" etc. Therese in the bow seat was acting as a brake, saw her disappear once in the wash, she was not impressed with Chris's boating skills. I had never heard her swear before. Mind you if I was in her place I would not have been impressed either. A few who hadn't surfed much before gained some experience. Being a sandy bottom with a gentle slope, not much damage can be had by either boat or paddler in this small surf.

When everybody had had enough it was a short paddle to Balnarring Beach. We threaded our way through the myriad of fishing rods (the bay trout were on the bite - bay trout are juvenile salmon).

as the wind in these conditions was blowing on shore, so if one came out of their kayak and couldn't reenter they could swim to shore.

The "PROM"... Easter 1979? ~ Harry Simpson

This was the first big get together of the VSKC.
Among the the star paddlers were Earle Bloomfield and John Brewster, who had recently circumnavigated Tasmania ...a quite remarkable epic of Australian sea kayaking ... I sincerely hope that a copy of their journal is held by the Club library.

Our special guest was John Ramwell, the British kayaker, who had earlier shared a 100 mile crossing of the English Channel with Derek Hutchinson and two others, in calm seas with no collisions or other mishaps! Other than fatigue and severe discomfort! John is a very disciplined seaman who inspires a great deal of commonsense and confidence to all those who are privileged to paddle with him!

There were quite a few kayakers from South Australia... my friend Joe Lamb, the first importer of Nordkapps; Peter Carter was there, and I think one or two others including Grant Cawthorne from way over in Port Lincoln.

Grant's initial enthusiasm and proficiency were far surpassed by his colourful and extravagant equipment right out of the pages of some glossy magazine!

All this disappeared in wild-eyed horror and amazement, when he was flattened by a high powered 'bullet' of wind about a mile or so South West of Mount Singapore! It took four struggling paddlers at least 45 minutes And nearly 3/4 mile of drifting in high wind, before they got him back into his pumped out boat. Grant had unknowingly lifted his of-set paddle far too high and was knocked down by it. If ever there was a situation for long, straight Eskimo paddles, that was it! (Paul Stocker's paddles would be ideal for winds like that... even yachts have been severely damaged by the "Prom Bullets"!

There were 16 kayaks in total, and on the first early morning of our illegal camping in Shelter Cove, on the northwestern top end of the Prom... we were alerted by the deep throb of a big diesel powered boat approaching through the thick fog! Several lazy paddlers had failed to drag their boats in behind the scrub the night before, and were easily visible from the sea: all hell and desperation broke out! "Drag those bloody boats in! Put out those smoky fires! I think the Rangers are here!" Then the engine stopped... and a big ghostly white boat drifted into view through the fog... and to everyone's joy and amazement... a deep, foghorn like voice said, "A-a-ah you a-a-l-l-right?" Earle replied, "Yes we're alright. Thanks." And he and John paddled out to meet the friendly fisherman. It was a big, well found timber boat, broad and bluff, like its owner. whenever we met any of the local boats after that; they would always stop for a yarn. I think they were intrigued by our little kayaks venturing where only big off-shore boats were the recognised craft. So unlike Port Phillip Bay, where they'll run ya' down if you don't get out of the way!

Apart from Grant's spectacular "knock down", and some hair raising moments of terror with a one hatched, stern heavy Nordkapp... everyone survived, although we all wondered just when Doug Speedy's toy paddle would break. I think it came off a cheap plastic inflatable raft, although the paddle bent to an alarming degree, it never broke on that Easter anyway!

Off the Internet ~ HYPOTHERMIA ~ Supplied by Rex Brown

What is hypothermia?

Hypothermia is the lowering of the body's core temperature. There are two types of hypothermia, acute and chronic. Acute hypothermia is the rapid lowering of the body's core temp. Chronic hypothermia is the slow lowering of the body's core temp. If the temperature drop occurs in less than 4 hours it is acute, otherwise chronic. Acute hypothermia is also called immersion hypothermia and typically occurs when a person is in cold water. It is important to note the difference between the two since treatment will be different. hypothermia is considered severe when the body's core temperature drops below 32°C and mild from normal body temperature to 32°C.

A difference between acute and chronic hypothermia is the severity of something called afterdrop. This is the continued dropping of the body's core temperature after the person has been brought to a warm place. Afterdrop complicates treating severe hypothermia.

