

# OCEAN KAYAKER



NEWSLETTER OF THE  
INTERNATIONAL SEA KAYAKING ASSOCIATION



A YOUNG INDIAN WITH HIS CANOE AT THE FOOT OF THE RIDE WATER SLIDE.

**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**

FEBRUARY 2003

ISSUE # 50

# Ocean Kayaker

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newsletter is:-  
5, Osprey Ave.  
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email  
<jramwell@provider.co.uk>

*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.  
Dont' 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@btinternet.com>  
Ensure you include WHAT,  
WHERE, WHEN and WHO  
(i.e. contact details).  
There is no charge for this  
service.

I still have a few T shirts, L  
and Extra L, grey with the  
ISKA logo, for sale @ £6.00

## editorial John Ramwell

As this is the first Newsletter of 2003 let  
me wish you all a HAPPY NEW YEAR.  
Two Canoe Exhibitions to go to this  
Spring. The National Canoe Exhibition at  
the NEC, Birmingham; 15/16th February.  
The International Canoe Exhibition, also  
at the NEC, Birmingham; 14th to 16th  
March. I shall be at both of them with  
the ISKA Stand - see you there.

At last, at last - I have finished my book,  
"Sea Touring". I started it over 12 years  
ago but have recently made a concerted  
effort. Currently it is being perused by  
someone from whom I have asked for a  
Foreword. Once he has agreed (if indeed  
he does) then I'll let you know who it is  
and how plans to publish it progress.

Delighted at how renewals to ISKA have  
gone this time - must be doing something  
~~write~~ right. If there is a renewal slip  
enclosed with this Newsletter then it  
means that you have NOT renewed and  
this will be your last delivery.

Raleigh Int. are laying on a selection/  
introduction to Raleigh sea kayaking  
expeds. at the Anglesey Sea & Surf  
Centre, N. Wales, April 2003. Want to  
know more (I and some friends will be  
running it), then contact Raleigh House,  
27, Parsons Green Lane, London, SW6  
4HL or phone 0207 371 8585

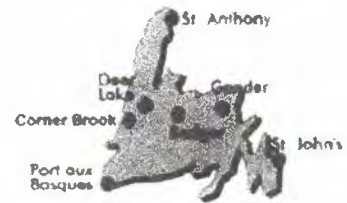
I remain in correspondence with BCU  
about the proliferation of BCU Coaching  
Awards in N. America. They say there is  
revenue to be had, - I say the American  
Canoe Association should provide an  
award scheme, apart from which the BCU  
does not have the supporting infrastruc  
ture in the USA to ensure the scheme  
works effectively. I'll keep you posted.



## CONTENTS

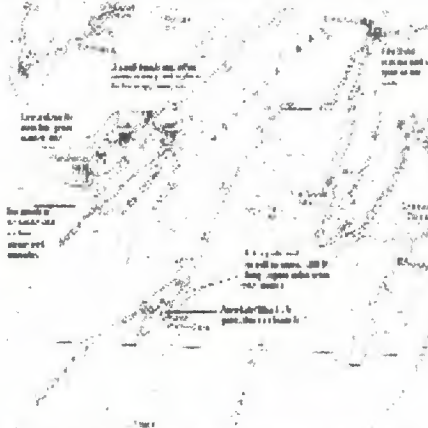
Editorial.....	Page 1
Letters.....	Page 2
USA Coastguards....	Page 3
Circumnavigation Of Britain Rich Atkinson.....	Page 3
Commandments of Surfing .....	Page 7
Global Warming.....	Page 8
Trip Assessment Joe Dicks.....	Page 8
Risk Exercise.....	Page 10
Avoiding Collisions John Lull.....	Page 11
Pathogen is New Pollution Kate Hutchinson...	Page 11
New Age Photography	Page 13
Sea Sickness Peter Treby	Page 14
Lighting System Bill Robinson	Page 15
Where River and Sea Meet	Page 16

NEWFOUNDLAND



From Alex McGruer, Newfoundland.

Here is a picture and copy of the Avondale Map. (Credit NDS St. John's) See you on the water <http://pages.ivillage.com/mcgruer>



# LETTERS

From Mike Walker, Redditch, Worcs. on 10527 528382. Mobile 07720 275774

"I have a Coleman Canadian canoe and I would like to exchange it for a sea kayak that is safe, stable, has a broad beam with a good load carrying capacity."

\*\*\*\*\*  
Hello John - as discussed, please find Pete's profile below - just click on the web link to view the website. I will create an overview for you to use along with some photos

- it's very kind of you to offer to promote his Newfoundland Challenge.

In the meantime we would be grateful if you could spread the word as we are looking for sponsors to help fund the

trip, if anyone springs to mind please let me know, or alternatively please feel free to pass on my details to anyone who would like to help.

Zoë Watson; P.R. Manager  
[zoe@spiritofthesea.co.uk](mailto:zoe@spiritofthesea.co.uk)  
07812 392334

Peter Bray SAS WORLD  
ECORDBREAKER

Personal Profile  
World Record for North Atlantic  
Crossing 2001

Undeten-ed by his previous attempt which failed in 2000 when Peter had to call upon all his survival skills to stay alive for 31 hours in conditions, which according to the experts, most would not survive.

Peter Bray's World record was achieved and recognized as the first ever attempt to cross the

north Atlantic -solo and un-supported in a Kayak.

THE RECORD WAS SUCCESSFULLY COMPLETED IN SEPTEMBER 2001

Newfoundland Challenge 2003

In May 2003, Peter Bray will face his latest challenge which is to circumnavigate Newfoundland single-handedly, and unsupported in a Kayak. Once again testing his stamina and overwhelming ability to survive against the odds. He is currently embarking upon a training programme, which will help to prepare him for the extreme conditions he will be up against.

\*\*\*\*\*

Dear John

I recently had four days paddling in Florida. I paddled with Sweetwater Kayaks (<http://www.sweetwaterkayaks.com>) and did my BCU 3 Star with them. I found them to be very friendly, helpful and flexible and the standard of instruction was excellent. Sweetwater do a variety of trips, courses and also a symposium in February. If any readers are looking for a different and warmer venue for their paddling, or maybe want to fit in some time on the water during a holiday in Florida, I can recommend Sweetwater.

All the best and keep up the good work Bob . [drbobmark@uk2.net](mailto:drbobmark@uk2.net)

\*\*\*\*\*

*I came across this obit. in the Times 8/12/02*

Bill Sparks

1922-2002, "Cockleshell Hero"

Bill Sparks was the last of the "Cockleshell Heroes" who paddled 85 miles through enemy defences in 1942 to cripple armed German merchant ships at Bordeaux. Ten Royal Marines set out in five craft on December 11, but eight were shot or drowned. Sparks and Major "Blondie" Hasler were pursued through France and Spain for three months before reaching safety. Four ships had been severely damaged by limpet mines, and a fifth sunk. Attacking by kayak, known as cockleshells, avoided the heavy civilian casualties of bombing.

\*\*\*\*\*

# U.S.A. Coast Guard Considers Name Change.

American Canoe Association says that the proposal is more descriptive of High-Speed Craft

In 2000 the American Canoe Association (ACA) filed a request with the United States Coast Guard (USCG) asking it to adopt new, less confusing, terminology to describe watercraft currently referred to as "Personal Watercraft" and other jet powered watercraft -- and to formally establish definitions for these specific types of watercraft. On July 3rd the USCG published a Federal Register notice requesting public comment on the ACA proposal.

Specifically, the ACA requested that the USCG phase out the use of the term "Personal Watercraft" as referring to a specific type of jet pump powered watercraft (also known as jet skis) and replace it with a more descriptive term such as "Personal Water Jet" or "Personal Jet Craft."

The current terminology is confusing and obfuscates the fact that any single person watercraft, be it canoe, kayak, catamaran, rowboat, airboat, or some other craft, is a personal watercraft.

The ACA also requested the USCG adopt a specific regulatory definition for craft currently referred to as "personal watercraft." Currently the USCG does not have a formal definition for such vessels, even though the craft are so unique that USCG has historically exempted them from many

of the safety standards required of other motorized vessels.

By adopting a truly descriptive name and a specific definition for these jet-pump powered craft, USCG would:  
1)Aide in the regulation of this very specific type of high-speed craft.  
2)Give new users of these craft a clearer idea of its high-performance nature and of the need for instruction.  
3)Eliminate confusion created by use of the term "personal watercraft" to identify a specific jet-pump powered vessel.

*I have the entire text of the September 2000 letter that ACA sent to USCG outlining the need for change.....let me know if you want sight of it, Ed.*

From Richard Atkinson who circum-navigated Britain last year. Here are his two final accounts.....

Hello, I'm afraid it's been a long time since I've been near a PC to scribble an update, but at last here it is! I'm currently in the beautiful Menai Strait, waiting for the afternoon tide to take me down past Bangor and so onward towards Liverpool and the final leg of the journey - a return to Scotland!!

After I last wrote I waved goodbye to friends at Leigh on Sea and pushed off from the Essex coast, crossing the Thames in a brisk wind and racing tide and working my way around the Kent coast. My first port of call was the resort town of Leysdown on Sea, a place of unrelenting awfulness and not one of my better decisions. A desperate, hour-long boat drag across a quarter mile of oozing mud flats led to a campsite near a loud and tacky amusement arcade... it rained non-stop and to cap it all I awoke to find someone had stolen my tent pegs in the night!

Having no desire to prolong acquaintance with Leysdown, I pushed off early, rounded North Foreland, Ramsgate and pulled ashore on the sands near Deal; just around the cor-

ner lay Dover, with its congested waters and frantic ferry traffic. The harbour control took it all in their stride however and waved me across between the stern of an outbound ferry and the bow of an inbound dredger, and from there it was just a short hop to the sheer white cliffline of Beachy Head, its red and white striped lighthouse dwarfed by the towering chalk wall above it.

