SEA KAYAKING ASSOCIATION





An international sea canoeing association open to all interested in this aspect of canoeing.

Aims:

Promotion of sea canoeing • Communication • Organisation of events and conferences • Safety and Coaching

INTERNATIONAL SEA KAYAKING ASSOCIATION

NEWSLETTER No. 20

MARCH, 1998

John J.Ramwell 5, Osprey Ave., Westhoughton, Bolton, Lancs. BL5 2SL

Phone/fax01942 842204

E Mail address> jramwell@provider.co.uk

EDITORIAL

The origins of kayaks, their development over time and the use that has been made of them has always fascinated me, as it has others. David Zimmerley, John Brand, John Heath, Charles Hall, Derek Hutchinson, et al have done some great work to ensure their own obvious fascination in this subject is passed down to generations coming up behind us. It is therefore with some gratification that I note the work being done by Tony Ford as he manages and promotes the Historical Canoe and Kayak Association. Tony is a member of the International Sea Kayaking Association and his address is in the 1997 directory and it will appear in the 1998 directory once I publish it; as I will following the International Canoe Exhibition. As I usually take quite a few new members at the exhibition I wait until it is over so that I can include them in the new members directory.

As you know I also publish the index for the previous year's newsletters in the members directory and again our gratitude is due to Eric Totty who has kindly prepared this ready for printing.

Some years ago I published some equipment reports. The Association cannot get into formally taking gear from manufacturers for testing as this raises quite a commitment - and, frankly, I feel it can be difficult providing honest reviews. I suspect the reviews one reads in the popular outdoor magazines. Consequently I am asking you, the reader, to let me have a report on your favourite or your least favourite piece of gear. It can be a tent, sleeping bag, cooker, spray deck, paddle, clothing ----anything that is frequently used by a sea kayaker. Come on - do let me have something for this newsletter from yourselves. I am particularly keen to have short expedition reports with diagrammatic maps of the areas visited and some simple photographs that will copy on my printer (in black & white only I'm afraid).

EVENTS are important to sea paddlers. Though many like going solo or with a small group of buddies, there are many like myself who enjoy the organised meet or event. So let me promote these through this newsletter. I shall be including an 'events section' in the newsletter - but only with your help.

Talking of events you may be interested to learn about the North West Kayakers Association in that it started up simply because there were a few local to me who wanted some trips they could

join. We don't have any rules, formality or constitution. In return for the cost of a few stamps we circulate a page every so often with a list of events, both local and national. I bet if one or two of you started this in your area this would give so many the opportunity of a friendly paddle every so often. Of course I know that there are organisations around the country already doing this sort of thing and there are clubs (I have in mind Portsmouth Canoe Club) that really do provide lots of opportunity for local paddlers.

I sent Paddles magazine an article on Newfoundland some time last year and my February copy gave me quite a thrill. There I was on the front cover. It is not just vanity that causes me to draw attention to this. I wanted to remind you that I still intend taking a group from the UK on a sea kayaking expedition to Newfoundland next year, 1999. I am due to visit Newfoundland this June with Keith Maslen and Nigel Dennis to provide a 'workshop' (coaching session) for the local paddlers. Not that they are not already very proficient paddlers but we thought they might be interested in the structured approach as outlined in the BCU Handbook. All this means is that I shall have the contacts to help make our exped. out there next year successful. Several of you have already expressed an interest and I am setting the dates as the first two weeks of June, 1999.

I.S.K.A. SHOP

ASKC ties @6.50
ISKA Stickers
ISKA T Shirts; L, XL, yellow or black6.00
ISKA Sweat Shirts; L, XL, yellow or black12.00 All prices
ISKA Woollen ski Hats in yellow3.50 UK Sterling
ISKA Base Ball Caps @4.50 & include
"Over & Out" the video by Gordon Brown @14.99 Post/Pack.
ISKA Polo Shirts6.50
ISKA long sleeved T Shirts6.50
Bound 'stand alone chapters from my forthcoming book
"SEA TOURING - A Manual on Sea Kayaking"
No 1 Expedition Planning @2.00
No 2 Expedition Medicine @
No 3 & 4 The Sea/Navigation4.00
No 5 History of Sea Kayaking2.00

I.S.K.A. Newsletter

LIFEBOAT KILTIES RESCUE CANOEIST. So reads the headline to an cutting from the Scottish Daily Record as sent to me at my request by Duncan Winning.

The article reads as follows:

"A stricken canseist was amazed when he was plucked from chilly waters after seven hours by a lifeboat crew wearing KILTS and bow ties.

The Oban crew had been heading for their annual dinner when they were called out to help Peter Murray.

So the six man crew pulled on their survival suits over kilts and suits and took off to search around Bainagewa Island in Lock Linnbe, Aravil.

They found Poter, 31, but he was halfucinating after the perilously cold water brought his body temperature to a critical level.

Peter, a Gaelic lecturer, of High Street, Fert William , was found just before 9 pm on Saturday Lianuary 10th, 1998) and flown to Lerne and Isles Hospital Oban.