Hypothermia is the biggest killer of sea kayakers. Many of its victims are unprepared for the cold water exposure that induces it. Water conducts heat away at 20-25 times the rate that air removes heat. This is one reason why an exposure to cold water at a certain temperature is more traumatic than exposure to air at the same temperature.

Sometimes a person will not know they are hypothermic since people typically do not notice it in themselves. It is important for people in a group to keep an eye on their companions for signs of hypothermia (this includes group leaders and guides). Sometimes a person will appear physically and mentally okay and will refuse treatment because they claim they are okay.

Exposure to cold does not automatically induce hypothermia, it typically will take time to develop unless there is exposure to very cold water or there is no protection (wetsuit/drysuit) against the cold.

How can one tell if somebody is hypothermia?

It can be difficult to tell if someone is hypothermic without actually measuring their core temperature. Measuring a persons core temperature in the field requires a rectal thermometer and is physically not practical. Therefore symptoms must be relied on. Hypothermia affects people in different ways and no one symptom is reliable to indicate if a person is hypothermic.

The following lists the body core temperature and its typical signs and symptoms. Not all hypothermia victims exhibit all these symptoms, it varies from person to person. Note symptoms will change as the person's core temperature changes.

37 to 36°C

Normal temperature range. Shivering may begin.

36 to 35°C

Cold sensation, goose bumps, unable to perform complex tasks with hands, shivering can be mild to severe, skin numb

35 to 34°C

Shivering intense, muscle incoordination becomes apparent, movements slow and laboured, stumbling pace, mild confusion, may appear alert, unable to walk 10 metres line properly

34 to 32°C
Violent shivering persists, difficulty speaking, sluggish thinking, amnesia starts to appear and may be retrograde, gross muscle movements sluggish, unable to use hands, stumbles frequently, difficulty speaking, signs of depression
32 to 30°C
Shivering stops in chronic hypothermia, exposed skin blue or puffy, muscle coordination very poor with inability to walk, confusion, incoherent, irrational behaviour, BUT MAY BE ABLE TO MAINTAIN POSTURE AND THE APPEARANCE OF PSYCHOLOGICAL CONTACT.
30 to 27.7°C
Muscles severely rigid, semiconscious, stupor, loss of psychological contact, pulse and respiration slow, pupils can dilate
27 to 25.5°C
Unconsciousness, heart beat and respiration erratic, pulse and heart beat may be unapparent, muscle tendon reflexes cease
25 to 24°C
Pulmonary edema, failure of cardiac and respiratory centres, probable death, DEATH MAY OCCUR BEFORE THIS LEVEL
17.7°C
Lowest recorded temperature of chronic hypothermia survivor

This table is from a book by Wm. Forgey called *Hypothermia- Death by Exposure.*

<u>Am I hypothermic if I am shivering and/or my hands/feet are cold?</u>
Mild shivering and cold hands/feet does not indicate you are severely hypothermic. These signs do mean you are losing more heat than you producing and your body is adjusting its temperature. Shivering is one way your body produces heat to warm itself. Cold hands and feet indicate your body is fighting the cold by reducing the flow of blood to the extremities. Reduced blood flow to the extremities helps to reduce heat loss and helps maintain the body's core temperature. Do take these signs as a warning.

Uncontrolled shivering does mean you are hypothermic. A lack of shivering does not mean you are not hypothermic since a symptom of severe hypothermia (core temp less than 30°C is the lack of shivering.

<u>How is hypothermia treated?</u>
Mild hypothermia where the body core temperature is greater than 32°C can be treated by warming the person up.
"This can be getting the person out of the wind, getting to a warm place, putting on warmer clothing especially a warm hat (as a large percentage of all body heat is lost through the head and back of the neck), nibbling on energy-rich foods (only if able to), exercising (see note below on treatment of severe hypothermia), etc. One way of treating hypothermia in the field is to place the patient in a large plastic bag (survival/body bag) or two large garbage bags (bottom bag from feet to waste, cut hole in bottom of second bag and place over head to waste) then if possible into a sleeping bag - do not remove wet clothing unless the patient can do so. The plastic bag acts as a vapour barrier and will assist the patient from losing body heat from evaporation. Place patient into sleeping bag A.S.A.P. and do not move. Movement of the patient will force the colder blood from the extremities into the core and the warm blood from the body's core out to the extremities, thus cooling the patient more. " (This section from editor)

Even though materials such as polypropylene, capilene, polyester fleece, wool, etc do insulate when wet, they are not as efficient when compared to dry clothing. There is heat loss due to evaporation and conduction when these clothes are wet. Stay away from cotton clothing, cotton kills in cold environments because it does not insulate when wet.