As I reached Hythe the red flags of the firing range were flying, and puffs of smoke accompanied sounds of artillery fire - reluctant to become an unwitting target, I took an enforced pause through the afternoon. Firing finally stopped at 5 pm and I was on my way again - but there was bad news. Lydd Range, ten miles further on, would be firing all the next day. I would have to clear Lydd that night or waste a day sitting on the shore tomorrow. I pushed on to break past Lydd that night, racking up an exhausting 38 miles that day and pulling ashore shattered on benighted beach. Too tired to pitch tent in the dark, I chanced the weather and rolled out my bag on the shingle to sleep under the stars!

Over the next days I worked my way along the south coast, fighting into

strong westerly winds almost every day. Energy reserves drained low, sapped by my long haul into the night to clear the firing ranges, and by days constantly battling wind and waves. Struggling to make 15 miles most days, I watched the schedule slip away from me while feeling powerless to do anything about it, a frustrating and dispiriting experience. However, on the plus side the south coast is home to family and numerous old friends, so for a change I was able to stop off and spend time with familiar faces - my family visited me with a picnic, and I even pulled in at Ricardo plc in Shoreham to catch up with old colleagues. There were some strange looks from people arriving in the morning to see a tent pitched on the company's front lawn! As I readied to go on the slipway a crowd of inquisitive schoolkids arrived and suddenly we were engulfed in ten year olds, fascinated at this strange adventurer! Small hands fumbled with cameras and a barrage of questions had to be answered! Ready at last, I rolled up my trousers and slithered the boat across the knee deep mud, children cheering and waving, friends recording the indignity on film!

Gradually I clawed my way windward - through the Solent and across

Christchurch bay to Swanage, where once again firing ranges dictated the schedule, this time a 4 am start to get past before hostilities commenced! Visiting Weymouth - delightfully pret-

ty as you enter the town from the sea - I called in to chat to the Coastguard before rounding the notorious Bill of Portland and crossing Chesil beach, a 15-mile stretch of hospitable single and dumping surf. Any landing here can quickly lead to drowning in the vicious undertow, and

I'd long worried about this exposed stretch so it was with relief that I pulled ashore after 8 hours without a stop. Slowly I ticked off the shores of Dorset, Devon and finally Cornwall, making steady but hard won progress. In Devon I waited out storms, and encountered some of the wildest seas I'd ever been in. Off Salcombe Estuary at Bolt Head, where tide and river and wind all meet at once to fight over their differences, I found myself suddenly engulfed in wild breaking seas, towering above me and crashing down towards me in walls of white - fighting hard to stay upright and bracing in all directions in the confused seas, I fought for an hour in water that was frighteningly powerful and at times close to terrifying before finally arriving in the tranquil estuary of Bantam, and tying up by the picturesque boathouse with its thatched roof and old ships' figureheads in the eaves. It was the scene of happy childhood holidays, and a needed tonic after the day's hard fight on the water!



Land's End marked a huge psychological turning point - finally I would be heading North, finally each mile would be taking me closer to, instead of further from, Spey Bay and the fin-

ing canoeist no harm!

Reaching the northern tip of Devon I made the short hop over to the Isle of Lundy - one of my favourite haunts -

and in the Marisco Tavern there I prepared my navigation for the biggest and most committing open crossing of the voyage. I planned to make a thirty mile trip from the Island across to St Govan's Head in South Wales. Poring quietly over my charts, I tried to be patient

with a crowd of onlookers advising me to 'watch out for the weather', including one chap who asserted "I bet you've never paddled right round Lundy!" The next day saw me miles out on an open sea, paddling on a compass bearing for a landfall that slowly emerged as a hazy grey outline, gradually took form over the hours to become cliffs and bays, and finally turned into the sandy paradise of Barafundle Bay - an almost tropically beautiful beach on the south pembrokeshire coast, and a fine reward for a ten hour paddle across the Bristol Channel!

ish line, and most important of all the strong south westers would now be blowing on my back - helping me instead of punching me back at each stroke!! Heading up the north coast of Cornwall progress seemed to leap ahead - suddenly twenty five, even thirty or more miles in a day were possible! As well, I was now seeing new wildlife - grey seals following the boat along, manx shearwaters zooming up to the kayak at wavetop height, a rare sun fish floating by and even a school of basking sharks. One of these lumbering monsters I didn't see until he was just feet off the bow. A two foot high dorsal fin slid by inches off my bow and a colossal grey bulk glided primevally past the kayak; close enough to touch, he was fully as long and a grey deal more massive than my slender, fragile craft. I admit I felt a minor tremor of fear and instinctively put in a couple of hasty paddle strokes! Basking sharks however, despite their Jaws appearance and colossal size, are toothless, gentle beasts, which graze lazily along our coast for plankton and mean the pass-

with a crowd of onlookers advising me to 'watch out for the weather', including one chap who asserted "I bet you've never paddled right round Lundy!" The next day saw me miles out on an open sea, paddling on a compass bearing for a landfall that slowly emerged as a hazy grey outline, gradually took form over the hours to become cliffs and bays, and finally turned into the sandy paradise of Barafundle Bay - an almost tropically beautiful beach on the south pembrokeshire coast, and a fine reward for a ten hour paddle across the Bristol Channel!

Despite the previous day's exertions, I had to be on the water at seven if I was to catch the west-going tide, so it was an early turn to. On a bright day I joined the tide race going past the St Govan's Head cliffs, and by evening I was in the tiny cathedral city of St Davids. The weather now held fair for the first time since the beginning of the voyage in May, and I made fast progress up the welsh coast to Newquay, where a resident

community of dolphins was out feeding in the ebb tide as I arrived - fantastic! I'd caught only passing glimpses of dolphins during my voyage, so it was a treat to simply stop and watch them, gracefully arcing out of the water, sometimes noiselessly wheeling back under, other times bursting right out to splash back in with a crash. This is well known dolphin territory and is being studied by the Marine Wildlife Centre in Newquay. Thanks to Steve who runs the centre I had a bed indoors for the night, and enjoyed a beer with the centre volunteers that evening - very civilised!

North of Cardigan I pushed on to Porthmadog, where I had arranged to meet up with Dave Evans of the Cwm Pennant outdoor centre. Dave generously offered to pick me up off the beach with a minibus... however, as we loaded the boat the van began to sink slowly and ominously into the sand! Frantically we tried to dig the bus out as it sunk down to its axles, with us getting progressively dirtier, wetter and more desperate! A passer by stopped, watching our labours for a while before mindlessly observing "You wouldn't think the sand was soft, would you?" Sensing, perhaps, that he was in greater danger than even our imperilled minibus he wisely moved on....

Leaving Porthmadog I paddled past the breathtaking but mist-shrouded mountains of Snowdonia, took Bardsey Sound at the slack - a place with a fearsome reputation, but calm on the day I was there, thankfully - and headed north towards Menai. Arriving in the strait just too late to go all the way through (Menai has some of the most complex and seemingly contradictory tides on the UK coast), I pulled up on the slip at the Plas Menai watersports centre. As I pulled in a sailing dinghy passed and we exchanged yells in the wind. "Going round the island?" "Yes, the island of Britain!" "WHAT?" (hand cupped to ear) "YES!" (for simplicity) He gave me a broad grin and a thumbs up. "AH! I'VE DONE IT A

COUPLE OF TIMES MYSELF!"

Richard Atkinson

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Hello all,

Firstly my apologies for the long delay since sending out any update! I finally pulled the boat ashore for the last time on September 2nd in Spey Bay, Moray Firth, completing four months and 2,000 miles of paddling! Since then I've packed up and moved to Spain and started an MBA, so it's been just a little busy. My apologies if it's rather long.. I promise there won't be any more!

So, to pick up where the salty tale left off, in North Wales. By the time Banana Boat - for so my ocean steed is named - (yellow, see?) and I pulled in at the Plas Menai sailing centre she was limping from several impact holes in the bow, major stress cracks parting the central bulkhead from the hull, and a hole torn clean through the stern from dragging the laden kayak over sand. Cape Wrath in such a sad state looked a remote prospect, so we pulled the sorry wreck into the workshop, and worked late into the evening, grinding off the tattered remains of the keel and laying up a shiny new base to the hull. Boat thus patched, we repaired to the bar. The following morning I launched with the reassurance of a watertight hull beneath me once again!

Such are the oddities of the tidal flows around Wales, that the sea is at times several feet higher at one end of the Menai Strait than the other. So the sea surged through this narrow passage like a river, spiriting me effortlessly to Bangor wearing the sort of vacant, inane grin that comes with a free tide. I camped the night on a storm beach at Great Orm, then it was off to Rhyl where the WDCS had arranged a press interview at an aquarium. With a force 6 behind me I surfed in a wild sea the 20 odd miles to beach in front of a camera man for by-now routine snaps, a fascinating tour of the aquarium and and an education about all the stuff whizzing about unsuspected inches below my

backside (best not thought about too much, on the whole). By the time I'd figured out just how much hungry stuff there was underneath me, the tide was miles out, so we perched the boat on the back of the lifeguard's quad bike and motored down to the sea! After a welcome day's pause on the Wirral with friends, it was off to Blackpool, a 25 mile crossing forced by the need to clear vast sandbanks that run miles out into this grey and windblown sea, an eight hour stint steadily pulling Blackpool tower out of the haze.