The Lifebeat Team turned up to cheers at their dinner at the Scorba House Hotel, Oban".

Duncan writes a little more in the way of backgraund:"launched Gail Bay to **Tsiand hen' in Loch** Linbe, Girlfriend reported him evertue. Oban lifeboat commenced search 1t 1856 hrs. Found Peter at the end of one of their box searches as they were about to move to next, near Blanagewan Island, not far from launch site at 21.45, No details of canae, Peter was wearing a boiler suit and woolly hat and divers type pld. Body temp down to 29 degrees C. Arm hooked Inte canee cecknit. found semi censcious. Coast quard reckened he was in the water for about five hours."

From Chris & Harry Simpson, - I've enclosed



some pictures of the Newfoundland kayak as far as it has got, I need to make up a steamer and bend the frames for the next phase



COQUET CANOE CLUB.

ROUND THE ISLAND RACE.

SUNDAY June 21st 1998 @ 10.30am

COQUET ISLAND LIES 1 MILE OFFSHORE FROM THE SMALL HARBOUR OF AMBLE ON THE BEAUTIFUL COAST OF NORTHUMBERLAND.

THERE ARE 4 RACES OF DIFFERENT LEVELS.

CLASS 1: SEA KAYAKS ONLY! 15 MILES, WELL OFFSHORE. MINIMUM AGE 16.

CLASS 2: SEA KAYAKS 5.5 MILES MINIMUM AGE 14.

CLASS 3: SLALOM KAYAKS up to 4 metres 5.5 MILES MINIMUM AGE 14.

CLASS 4: SLALOM KAYAKS up to 4 metres 3 MILES, MAINLY IN THE HARBOUR UNDER 15'S AND NOVICES.

PRIZES FOR SENIORS / JUNIORS / LADIES / VETERANS.

ENTRY FEES: £ 2.50, U16 £ 1.00 Age categories are based on age on the day of the race.

Lots of prizes from our many sponsors: Wild Spirit, Watershed, Ainsworths, Sharksports, Breezes, Ords, Braid Marina, etc.

SAE FOR DETAILS: John Rae, 33, Meadow Riggs, Alnwick, Northumberland (01665 603176)

email address :- john.rae@dial.pipex.com

SAT 20th: FARNES TRIPS WILL BE ORGANISED BY THE BCU SEA TOURING COMMITTEE.

SAE FOR DETAILS: Martin Meling, 20, Windermere, Cleadon Village, Sunderland, SR6 7QQ

Swedish Sea Kayak Symposium -98

21 - 23 of August

Ferries depart from Harwich and Newcastle and takes you to Göteborg from where you drive about 40 miles north to the island of Orust.

We will stay on a campsite during nights and paddle about an hour out to the island of Vallerö for the days activities.

The activities will consist of everything from basic handling, manouvering, rescue tecnics etc. to more advanced classes with surfing, rockhopping and open sea rescues.

Why not go for a half day trip and learn about navigation? That's quite a different story in Sweden, from what you're used to in the U.K.! (Tips: Bring your binoculars.)

One of the instructors is actually an Englishman -Nigel Foster- the rest of us are Swedish, but we are all civilized people and do speak English (or Swenglish).

The symposium fee is 400 Swedish kronor and the camping is 60 kronor/night/tent with two persons. £1 = 11-13 kronor. Bring your own food and outdoor equipment. Kayaks can be hired if you book in advance.

You can take a closer look at the programme and also find an application form on my web site. I can also mail or fax the programme to you.

Also take the opportunity to spend a week or two paddling in the beautiful archipellagos of Sweden after or before the symposium!

Very welcome to Sweden -98!!

Contact:

Karin Mentzing Repslagareg.13 611 32 Nyköping Sweden tel+fax: +46 155 28 86 85 mobile (summertime): +46 70 567 47 49 e-mail: karin.mentzing@nykoping.mail.telia.com web: http://w1.155.telia.com/~u15502544/index.htm

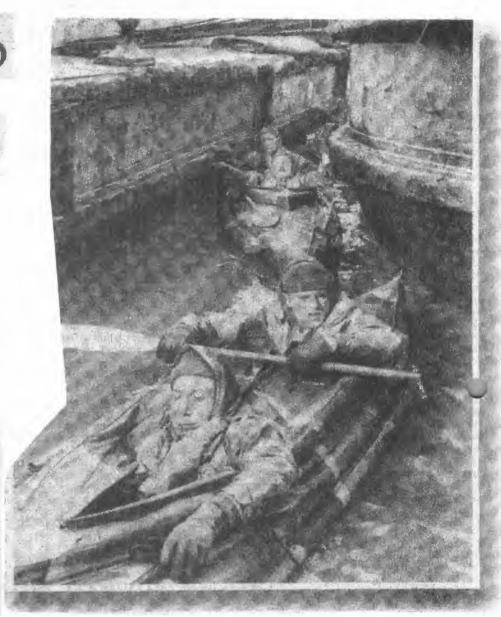
A hero of the old school

Blondie: A Life of Lieutenant-Colonel H G Hasler DSO OBE RM, Founder of the SBS and Modern Single-handed Ocean Racing by Ewen Southby-Tailyour Leo Cooper £25 pp#13

Michael Rose

since Homer drew the attention of the Greeks to the feats of the wily mariner Odysseus, every community has needed its own hero—and undoubtedly Lieutenant-Colonel Blondie Hasler DSO, OBI-provides the source of such inspiration for the Royal Marines today. They regard him as the man whose ideas, inventiveness and practical example led to the foundation of the modern Special Boat Service (SBS) of the Royal Marines, the manime equivalent of the army's Special Air Service regiment (SAS).