Severe hypothermia is where the body's core temperature is below 32°C. A person with severe hypothermia needs to get to hospital as soon as possible. They should be considered a stretcher case and handled very carefully. Rough handling can induce an irregular heartbeat that can kill them. If they cannot be taken right way, then treat them like you would somebody with mild hypothermia. The one thing that will not help them is exercise because at this stage they have depleted their energy reserves so much that they cannot even shiver. Exercise may even kill them by inducing an irregular heartbeat.

A hypothermia victim should not be considered dead unless they are warm and dead. Even though a hypothermia victim may appear lifeless, get them to an emergency room as quickly as possible.

What is the best defence against hypothermia?
Be prepared. Wear clothing that is appropriate for immersion in the water and not the air temperature. Eat properly to keep your energy levels up, get enough rest and drink enough water to maintain proper hydration. Fatigue and dehydration help to induce hypothermia when exposed to cold. Most kayakers that get hypothermia did not expect to end up in the water. Be prepared for cold water immersion when paddling on cold water.

Stay off the water if you are unsure the conditions may exceed your abilities. This includes your ability to do a self rescue or assist in the rescue of another paddler. Be aware of the weather forecast and what the weather is currently doing. A weather forecast is not always 100% accurate.

Remember that extremely cold water can cause your hands to become useless in a relatively short time (less than 20 minutes) even when properly dressed. This will complicate operating a pump, pulling on a spray skirt, firing off flares, radioing for help, etc. This may result in your inability to signal for help, do a self rescue or assist in your rescue or the rescue of others.

What is vertigo?
Vertigo is not hypothermia but it is related to cold water exposure. Vertigo is the sudden loss of balance and orientation to one's surroundings.

Vertigo is caused when one ear drum is at a different temperature than the other and since your inner ear affects your balance, different inner temperatures affect your balance. A vertigo study was done where they would induce vertigo by injecting cold water into a persons ear. The head position they found that induced vertigo the most is the position of your head when you are starting your roll. vertigo can be prevented by ear plugs and it can be cured by allowing your inner ears regain equal temperatures which occur after a few minutes. Vertigo does not occur in all immersions into cold water.

Vertigo can cause your roll to fail no matter how good it is. Have a backup rescue method to your roll. If your roll fails, are you prepared to wet exit and be exposed to cold water?

What is cold shock?
Cold shock is not hypothermia but it is caused by sudden immersion in cold water. It is an involuntary gasp reflex followed by hyperventilation. These affect the ability to breath normally and can cause the breathing in of water that can result in drowning. Typically, there is one gasp reflex. The hyperventilation can last 10 to 15 minutes. It does not occur in all cold water immersions.

Cold shock can complicate a rescue. The gasp reflex can interfere with ones roll due to the involuntary breathing in of water. The hyperventilation will prevent a person from holding their breath for very long complicating the ability to do a reentry and roll. The hyperventilation can also cause panic in some people due to the inability to breath properly and/or the breathing in of water in rough seas.

Is this information meant to scare me away from cold water?
No, but it is meant to help educate people on the dangers of cold water. This will hopefully result in the people who do paddle in cold water to realise the risk they are taking and to take the proper precautions.

TECHNICAL TIPS
FINE TUNING A RUDDER ~ Paul Caffyn

There are several ways to improve a rudder's effectiveness:
i balancing a rudder
ii changing aspect
iii eliminating rake
iv changing cable attachments

Some paddlers argue that a rudder is a movable skeg for maintaining a straight line course and is not for steering. In calm conditions I would have to agree that a rudder can be considered as a movable skeg, for minimal movement is necessary. In nearly all other situations, wind, chop, tide races, reefbound coasts, ice packs, etc I consider a rudder is a basic steering mechanism. My development of an aluminium overstern rudder in 1982, based on a fibreglass rudder concept used by Tasmanian paddlers, has spread throughout the world and improved rudder steering efficiency by comparison with the old 'gravity drop' system. The bugbear with non retractable rudders or skegs was their susceptibility to damage during landing and launching, particularly on surf beaches.