Having by good fortune a string of friends along the coast here, I slept in a real bed for several nights as I pushed north, crossing Morecambe bay and heading up past the Cumbrian coast - quite a luxury! A broken rudder cable forced a day off the water north of Walney Island, and then it was across the Solway to Kircudbright - back in Scottish waters once more! After a good night's sleep on the beach at St Ninian's Cave, and a quiet pause at the shrines hidden within, I set out across Luce Bay, headed for the infamous Mull of Galloway. A strong tide carried me to the Mull in an easy three hours, but as I entered the tide race off the point, I was alarmed to find myself being pushed rapidly south west, out into the open space of the Irish sea. Turning the bow now north, I punched a tide running at some three to four knots, in a bucking and breaking sea. As if in sympathy with the waves, the wind now kicked up and howled out of the north too. Feeling my strength ebbing alarmingly, I knew this was becoming serious - unless I could somehow fight against the wind and tide I would soon become exhausted and be forced to put out a mayday call. I struggled close to exhaustion for a further two hours before the coast began to inch closer, and finally I beached shattered in a small cove.

Past the Mull of Galloway the coast leads into the Sound of Arran, and I crossed to the Isle of Arran (where, alas, hebridean midges were

already salivating at the prospect of my arrival), and headed for the Crinan Canal. This shipping canal leads from Loch Gilphead to Crinan, and with time short I opted for it, piloting my sea-weary craft incongruously between trees and fields. Kayaks being forbidden in the locks, I tied Banana Boat alongside the yacht 'Anncara' and sipped a civilised gin and tonic as we motored along! Reaching Crinan all too soon, it was time to don wet clothes again, and despite the oh-so-tempting offers of a stay on Anncara, it was time to go. I knew the tide to be slack at the Dorus Mor race - If I went now I could be sure of making it through. If later... who knows. If I'd learned one thing on the voyage, it was to go when the sea let you, and the fiercest race on the scottish coast wasn't the place to test this! So, sneaking past the Dorus Mor while it wasn't looking (and leaving the still nastier Corryvreckan whirlpool a healthy mile or so off), I paddled into the idyllic Sound of Shuna. Truly, this string of islands is so stunningly beautiful, and a solo kayak such perfect way of weaving among them, it takes on an almost magic quality, a brief foray into another world.

As I was pondering this, I was hailed from a hundred year old sailing ship anchored in the channel! "Do you want a whisky?" "Have you eaten yet?" Well, these are offers not to be refused! Tying up alongside, I clambered aboard the ketch 'Leader', a meal was pressed into one hand and whisky in the other! A delightful hour or so later, it was once more time to desert good hospitality, and catch the tail of the ebb north in the fading light - missing it would mean a day's delay. I climbed back down into my canoe, waved goodbye, and pushed off into the dusk towards Oban. Passing Kerrera Island in the dark, its gloomy bulk loomed sinister against the black sky, and I picked my way into Oban by the blinking red and green buoys. Ferries, full of blazing lights and deep-rumbling engines, thundered through the eerie night and I sprinted between them to find a

quiet corner of beach to camp on.

After a day's frantic shopping for re-supplies in Oban, I pushed on to Tobermory and rounded the most westerly point of Britain at Ardnamurchan Point. Here I stopped the night with three girls doing a whale watch survey from the lighthouse (I've always been interested in whales, me). We passed a lovely evening in the old lighthouse keeper's cottage before, as ever on my journey, it was time to say goodbye and take to the water once more. This was known whale territory and sure enough - soon I heard the distinctive blow of a whale behind me! Spinning around, I had cetacean company as a Minke whale, smallest of the Baleen whales but still the size of a small bus, glided past some fifty feet away, grey fin rolling gently through the waves. Given that my journey was all in aid of the Whale and Dolphin Conservation Society, this seemed only right and fair but my grey companion, unaware of his benefactor, slid by without pausing to chat.

Picking my way through the sunken valleys that cast Skye adrift from mainland Scotland, I headed on to Rubha Reidh where, simply because it looked so appealing, I camped on a small flat-topped rock out at sea! The next day I docked at Ullapool for re-supplies, and it was time to size up Cape Wrath. Exposed to the full force of the atlantic swells and winds that blow uninterrupted from Greenland and the arctic, the Admiralty pilot advises that 'huge seas can build up extremely rapidly', before making pessimistic notes on passage here in small craft. Cape Wrath had echoed around in my imagination ever since I had first dreamed of the voyage, its wild and powerful reputation unnerving me - this was the final, biggest test of the whole expedition, a genuine challenge in the sense that I would not know until I got there exactly what I would meet. Fear unresolved, I stuffed the charts back inside the canoe and re-focussed my mind on the day at hand. Accompanied by my ever-loyal squadron of fulmars

skimming the waves and wheeling around me, I pushed past Point of Stoer, punching through a powerful tide race pouring south off the point. (I'd nearly come to grief in a similar race in Wales, where waves surging up the tide race had smashed the kayak against the cliff. I had been lucky to escape disaster.)

Checking and re-checking my tides and the weather, I set off early for the biggest day of the voyage; a fast tide under me felt like an enormous conveyor as I headed for the northwestern tip of Britain, boat rising and falling on a rolling ocean swell. The wind eased just long enough for me to clear the Cape, but rounding the corner the north coast became an intimidating fight in big overfalls and fierce winds. Two thousand miles solo at sea had changed my perspective however; this was a powerful sea, but I had learned how to ride it now - even turn it to my advantage and enjoy the wildness of it. As I pulled the boat ashore that night, I knew I'd taken on, solo, the toughest stretch of coast in Britain - and I'd won! It was a fine feeling as I curled up in my sleeping bag and nodded off, a big grin still on my face.

The northern edge of Scotland seems a succession of empty, windswept, perfect beaches, separated by magical clifflines riven with geos which cut deep into the land - often running back a hundred meters or more before opening upwards via sheer walls to the sky, or tunneling back out to sea by another route. I explored my way along, carefully timing my passage to avoid the infamous tide races of the Pentland Firth. Rounding Duncansy Head, I finally turned the compass south at last! However, now the winds were blowing from the bow again, and progress was blunted as a force 7 halted me in Sinclairs' Bay. In mixed conditions I picked my way southwards to Helmsdale. Now a day short of my planned arrival, I looked at a borderline weather forecast and pondered - take on the open crossing, or wait? Knowing I was picking a hard

fight, but sure of my fitness and strength by now, I headed into the open Moray Firth. At 25 miles, it would take around eight hours. The first two hours were light; but as mid-day arrived the wind stepped up to F5-6 and soon was I fighting a nasty southwester - as if it was the weather's last throw! The sea built up quickly and soon the waves were breaking heavily across the boat. Some 12 miles from any land, losing body heat rapidly in the cold, it was a struggle to hold concentration in genuinely frightening conditions, knowing that the only way out was through, a further five to six hours in mentally exhausting conditions. Waves smashed down on me, at one point tearing the maps from the deck and washing them into the sea. Probably I've never been in such demanding conditions for so long; without the fitness and the mental stamina built in the preceding four months I doubt I could have completed the crossing. I yearned to somehow escape, to abdicate responsibility; but I'd got me in, only I could get me

out. After the toughest day of the voyage, I pulled in Lossiemouth with relief and was fed hot coffee by a friendly pair of geordies ("From Helmsdale? Good God, we was nervous out there in 36 foot yacht!"). Unable to unwind from the tension of the day's battle, I slept badly but it didn't matter: tomorrow was the final day, a short hop along the coast to Spey Bay, friends and family and the journey's end!

On the final morning, I pulled on wet clothing for the last time, turned Banana Boat east and wondered. How would it be to forsake my simple existence of sea and solitude, to exchange it for the company of the madding crowd? My wonderings were punctured as an inflatable zoomed up to me loaded with waving friends, the beach was full of smiling faces I'd missed over the months, cameras clicked and champagne was uncorked; it was the end of a fantastic adventure, a crazy dream I'd followed all the way to see where it might lead.

I stepped ashore for the last time, accepted a glass of champagne and felt slightly dazed by it all!

With the voyage completed, it's time say a big thank you to all the people who helped make it possible - everyone at the WDCS for their enthusiasm and support; Avril for being there 24/7 as shore contact; Arthur and Eileen for their encouragement and invaluable help; my mother for hiding the extent of her misgivings; the coastguard for their professional support and encouragement throughout my journey, and all the friends I've met and made along the way, who helped out so generously and who made the journey so much more than a solo passage. And for now, Banana Boat now hangs in the garage, filled only with memories and - who knows - future odysseys yet undreamed?

Richard Atkinson

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## THE 8 COMMANDMENTS OF SURFING

WORDS BY SIMON HAMMOND ILLUSTRATIONS BY GRAHAM PEARCE



THE CREATOR OF THIS POSTER PERMIT FURTHER REPRODUCTION FOR EDUCATIONAL PURPOSES ONLY AND ANY OTHER REPRODUCTION IS STRICTLY PROHIBITED

Surf safety poster

Shoreline Outdoor Pursuits' Simon Hammond is currently working on a surf safety poster in the form of a comic strip on an A4 sheet. Comments Simon: "As the SW paddlesport development officer and SW surf rep I have got involved in this due to the increasing danger which some paddlers are putting themselves and others under when they come to the coast for their summer surf trips.

"The poster is almost complete and our intention will be to make it available to as many visiting

surfers and surf canoeists as possible, in order to provide them with some initial education. It will

be free to copy and distribute."

For copies contact: Simon Hammond, Shoreline Outdoor Pursuits, Ila Crooklets Beach, Bude, Cornwall

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# Global warming by 2100

The global temperature is projected to increase by between 1.4C and 5.8C

Malaria could return to much of southern England

Sea level is projected to rise by between 9 and 88 cm

As European temperatures rise malarial mosquitoes will travel north

MALARIA ZONE

Drought and floods could increase and temperatures may be too hot to grow crops

Source: UN Inter-governmental Panel on Climate Change 2001

## Trip Assessment

From Joe Dicks, Newfoundland

Assessment of any trip is a difficult exercise for both the novice and the expert paddler. For the novice it is the lack of awareness that tends to hamper assessment and contribute to the general malaise while paddling. At the opposite end of the spectrum is the expert, spending hours reviewing charts, tides tables and weather forecasts trying to grasp a glimpse into that allusive crystal ball. At best it's about limiting risk not eliminating risk.

A number of factors come into play to make trip assessment effective.

### A. Coastline

Coastline is a major factor to consider when planning a paddle. Is it a friendly coast with plenty of pull out opportunity. Are there headlands, channels and breakers or is it sheltered coastline perhaps in a Bay or Harbor.

### B. Sea State

The Sea State can range from glassy calm to very rough. The sea can be regular in its rhythm or very irregular. How does the sea interact with the coastal topography. Does it wash over rocks and rise up as it connects with the coast.

### C. Wind

Wind is an important consideration for any Trip assessment. Strong breezes blowing on shore

can escalate the sea state or Gusting winds off shore make paddling challenging at times and can make it difficult to reach shore when problems arise. Strong winds are of concern whether they manifest themselves on the sea or not it may be a simple case of a shift in wind direction causing your area to change instantly.

**D. Equipment**

**The Kayak**

Not all kayaks are made equal. Some are recreational by design and fitting, their purpose is light duty on sheltered waters. Some kayaks are designed to range from sheltered to moderate sea journeys while still others are designed for open sea challenges. Most manufacturers readily accept the limitations of a particular kayak. The distinctions may be lost on the

novice kayaker however this can potentially cause problems.

**Accessories**

As trips get more challenging, gear has to keep up with the risk. If the water is cold appropriate clothing must be worn. The further you go the more communications becomes an issue. Other considerations such as emergency flares, tow lines, 1st Aid equipment all become a consideration.

**E. Paddling Skills**

The paddling skills of the individual(s) can make a big difference in assessing a trip. At what level would you rank your skills. In practical terms is maneuvering the

I wrote to Joe with my comments re: his Trip Assessment Paper

*Hi Joe, have accessed your Trip Assessment document. Makes every sense but of course is only an outline in that to judge the wind, weather and sea takes quite some experience in that it can be subjective and very relevant to one's own personal experience. Work has been done to provide tables to aid assessments and comparisons on such as sea state. Determining whether the prevailing conditions and available gear make a trip possible or 'dodgy' can be difficult. One of the big factors is the skill and ability of other paddlers you set off with. I have taken the liberty of forwarding your paper to Udo Beier as I know he would be interested to make some comments. Udo might well contact you directly. I will be sending a separate email re: my visit. Cheers, John*

kayak in a choppy sea possible and are rescues possible if conditions turn out to be less than ideal.

**F. Seamanship**

Does the knowledge base of the individual or group include an understanding of tides, currents, navigation, charts and interpretation of marine weather.

**Example:**

Josh and Mary have decided to Sea Kayak for the day. They look out at an expansive beach with a few small islands not more than 1 Kilometer off shore. On a scale of 1 to 10 they rate all factors.

Josh and Mary choose to paddle alone the expansive beach and stay 100 meters from shore. The day goes

Coastline	Friendly	1	2	3	4	5	Harsh
Sea State	Calm	1	2	3	4	5	Rough
Wind	Light	1	2	3	4	5	Gale Force
Equipment	Recreational	1	2	3	4	5	Expedition
Paddling Skill	Novice	1	2	3	4	5	Expert
Seamanship	Aware	1	2	3	4	5	Unaware

smoothly without incident.

Given all these factors, it is important to remember that some paddles require only a well fitted PFD a simple kayak and paddle as well as the desire to have fun. Some of the best paddles take place in sheltered coves with little wind and little if any planning.

## Consider Risk Exercise

(An extract from 'Sport & Recreation', the official magazine of the CCPR.) At a meeting of the Sports Council held in Edinburgh on 15th July 1970, Mr Eldon Griffiths, Minister with Special responsibility for Sport, said:-

"Leisure, it is true, is becoming more abundant but it is still too precious and, in most cases, too hard earned to be frittered away. And physical fitness for those who have it, or who can if they will, achieve it - is surely too valuable an asset to be neglected."

Universal, systemised, physical fitness programmes have been stressed repeatedly on both local and national levels; leading medical authorities to agree that exercise is vital to physical and mental health. The question arises as to the relative merits of the various types of exercise and which of these will so interest the participants that they will pursue them over long periods of time.

The thesis presented in this article is that man in his primitive state took risks daily in his hunt for food and in protecting himself and his family against his enemies. There was nothing foolhardy about the risks he took; they were well calculated and contributed to the moulding of our evolution. Civilisation has eliminated many risks but the need for action and risk remains in man's genes, so to speak. To satisfy this urge, I recommend **Risk Exercise** (RE) as the modern counterpart of what our ancestors were confronted with in their everyday lives. RE is necessary for our daily well-being and should replace not only the violent acts of our ancestors, but the violent acts of today.

To test this hypothesis, a comparative study was conducted by means of personal interviews and questionnaires of several hundred individuals who participated in RE and non-RE sports. Among 35 RE sports reviewed were boating and sailing, mountain climbing, outdoor living, hunting, skiing, boxing, wrestling, rugby, soccer, flying and gliding, judo, motor-cycling, horseback riding, polo, etc. The non-RE sports were golf, tennis, jogging, callisthenics, etc. (I looked it up and it means, 'Body-building for strength and grace.' Ed.)

### A High Level of Elation

The degree of physical invigoration, and the mental feeling of well-being, at times bordering on euphoria, was in 97% of the cases greater for RE than for non-

RE sports. This feeling of elation, well-being and euphoria is what addicts one to RE sport. The height of exhilaration easily approached that described for 'acid' (LSD), but the overall effects were constructive rather than destructive.

Non-RE sports can be highly invigorating physically but as a rule are not accompanied by the high level of elation and euphoria that is experienced following RE sports. Furthermore, it is frequently reported that after a hard game of tennis or golf, for example, one may feel good but dog-tired and ready to crawl into bed - whereas after skiing one may be tired but elated and ready to 'go out on the town'. These are some of the reasons why one becomes 'addicted' to RE sports but one returns to some non-RE sport in the main because it is good for one. These facts are not presented to undermine participation in non-RE sports but rather to stress that RE and non-RE sports should complement each other depending on availability.

The degree of the RE effect is directly related to the proficiency in a sport. In fact, in novices the effect may be the reverse - a dejected and depressed feeling. The feeling of well-being bordering on euphoria does not usually occur during the actual participation in a given RE sport but shortly afterwards (up to one hour) or long after (up to 24 hours) and may last for days.

### The Case For RE

Our genes have been coded through evolution to receive a great deal of stimuli (chemical or otherwise). Over the years the stimuli remitting from RE have become less and less intense so that it is postulated that a deficiency has been built up which 'frustrates' our genes. Deficiencies of certain hormones or related substances in animals and man are known to produce states of irritability, hyper-activity, and violent reactions. In this regard it is relevant that in questioning some 216 students from eight major universities of the USA, where demonstrations and riots had taken place, up to 80% experienced elation to euphoria, during or shortly after the demonstrations. Some of these reactions were not too dissimilar to those described by skiers or mountain climbers. Furthermore, these same students rarely participated in sports.

RE sports are proposed not only to supply our basic physiological needs but to give exquisite joy, vigour and to maintain our sense of humour and perspective.'

Reprinted from *Bay Currents*, a publication of BASK-  
The San Francisco Bay Area Sea Kayakers

## AVOIDING COLLISIONS

BY John Lull

Picture this: You're paddling across the shipping lane in SF Bay. Off to your left, you spot a large ship about a mile or two away heading across your course. To use the bow angle method, quickly point your paddle at the ship and notice the angle between the paddle shaft and your bow. Then continue paddling forward, maintaining course and speed. After about 1 minute (or less), point the paddle at the ship and again check the angle. Note whether the angle has increased, decreased, or remained the same.

Let's say the angle has decreased (the paddle is pointing more toward the bow than on the previous check). As you maintain course and speed, continue to check the angle to verify that it is indeed decreasing. As long as the angle continues to decrease, the ship will pass in front of you. If the bow angle has been increasing (the paddle is pointing more and more off the side), the ship will pass behind you.

Here's the important one: If the angle remains the same each time you check (i.e. the angle between paddle shaft and bow stays at 45 degrees), you are on a collision course with the ship. You must alter course and/or speed, until you see a change in the bow angle and determine that the ship will pass by either in front of you or behind you.

This simple method really works well, but it requires two things: that you maintain course and speed and keep checking until the other vessel is clearly going to pass harmlessly by. If you keep checking, you will catch any course changes by the other vessel before it is too late.

Editors note: For some people, using the clock method of measuring angles works well. Assume the bow of your kayak is 12:00 O'clock and the stem is 6:00 O'clock. Directly off to your right side would be 3:00 O'clock and perpendicular to your left side would be 9:00. You can estimate where 1:00 or 1:30 O'clock, for example, might be quite easily.