Certainly the old drop system allowed a rudder to be lifted above the keel or rocker line to avoid damage when landing and launching - a single cord led from the top of the rudder back to the cockpit - but once the cord was released and the rudder blade dropped into the water under gravity, there was no way of holding the rudder down. The more a rudder blade is dragged out of a vertical position by frictional drag, the less inefficient it is and the greater the force required to achieve steerage. The overstern rudder eliminated this problem with the use of a continuous loop of cord, which enabled a rudder blade to be locked into position.

FIG 1

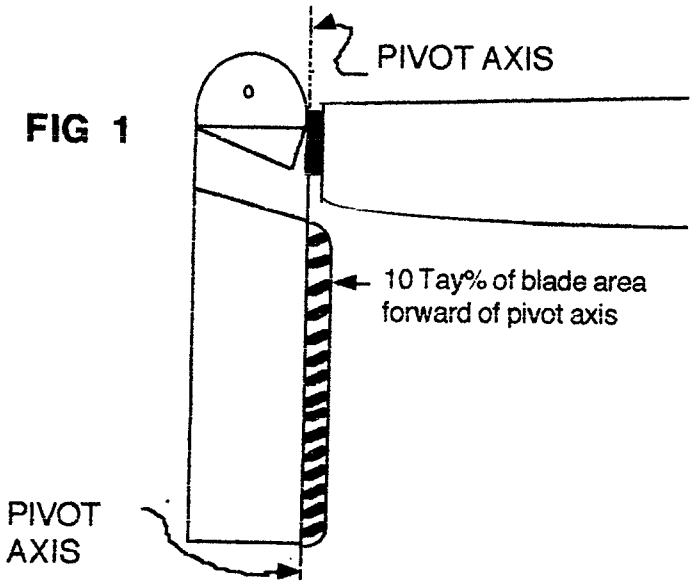


FIG 2

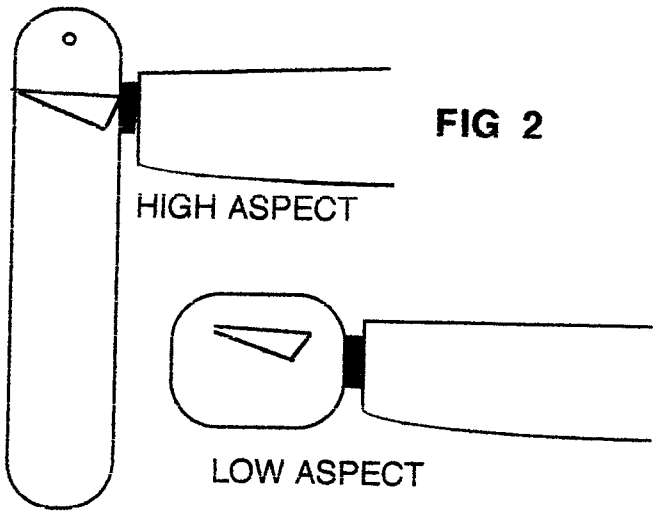
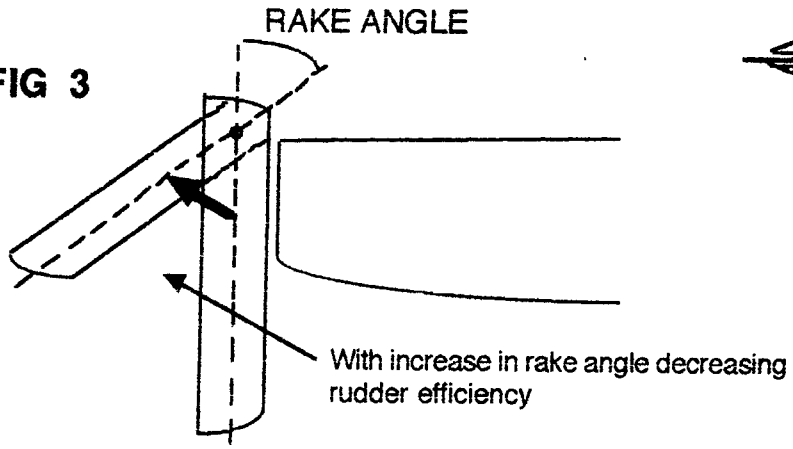