*John Lull is a Tsunami Ranger and an American Canoe Association Instructor Trainer Educator.*

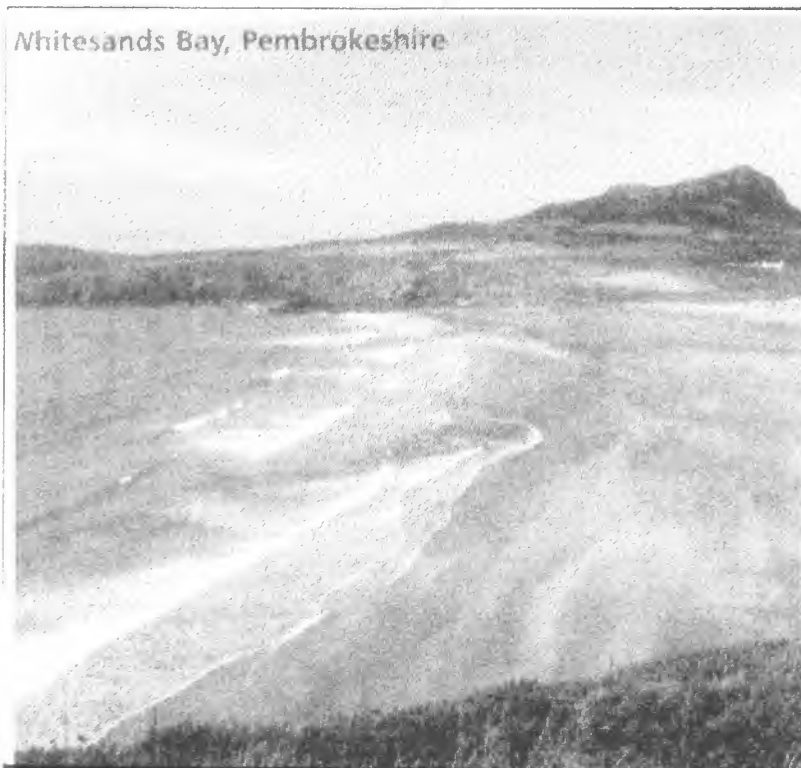
## “PATHOGEN” IS THE NEW POLLUTION

BY KATE HUTCHINSON  
MCS Coastal Pollution Officer

mals, particularly mammals, are affected -though no studies have

been undertaken in the UK. There have been 14 different

People think of 'pathogen pollution' as something that only affects human health when they swim, surf, or dive in the sea, and that fish and marine mammals are unaffected by those viral and bacterial agents which cause disease in humans. But new techniques in pathogen typing are now enabling studies to determine the origin and epidemiology of particular pathogens which prove that marine ani-



Whitesands Bay, Pembrokeshire

sewage-related bacteria recorded in cetaceans and pinnipeds, 11 of which were found to have caused infection in the animals. More research is needed into specific pathogens that can cause diseases in marine wildlife, both in the UK and internationally. Recent research has identified a pathogen from cat faeces, which is affecting populations of the endan-

gered sea otter in California. The pathogen gets into the sewerage system, and thereby the sea, via flushable 'kitty litter'. Researchers believe that high mortality rates in the otters may be due to massive exposure to the disease-causing agent, the presence of which is entirely unnecessary.

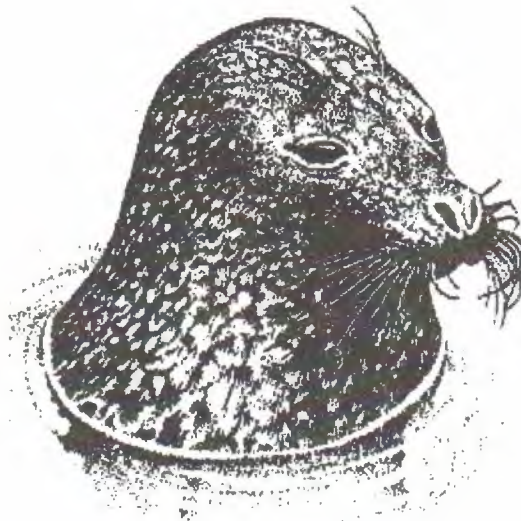
A study in Florida has shown that layers of mucus on the heads of coral polyps accumulate human derived bacteria and viruses, and can be reservoirs for disease. The results are significant because faecal bacteria have previously been shown to cause at least one disease that devastates corals in Florida and the Caribbean. The sewage can also provide nutrients to algae that attack coral. People who visit, or eat fish caught near infected reefs, can also be exposed to the pathogens that survive on the coral.

In just two years, the MCS Good Beach Guide has increased its number of recommended beaches from 215 in 2000, to 341 this year. The number failing the minimum EC standard has also decreased from 80 to 61. Will this trend continue

in the next three years?

The answer is not as simple as it once seemed. Targets under the Urban Waste Water Treatment Directive have been, or are slowly being, met by the water companies -albeit with continued pressure from Government and regulatory agencies. By 2005 all coastal discharges, except for those with 'population equivalents' of less than 2,000, will have to be treated to a minimum of secondary level,

a figure which actually goes beyond the Directive's requirements for England and Wales. In March this year, DEFRA announced 180 bathing waters as 'sensitive' to pathogen pollution, and any discharges affecting these waters are to be treated to tertiary level. In Scotland, coastal discharges will be treated to secondary level only if the discharges have population equivalents of greater than 10,000. For many smaller coastal towns and villages around Scotland, sewage is discharged via septic tanks and private discharges, causing localised pollution and affecting beaches. New technologies for treating sewage to a standard equivalent to secondary have been developed for small sewerage plants -MCS wants these to be



explored for areas with small populations, as people living and visiting rural areas deserve protection too.

A large number of beaches still fail to reach the EC mandatory water quality standard because of weather conditions, particularly rainfall. After heavy rainstorms (the occurrence of which is predicted to con-

tinue increasing), intermittent storm and combined sewer overflows (CSOs) operate, allowing untreated sewage to enter the sea and watercourses. MCS has been calling for a review of the consents for CSOs (the frequency at which their use is allowed) for a number of years, and for the discharges out of season to be subject to consents.

Diffuse pollution from agricultural and urban runoff also contributes to bathing water failures. MCS has been involved with DEFRA's Diffuse Pollution From Agriculture programme, ensuring that the effects on the marine environment are highlighted and that DEFRA incorporates this strategy with other marine and environment strategies. It also raises awareness of the impacts on the marine environment to farmers, who may not see them first-hand.

To tackle such a wide variety of sources of pathogen pollution, it is essential that a partnership approach is taken and that water companies, local authorities, regulatory agencies, farming communities and NGOs, like MCS, are all involved. It is important that MCS continues to raise awareness of the problems associated with pathogen pollution through the publication of the Good Beach Guide, to ensure that, whilst there are still beaches that fail the minimum standards, people are aware of where these beaches are.

# new age photography

*Gary Luhm*

2001 was a pivotal year for on-the-water digital cameras (digicams). Little cameras were cautiously popping out of dry bags, and paddlers rafted up to view the results on tiny liquid crystal display (LCD) screens on the backs of the cameras. Digital images produced by these hi-tech wonders could be e-mailed to friends and family or even sent from expeditions via satellite phone to be loaded daily onto Web sites. Digital does away with film and developing expenses—just transfer the files to your computer, and you're ready to go again.

With in-camera editing, movie modes, "stitched" panoramas, reasonable prices, and new compact waterproof cases—digital has come to kayaking.

For 2002, prices are dropping, and the number of features are rising.

The cost of memory, a big issue just last year, has dropped through the floor. 128-MB memory cards sell for under £40 and have the capacity to store a dozen to hundreds of images, depending on image dimensions.

Waterproof cases for select digital cameras from Canon, Sony and Olympus first hit the market in 2000. Underwater housings for digicams have been available before, but they've been much bulkier and more expensive than the new compact cases. They hold the cameras securely, are lightweight, and take up only a little more space than a 35mm point-and-shoot. This year's models are

depth-rated to 100 ft or more, great for snorkeling, diving or kayaking. External, O-ring sealed buttons control most or all of the camera functions.

## DIGITAL PRIMER

When you are shopping for digital cameras you need to understand how they work in order to choose the one that best suits your needs. The following is a list of features that you need to consider.

## .MEGAPIXELS AND RESOLUTION:

The light-sensitive sensors that make up the CCD (charge-coupled device) in the camera are referred to as pixels. More pixels means higher resolution for bigger and sharper images. Digicams usually list the dimensions of the images they record in pixels: the Canon 530's 2048x1536 image has 3,145,728 or roughly 3.2 Megapixels. If all you want is to send e-mail pictures, 640x480 is fine. Good 8x10 prints, require a 3 or 4 Megapixel digicam.

## .FOCAL LENGTHS

of digital cameras differ from film. The CCD area is smaller than 35mm film, so a 7-21mm zoom may be equivalent to 35-105mm in 35mm. Digicams usually list 35mm equivalents.

## OPTICAL ZOOMS

use moving lens elements. 2x or 3x optical zooms are typical. I like 3x, in the 35-105 range, for nice wide-angle to short-telephoto coverage.

## DIGITAL ZOOM

extends the range of optical zoom only by cropping and consequently reduces resolution. It's useful only

if you want low-resolution images for things like e-mail. Optical Zoom is the real deal.

## LCD AND VIEWFINDERS:

LCD screens consume valuable battery power and are tough to see in bright light. You'll use the optical viewfinder to save power and frame pictures in bright light. That said, try to get a bright LCD. You'll use it on the water to check framing and exposure. A waterproof case may partially block the viewfinder especially at the wide angle end of the zoom.

## .BATTERIES:

Many digicams require proprietary lithium-ion batteries. They are compact and have excellent storage capacity—twice that of NiCd's—but with the LCD screen on and some in-camera editing, a few hours is all you'll get before the battery runs down. This is fine for day trips, and possibly overnights, but for extended paddles you'll want a few spares (at about \$50 apiece). Recharge from an AC outlet takes 1 to 2 hours.

Some digicams take AA batteries. Digicams eat power too quickly for regular use of alkaline AAs, so it's best to use rechargeables. NIMH (Nickel-Metal Halide) have 40% more capacity than NiCad's (Nickel-Cadmium) and can be recharged without being fully discharged. And you'll be charging a lot. A NIMH charger and a dozen batteries will handle weekend-long excursions. For expeditions, solar chargers available commercially for NIMH batteries would tip the scales toward AA's.