FIG 3



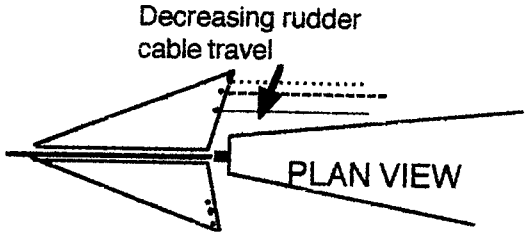


FIG 4

If you enjoy long surfing runs or commonly deal with strong tide races, the following hints may improve the efficiency of your rudder:

i Balancing a Rudder - Modern yacht rudder design incorporates 10 to 12% of the rudder pivot line or axis. Kayak rudders predominantly have the hinge or pivot point mounted so the rudder, when turned, pivots in a vertical plane. A rudder pivot axis which is either angled to the bow or stern will cause a pulling down or lifting effect when the rudder is turned. The reason for moving 10 to 12% of a rudder blade's area forehead of the pivot axis - balancing a rudder - is that less force on the foot pedals is required to turn the rudder. Blade area applies to the working area or that predominantly submerged, not total area. For a deep overstern rudder, with a wetted working area of 40cm deep by 8cm wide, balancing can be achieved by moving the leading (forehead) edge by 9mm (Fig 1).

ii Changing Aspect - Aspect is the shape of rudder blade - a deep, narrow blade has a HIGH aspect while a square sided one has a LOW aspect. The high aspect blade is a more efficient foil and provides more effective steering in rough seas when a kayak stern is leaping out of the sea (Fig 2).

iii Eliminating Rake - Rake is the angle that a rudder hangs behind its pivot point or axis (Fig 3). The greater the rake angle, the harder a kayak is to steer, and the greater the amount of force required to steer it. If a rudder blade is not fixed in its most efficient vertical position, frictional resistance particularly during surfing runs drags a rudder blade back from its vertical position. A cam cleat by the cockpit or some other form of

quick grip/release is necessary to lock a blade into the vertical position.
iv Changing Cable Attachments - The amount of foot pedal travel can be modified by changing the rudder cable attachment points on the rudder flanges or wings. By bringing the attachment points closer together (Fig 4), the amount of rudder cable travel is reduced which has the effect of improving steerage for minimum pedal movement. (Sea Canoeist Newsletter No 45, July 1993)

What's on the HORIZON? ~ Ian Hill

have you ever wondered how to calculate your distance from the horizon? Sailors and seafaring adventurers often need this information, especially when they have just sighted land, or spotted a container ship steaming over the horizon and apparently locked onto a collision course. Here's a handy little formula which all seafarers should know:

$$D=2.12\ \sqrt{H}$$

Where:

D = distance from observer to horizon in nautical miles
H = height of eye in metres above the surface of the sea

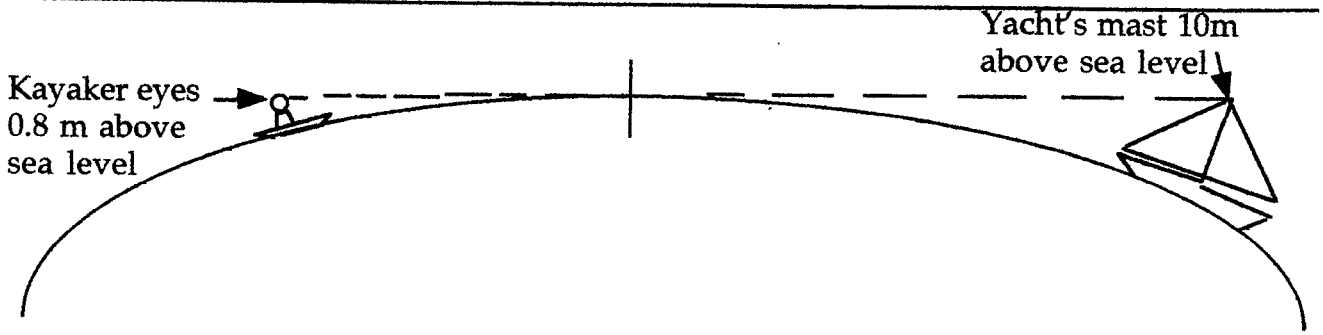


Diagram 1 Kayaker to ship is D=(2.12√0.8) +(2.12√10) =1.9 + 6.7 = 8.6 nautical miles

Of course the first sighting of an object beyond the horizon will be a sighting of its highest point. The distance from the horizon to that point can also be calculated using the same formula provided that you have some idea of the objects' height. The total distance from you to the object is the sum of distances from the horizon, do not just simply add heights and do one calculation.