**IMAGE STORAGE FORMAT:**

JPEG, a compressed format designed for photographic images, is the most common. Compressed images take less storage space, but at the expense of image quality. If you want top-quality images, digicams with TIFF compression will retain the highest image quality.

**MEMORY:**

The removable memory cards differ: Canon uses CompactFlash; Olympus uses SmartMedia; Sony has a proprietary Memory Stick. You can process your images with your computer and printer or take your memory card to a digital mini-lab or kiosk to make low-cost prints.

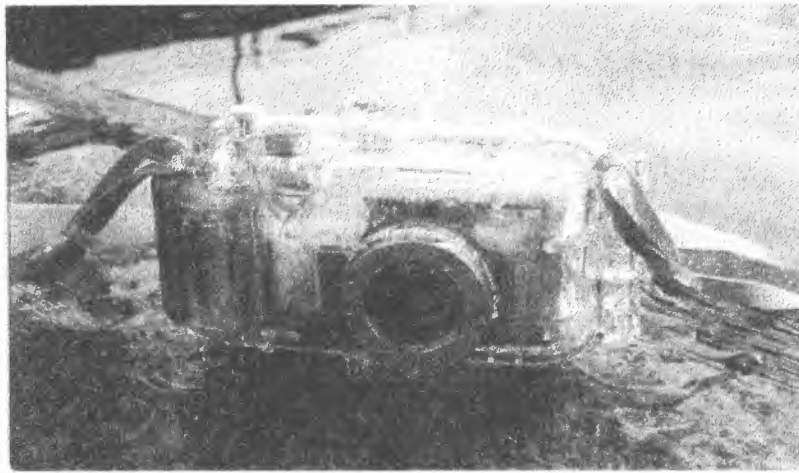
**VARIABLE ISO:**

The light sensitivity of the CCD is listed in equivalencies of ISO ratings for film and can be changed to suit the image. You'll have the flexibility to capture action in low light at ISO 400, and, moments later, a tripod-mounted, color-saturated sunset at ISO 50.

**USB (UNIVERSAL SERIAL BUS) PORT:**

Most new digicams come with a

cable to connect to the computer USB port for downloading images. If your computer was manufactured in 1998 or later, it almost surely has USB.

**VIDEO PORT:**

Some cameras have a video port so you can view the pictures on your TV or transfer images to a video tape.

**WEB PUBLICATION:**

If you want images for e-mail or Web use, any low-end digicam will surpass your need. E-mail and Web images are best kept small.

A 480x640 pixel, low-quality JPEG is usually as big, as you'll need and will download quickly.

**PRINT PUBLICATION:**

Most magazines, including Ocean Kayaker, print photographs at 300

dpi (dots per inch). This means the top-quality 2048x1536 image from the 3.2 Megapixel Canon S30 will print no larger than 5" x 7", or half a page. Newspapers print at 150 dpi, so a 3.2 pixel image will work for 10" x 14". For home printing,

200 dpi generally makes very satisfactory prints.

**WHITE BALANCE:**

Many digicams allow you to adjust color balance, a great feature when indoors. For kayakers, it's a plus in the pool, or while snorkeling, or while ashore in shade.

**WATERPROOF CASE:**

Finally, the reason to consider on-the-water digital in the first place: the availability of compact waterproof housings that allow camera operation by way of external buttons. This year's cases are rated for submersion to 100 feet or more, and made from ABS plastic that should take some abuse. The cases aren't pocket-sized, as the cameras are, but the extra bulk makes the camera easier to handle. The extension of the case around the zoom lens is likely to partly block the viewfinder. In addition, some of the camera functions may not be accessible via the buttons.

## Sea Sickness Remedies and Ideas

I gather that seasickness happens when the body, inner ear, and eyes all send different signals to the brain, resulting in confusion and queasiness. It is attributed to a disturbance in the balance system of the inner ear. Your sensory perceptions get out of synch as the balance system attempts to compensate for the unfamiliar motion of the boat. Apparently sea

sickness goes after 2-3 days at sea, after which you have your sea legs.

Meantime:-

1. Eat lightly in the morning, avoid fatty or rich foods, and alcohol.
2. Get enough rest, tiredness contributes to onset of symptoms.
3. Keep your eyes on the land or horizon, don't

focus on nearby objects. Reading maps, gps's, or staring at a nearby object will help it start. Keep your eyes working flat out interpreting the motion of the boat and the waves.

4. Make sure the people around you are sympathetic. Support any sickies, reassure them, on the next trip it could be you!
5. Take deep breaths and sip plenty of water.
6. Preventative medication can be taken before getting on the water. Some of these have side effects to consider. Some cause drowsiness and instructions should be read carefully. I have tried ginger, and didn't get seasick, and Kwell, again with no seasickness, but I can't say if it was cause and effect. Medications include:
  - a. Antihistamines (Dramamine)
  - b. Scopolamine / Hyoscine (Kwell)
  - c. Travacalm, one variety of which has caffeine to offset the possibility of drowsiness.
7. Wrist bands / acupressure.
8. Assisting a seasick paddler:
  - a. Raft up and hold the sickie upright;

- b. Keep the victim's comfortable, put on more clothing if necessary. Being towed can get cold.
  - c. With four people, two can tow and one raft up with the sickie.
  - d. Two people might have to resort to a short line tow, bow of the victim's boat tied near the cockpit of the rescuer, to prevent capsize.
  - e. Get the victim to flat water or shore as soon as possible.
  - f. A lone paddler seriously seasick could be in big trouble. Maybe a combination of one or two paddlefloats for support and a sea anchor could be used. If you're really seasick, you feel like you wouldn't mind a quick end anyway!
  9. Paddle for a few days in swell conditions before any long crossings, if possible.
  10. Don't scoff too much lunch, unless you'd like to see it again. !
  11. And always the best, sit under a tree until the seasickness passes!
- Peter Treby** (Taken from the Victorian Seakayak Club Newsletter)

## A CHEAP AND EFFECTIVE LIGHTING SYSTEM FOR NIGHT PADDLING

By **Bill Robinson**

I have been paddling for many years and have tried different systems, with varying success. However this year I have devised a new arrangement, which is cheap, easy to put together and very effective. I now paddle with about 6 other paddlers at night and we seem to be able to see where each of us are, as it has been said that we look like a group of fire engines crossing the water with our bright red beacons

### Head Lamp

You can now purchase an excellent Chinese waterproof diving headlamp for \$15--\$16. (£10) It is light, totally waterproof and gives up to 20 hours from two alkaline AA batteries. It is very comfortable

to wear on your head and the switch is extremely easy to operate with one hand.

It is also a great torch to have around the camp and allows you cook or eat without having to hold a torch.

### Rear Light

An efficient rear light has been a problem in the past, but our new invention seems to have solved all that. You can get hold of flashing red bicycle taillights for \$3 each. They have 4 LEDs, which run off 2 alkaline AA batteries and can be set to either flash or emit a steady red light

We remove the screw and bracket from the back of the lights and then place them inside a plastic jar, which in its

1/2 Gm of Kraft Peanut Butter. Place three lights with their switches uppermost in a triangular pattern in the jar and wedge them in place with a piece of old towel or a Chux wipe. This also acts to absorb any small amount of moisture that can enter

Take a piece of shock cord and tie it finny in the groove below the lid, and then take another two pieces of shock cord and two olive cleats and slip them under the cord in the groove--See diagram

Turn on the lights-either flash or steady, screw the lid on finny and attach the light to your rear deck with the olive cleats and shock cord--takes about 30 seconds. Total cost for everything---about \$15

previous life had contained 375

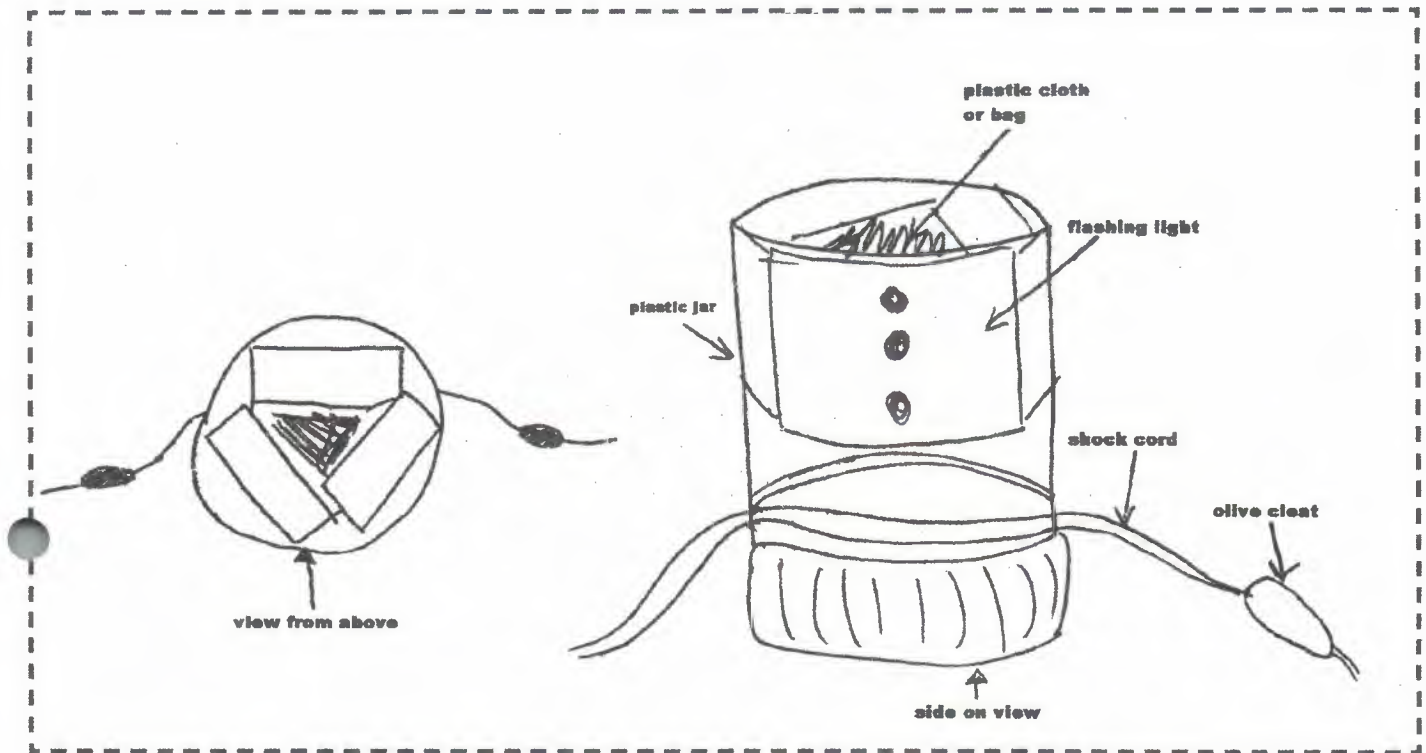


**Reflective Strips**

We thoroughly recommend the Solas Reflective Strips, which are available from Marine Chandlers

at \$10 per metre. A metre will provide enough tape for 3 strips on each side of the kayak as well as the paddle handles. It is amaz-

ing how a boat can light up with these strips at considerable distances even with low powered torches



ARE ALWAYS LOOKING FOR COMPETENT LEADERS, PARTICULARLY FOR SEA KAYAKING EXPEDITIONS.

TO THIS END RALEIGH ARE LAYING ON AN INTRODUCTORY WEEKEND AT THE ANGLESEY SEA & SURF CENTRE, N. WALES THIS COMING APRIL 4/5/6th.

A MIXTURE OF MINI TRIPS ON LOCAL WATERS AND PRESENTATIONS ABOUT RALEIGH ARE ON OFFER.



FOR FURTHER INFORMATION AND/OR TO REGISTER A PLACE CONTACT RALEIGH HOUSE, 27, PARSONS GREEN LANE, LONDON, SW6 4HL OR E-MAIL [staff@raleigh.org](mailto:staff@raleigh.org)

## WHERE RIVER AND SEA MEET

An estuary IS a stretch of water where a river flows into the sea. Some of our largest estuaries, such as the Thames, Humber, Mersey, Solent, Severn and Firth of Forth, provide the sheltered sites of great ports. Other estuaries are in comparison tiny, where a small river or stream enters the sea.

Most estuaries are roughly triangular in shape, with the river

For a habitat of such extremes - the dry, exposed sands at low tide and the rush of salty water at high tide - an estuary is surprisingly well populated

water flowing in at the narrow apex and the seawater at the broader base of the triangle.

Many of them owe their origin to the 'drowning' of deep, gorge-like river valleys when the sea level rose after the last Ice Age about 10,000 years ago. These drowned river valleys (rias) are common along the coasts of Devon and Cornwall and south-west Ireland. At the same time, the rise in sea-level converted sluggish streams flowing across the lowlands of East

Anglia and north-west England, for example, into wide estuaries that extend well inland.

In all estuaries there is a region where sea and river waters meet and move up and down with the tides. In some, notably the Severn, the salt water moves up after low tide in one great block or 'bore', mixing with the fresh water throughout its depth. But in most estuaries the salt water, being denser and heavier than the fresh, floods in along the bottom of the channels, while the lighter, fresh water forms a layer above it. Of course some mixing of the two kinds of water does occur. One effect of this is to make minute suspended particles of sediment clump together until they are big enough to fall. In this way the tidal mudbanks begin to grow, formed from sediment brought in by the tide from the seabed and downstream by the river.

### Changing water levels

Within the shelter of an estuary there are virtually no waves. But estuarine water is never still. The level is constantly changing with the tidal inflow of salt water and the outflow of fresh water which increases after rain. Then there is the added complication of the swift currents in the estuary. After heavy rain, these may be so powerful that they scour away the banks, transporting the mud in suspension and later depositing it at the mouth of the estuary.

Unlike the seemingly permanent nature of a wood or pond, the mudbank which is such a prominent feature of the estuary today may be swept away in a storm tomorrow and later reappear in a different form somewhere else.

In the middle and seaward reaches of an estuary, the salinity of the water will range from almost fully salt water at high tide to almost completely fresh water at low tide. The mudflats, vast expanses of mud exposed at low tide, may freeze in the winter's cold or heat up rapidly in the summer sun. Not surprisingly, few species of animals and plants are able to live under such hostile conditions. But those few species that can, thrive and often form huge populations.

### Plant life

Of the plants, very few species of seaweeds can survive in estuaries, partly because so little light can penetrate through the murky water. One exception is the bright green seaweed *Enteromorpha*, common in rock pools higher up on the open shore. In estuaries it grows over the surface of the mudflats, where its simple thin strands and tubular structures may be anything from a centimetre or two to 60cm (24in) long. *Enteromorpha* is particularly tolerant of fresh water. Brown seaweeds, particularly the wracks, grow in estuaries wherever they can attach themselves to stones, rocks, timbers and other supports.

Of the flowering plants, two of the three British species of eelgrass grow in estuaries, the third preferring the open coast. Unlike the brown seaweeds, eelgrass does not require a firm support to grow on. Instead it thrives in muddy sand, where its deep roots, creeping underground stems, and long, green strap-shaped leaves help to stabilise the mud banks.

Around the margins of a sheltered estuary or tidal gully branching off from an estuary, you find the salt-marshes. These are large

mounds of mud stabilized and covered with plants such as glasswort, cord-grass, sea-blite, sea manna grass, thrift, sea-lavender and sea aster. These salt-marshes are only completely covered by the sea at high tides. At the top of the estuary, where the water is scarcely salty, large beds of the big reed (*Phragmites australis*) may fringe the banks.

### Adaptable creatures

Just as the plants which colonise the mud of an estuary are adapted to living in this hostile environment, so too are the resident animals. The ubiquitous shrimps, worms and shellfish living on or in the mud are able to withstand a wide range of salinities. When conditions at the surface become too difficult, they simply burrow deep down into the mud or sand. Vast numbers of cockles are found in the sand or coarser mud, while it is not unusual for there to be 6000 of the bivalve Baltic tellin living in a square metre of the surface mud.

The smallest and most numerous of the estuary molluscs, *Hydrobia*, lives much of its life exposed on the surface of the mud where it feeds on microscopically small algae. Although each *Hydrobia* is only 5 or 6 millimetres long, because of their abundance (populations often exceed 30,000 to the square metre) they seem to be everywhere. In some estuaries, so does the little sandhopper *Corophium*. This crustacean hauls itself out of its burrow and feeds on any organic matter it can find on the wet surface of the mud.

Another common estuary animal is the ragworm. You can find over a thousand of these fierce-

looking creatures to a square metre of mud. Growing up to 10cm (4in) long, each inhabits a small mucus-lined burrow from which it emerges to feed when the tide comes in. Another common burrowing worm in the muddy sand is the lugworm.

**Fish**

Not surprisingly, these multitudes of invertebrate animals provide an important food supply for many fish and birds. The typical estuary fish is the flounder.

common terns on the shingle ridges; oystercatchers are also frequently around. From time to time, a pair of mute swans may build a massive nest in the upper reaches of the estuary.

One regular estuarine breeding bird is the shelduck. By early spring this attractive bird has built a nest containing up to a dozen eggs in a disused rabbit burrow or in the vegetation at the edge of the marsh. While one of the pair incubates the eggs, the

tebrates and plants. The absence of cover in the open estuary means that a predator cannot approach unobserved, and so the birds can feed safely in huge flocks.

A few species of mammals visit the estuary: rabbits and water voles may graze the marshes, and foxes go to hunt there. The rare otter and the not-so-scarce mink may seek food along the creeks and tidelines, while seals, porpoises, dolphins and killer whales occasionally rest or fish in the estuary waters.

**Grim future**

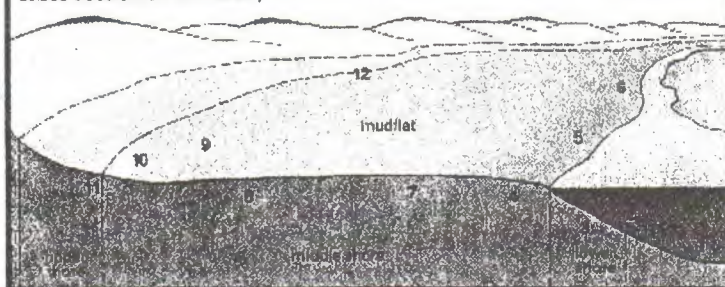
The wildlife of estuaries is, however, in danger. Developments are now planned for estuaries around the entire coast of Britain and threaten to damage the

wildlife interest severely. The Mersey, the Severn and the Taff at Cardiff have all been suggested for barrages across the river mouth that will affect the tidal flow seriously. Elsewhere plans for the generation of tidal power, marinas and port developments all threaten areas of intertidal mud.

Vast areas of estuarine marshes have been drained and reclaimed for farmland or used as rubbish tips, while there is the constant threat of pollution from farms, factories, oil refineries and power stations. Parts of a number of estuaries have been set aside as nature reserves under the watchful eye of several conservation bodies. But even though a section of an estuary is protected, it is not secure, as it can still be affected by pollution many miles away.