The trick is in calculating the square root of H and then multiplying the answer by 2.12 without the aid of Clive Sinclair's invention;- the hand held calculator. This is where the good old slide rule excels. Unlike Mr Sinclair's gift to mankind, the slide rule will operate perfectly well under 20 feet of salt water!

Well, what can sea kayakers get out of this?

- distance from one kayaker looking another in the eye on calm sea can be as much as 3.6nm
- distance from observer standing at the water's edge on a beach to a kayaker who's head is just visible beyond the horizon is 4.5nm
- a paddler out to sea can still see the water's edge at the beach until beyond 1.8nm

Here's a table of distances that people who paddle with me might use:

OBJECT	HEIGHT	DISTANCE FROM PADDLER TO OBJECT naut. miles	OBJECT	HEIGHT	DISTANCE FROM PADDLER TO OBJECT naut. miles
kayaker to horizon		1.9	windscreen flash from sedan car	1.1	4
kayaker's beany	0.8	3.7	windscreen flash from	1.5	4.4
kayaker's paddle flash	1.6	4.5	100 yr old Norfolk Island pine	16	10.3
fisherman in tinnie	1.1	4	Highest point Mud Island	1.4	4.3
12m sail peak of yacht	14.5	9.9	Highest Point Fawkner	16	10.3
windscreen flash from fishing trawler	3.5	5.8	Highest Point South Channel Fort	6	7
windscreen flash cabin cruiser	2.5	5.2			
bow of Tassie ferry	15	10			
barefoot walker on beach	1.6	4.5			

Caveat Emptor: the distances I have calculated for kayak to kayak, and kayak to beach recognition are based on the assumption that the kayaks are riding a crest. The position of a kayak on a swell or wave affects its height from the mean sea level. Consequently the distance over which one paddler can observe another depends upon their positions on the swell. If they are both on a crest, the observation distance will be enhanced. If one or both is in a trough the distance will be reduced. In big swells the observation distance may be no further than the next crest until you rise upon on a crest!

The following table is some starting points to find your own abilities - set hem in cloudy-bright conditions, unimpeded by smog or mist.

- at 1.5nm basic colour of kayaks and number in a group should be visible
- at 1nm paddle movements should catch your eye
- at 0.5nm colour of bright hat or buoyancy vest should be obvious
- at 500m colours of clothes should be distinguishable
- at 400m arm movements should be visible
- at 300m faces can be seen; well known people can be identified by general appearance
- at 200m details of clothes are visible
- at 100m eyes should be visible as dots
- at 50m mouth and eyes are clearly visible

Sources: Chapman Piloting 58th Edition pg 383; Scouting for Boys, B-P 1956

OFFSHORE WINDS by Paul Caffyn

(abrigded version NSW Sea Kayaker Issue 26 March 1996)

Wind is the curse of sea kayakers. It generates the bulk of problems that arise, choppy seas, capsizes, wind chill, weather tide effects, surf and so on.

There is however an exception; a following breeze, or one quartering from astern, can be a real boon in aiding progress through surfing rides. A breeze on the beam requires continuous corrections for drift and more concentration on balancing the boat. a breeze on the nose, or quartering from the bow, generates soul destroying, tiring, very wet slogs.

The most deceptive and horrible wind blows offshore. deceptive in that conditions may appear flat calm against shore with a light breeze wafting offshore, but with increasing distance offshore wind strength increases dramatically. cliffed coastlines or those with marked topographic relief such as dune ridges, or swathes of forest, are particularly deceptive. Lurking sea kayaker traps are wherever those continuous cliffs or dune ridges are broken by gorges, fiords, steep sided valleys and narrow entrance bays.