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**Cross section of an estuary**



An estuary at low tide showing where you might find some of its inhabitants

- 1 Common Eel    2 Flounder
- 3 Ragworm    4 Baltin Tellin
- 5 Enteromorpha seaweed
- 6 Eelgrass
- 7 Common Cockle
- 8 Lugworm
- 9 Bladder wrack
- 10 Shore crab
- 11 Hydrobia mollusc
- 12 Cord-grass

Although these flatfish spawn at sea they can survive in fresh water for a considerable time. Grey mullet swim up the estuary with the tide. Lacking teeth, these fish suck up tiny algae for food. Eels are common in estuaries too, since they stay there for a while during their migrations to and from the Atlantic spawning grounds.

In a hot, dry summer Atlantic salmon, which are also migrants, may wait in the estuary until heavy rain raises the water level sufficiently for them to make their way up the river to spawn. Other estuarine fish include the three-spined stickleback, smelt, sprat, sea trout and the gobies.

**Nesting birds**

Because of its unstable, tidal nature, few species of birds nest on an estuary. However, black-headed gulls often breed in colonies on the salt-marsh and

other keeps watch for enemies from some distance away. In July the shelduck migrates to a special moulting ground, the Heligoland Bight off north-west Germany, returning to its home estuary in late autumn.

**Feeding grounds**

Cormorants and herons fish the estuary waters throughout the year, and a few non-breeding curlews, redshanks or plovers may stay out on the estuary during the summer. But at that time most estuary birds are far away in the Arctic zones of Greenland, Scandinavia and even Siberia.

It is in winter that estuaries come into their own as feeding grounds for swans, ducks, geese and waders from northern Europe and beyond. Each estuary then becomes a magical place, orchestrated with the fluting calls of thousands of birds attracted by the large concentrations of inver-

# Estuaries of the British Isles

This map shows some of the largest and most interesting estuaries in the British Isles. You can expect to see flocks of waders and wildfowl (ducks, geese and swans) at all of them.

**1 Cromarty Firth** One of the most important wildfowl haunts in north-east Scotland

**2 Moray Firth** Arrival point for wintering birds from Iceland and Scandinavia. Outstanding for sea ducks. Hundreds of Canada geese arrive here from Yorkshire in summer to moult

**3 Ythan estuary** Small but rich estuary for wildlife. Big nesting colony of eider duck

**4 Firth of Forth** Large squids are frequently stranded here. Excellent spot to see gannets, sandwich terns, skuas, dabbling and sea ducks and waders

**5 Teesmouth** Winter roost for sanderlings and 1000s of gulls

**6 Humber estuary** Extensive mudflats. Pink-footed geese, wigeon and waders. Resting place for migrants

**7 The Wash** One of the largest estuary areas in Britain and very important for waders and wildfowl. Breeding ground for common seals. Cockle beds

**8 Breydon Water** Wide range of migrant birds

**9 Stour and Orwell estuaries** Large flocks of non-breeding mute swans in summer. Many waders, wildfowl and brent geese

**10 Crouch, Colne, Blackwater and Roach estuaries** Largest native oyster beds

**11 Foulness and Maplin Sands** Large areas of eelgrass. Famous for brent geese and waders

**12 Thames estuary** Winter roost and feeding ground for thousands of gulls and brent geese

**13 Medway and Swale estuaries** Brent geese, wigeon and other wintering wildfowl

**14 Pagham Harbour** Excellent migration area

**15 Chichester Harbour** Black-tailed godwits, brent geese, sanderlings and Slavonian grebes

**16 Langstone Harbour** Brent geese, shelduck and black-necked grebes. Many waders, including black-tailed godwits

**17 Southampton Water** Remaining mudflats at north and south good for waders and wildfowl

**18 Exe estuary** National Wildfowl Refuge. Brent geese, wigeon, shelduck and black-tailed godwits. Visited by eider ducks and avocets

**19 Tamar estuary** Extensive mudflats and salt-marsh. Visited regularly by avocets

**20 Fal estuary** Drowned river valley. Gulls, waders and wildfowl including shelduck

**21 Helford estuary** Drowned river valley. Wooded banks and cliffs. Oyster fishery

**22 Camel estuary** Wintering waders and wildfowl, including white-fronted geese

**23 Severn estuary** Famous for the Severn Bore. A tidal surge of water (the bore) moves up the estuary headed by a wave up to 1.8m (6ft) high. White-fronted geese, Bewick's swans and dunlin

**24 Barry inlet** Cockle fishery. Oystercatchers and pintail

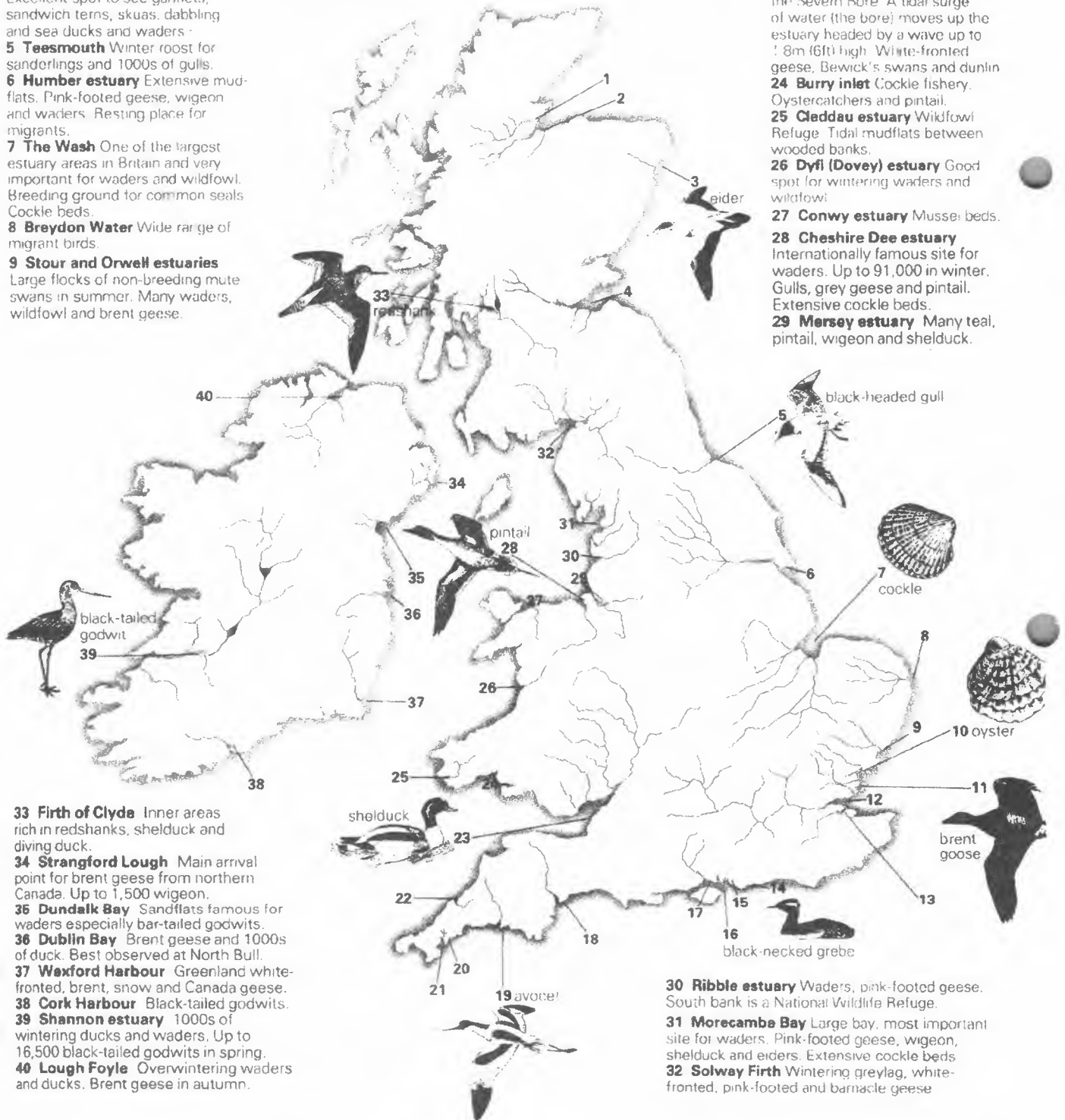
**25 Cleddau estuary** Wildfowl Refuge. Tidal mudflats between wooded banks

**26 Dyfi (Dovey) estuary** Good spot for wintering waders and wildfowl

**27 Conwy estuary** Mussel beds

**28 Cheshire Dee estuary** Internationally famous site for waders. Up to 91,000 in winter. Gulls, grey geese and pintail. Extensive cockle beds

**29 Mersey estuary** Many teal, pintail, wigeon and shelduck



**33 Firth of Clyde** Inner areas rich in redshanks, shelduck and diving duck

**34 Strangford Lough** Main arrival point for brent geese from northern Canada. Up to 1,500 wigeon

**35 Dundalk Bay** Sandflats famous for waders especially bar-tailed godwits

**36 Dublin Bay** Brent geese and 1000s of duck. Best observed at North Bull

**37 Wexford Harbour** Greenland white-fronted, brent, snow and Canada geese

**38 Cork Harbour** Black-tailed godwits

**39 Shannon estuary** 1000s of wintering ducks and waders. Up to 16,500 black-tailed godwits in spring

**40 Lough Foyle** Overwintering waders and ducks. Brent geese in autumn

**30 Ribble estuary** Waders, pink-footed geese. South bank is a National Wildlife Refuge

**31 Morecambe Bay** Large bay, most important site for waders. Pink-footed geese, wigeon, shelduck and eiders. Extensive cockle beds

**32 Solway Firth** Wintering greylag, white-fronted, pink-footed and barnacle geese