Yours truly was caught during the Australian trip a long way offshore immediately south of Jervis Bay by a sudden, dramatic wind shift, that left me with such a struggle against an offshore wind that I felt like throwing in the towel and abandoning the trip. Limping into the lee of St Georges Head I coined the phrase, 'Wind was definitely the curse of the canoeing class.'

Wind Strength

Above an altitude of 500 to 600m, wind has an unobstructed flow over the sea while below that height, there is increasing frictional drag effect between the air and the surface over which the wind is blowing, resulting in a diminishing of wind speed as the ground or sea is approached. The amount of wind strength reduction depends on the nature of the surface; over forested hilly terrain the air flow will be less than that over open sea because of greater frictional drag.

Approximate values have been determined for frictional drag: over open sea a wind 500m above the sea reduces by about 33% at sea level, while over land the reduction is 66%. Thus a 30 knot wind at 500m will produce a 20 knot wind over sea and 10 knots over land.

There is where the 'deceptive' description for offshore wind applies, for a factor of 50% can be applied to wind when it blows from land out to sea. A gentle breeze of 6 knots inland becomes a moderate wind of 12 knots offshore and a 15 knot wind inland becomes a near gale of 30 knots at sea.

The height and nature of a coastline govern the zone width of calm, sheltered water in offshore wind conditions:

a a long beach with a low sand dune ridge providing minimum relief, dictates a minimum width with the offshore wind felt at the water's edge.

b a continuous line of vertical cliffs will provide a maximum width of calm, sheltered water, naturally depending on the height of the cliffs which govern where the offshore wind hits the sea.

The obvious problem with offshore winds is being blown offshore. Where there is no off-lying shelter, such as a reef or island, and the next continent is thousands of miles away, the chances of survival without a radio or batphone are zilch. I maintain that once a wind rises over 30 knots, paddling progress into the wind grinds to a halt.

Any misadventure such as a dropped paddle or capsize, both occurred with two paddlers off Jervis Bay, resulting in instant seawards drift and a greater distance to reach shore after recovering from the misadventure.

By way of example to those who have yet to experience such conditions, I struck diabolical offshore conditions during my first day in the Bering Sea, on the northern side of Alaska Peninsula with a gale force wind blowing offshore over a low dune ridge and flat tundra inland. The sea was flat calm, a low surge against a gravel beach, wind ripples close inshore and an increasing density of whitecaps with distance out from the beach. Deceptively good paddling conditions, but bear in mind the 50% increase in wind strength from land to sea, and conditions more than 10m offshore were well beyond my limit to reach the beach. I spent many hours crabbing my way along the beach, the kayak at a 45° angle to the line of the beach to check offshore wind drift, the bow rising and falling against the beach with each surge. Ii was fully aware of the risk, realising the next stop offshore was the ice pack and unbearable polar bear country.

At the base of a long continuous line of cliffs, excellent shelter is afforded in strong offshore winds. Steep hillsides close the coast, continuous dune ridges and tall forests also offer shelter close to a beach.

But wherever that continuous line of shelter is broken abruptly, for instance by a narrow fiord, narrow bay or harbour entrance, gorge, river or stream valley. the offshore wind is funnelled through that break with unbridled force, causing williwaws and violent gusts or bullets of wind. And it is the violence of the turbulence that can cause the loss of a paddle or a capsize.

Many sheltered bays and harbours have narrow entrances which open back into broad areas of calm water. Jervis Bay in NSW is a classic sheltered bay, which has a narrow entrance with tall cliffed headlands on both sides and we have many such examples in New Zealand. Offshore winds funnel through such narrow entrances with double or triple the wind strength of that inland.Also where a continuous line of cliffs of steep coastline is broken by a headland or cape projecting seawards, increasing wind strength must be expected often accompanied by williwaws and strong gusts or bullets of wind.

THE AD PAGE

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We were just passing through Cobargo (Far South Coast of NSW, just North of Bega) and discovered the Kinetix Factory and Sports Clothing Shop. If you can't get the correct fit or want that something a bit special, Margo will personaly custom fit the item and will adapt clothing to suit your special needs at factory prices. Clothing includes pile tops and trousers, solar lycra swimwear, and a new fourway stretch polarfleece that works similar to a wetsuit. I've ordered a customised top and will give a review of it in the next issue.

- Chris & Therese

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