However, Hasler is better known to the general public for his involvement in Operation Frankton in 1942 when he led a team of canocists 91 thiles up the Gironde river in order to attack ships in Bordeaux - although the film called Cockleshell Heroes that was subsequently made of this exploit always remained a great embarrassment to him. After the war, Haster became equally famous for his contribution to the development of small-boat sailing partly through the brilliance of his designs, and also because he was the man who conceived the idea of the single-handed transatlantic race. It was during these races, on his 25ft yacht lester, that he tested the practicability of many of his revolu tionary ideas.



It is, therefore, fitting that Hasler's biography should be written by Ewen Southby-Tailyour, a Royal Marine who possesses many of Hasler's eccentric attributes, as well as his sailing ability. It was after all, Southby-Tailyour who went to war in the Falkland Islands, living in a bath because of a shortage of accommodation, and whose detailed knowledge of the coastal waters of the islands proved to be so indispensable to the Royal Navy during the landings. However, because the author knew Hasler so well, and because he admired him so greatly, the book turn, out to be something of a hagiography and is diminished by a lack of critical analysis.

By the time that Hasler had become involved in covert amphibious operations in 1941, much experimental work in this field had already been done by such men as Major Roger Courtney; operational experience had also been gained by the Special Boat sections of the British Army in the Mediterranean. It was at the tactical level, therefore, inther than at the strategic level of operation, that Hasler's main contribution

was to be made.

Throughout his life, Hasler was evidently more comfortable with the details of practical design and the pursuit of technical excellence than he was with wider strategic issues. It is no coincidence that in the post-war years the SBS was to inherit this attitude. It was not until nearly 50 years after the end of the second world war, when the SBS stated to work more with the SAS, that their liorizons widened sufficiently to include strategic level operations.

Hasler always believed that small boats could be designed to be as seaworthy as larger boats. He agreed with Sir Walter Raleigh that 'He that will happily perform a fight at sea, must be skilful in making a choice of vessels to fight in' Hasler chose to develop vessels that were as small as possible, and it was his understanding of hull design and materials that led to the construction of the Cockle Mark II cances that were used on the raid in Bordeaux. These craft could carry 480lb, including two men, and the design is still in service today.

Rod Slaughter. Newbiggin by the sea. Northumberland.



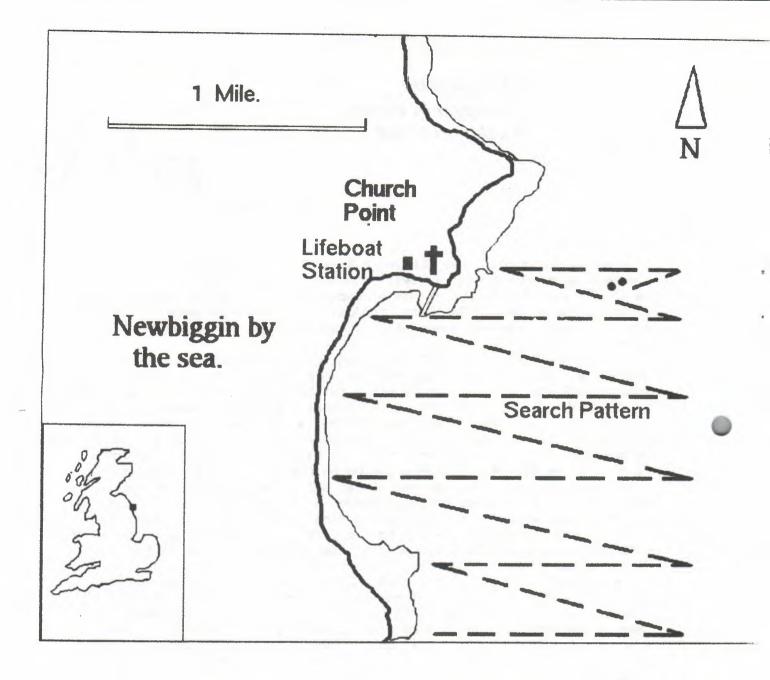
On a few occasion's over the years Brian Athey an Myself have helped the Newbiggin branch of the Royal National Lifeboat Institution in fund raising events. In August it was a rescue exercise for the launch of the Lifeboat for a Harbour Day Fete, following this we were asked if we help out on a Night Training Exercise which was planned for Wednesday 8th October.

Newbiggin's lifeboat, a B Class Atlantic 21 has a minimum crew of 3 and is launched by tractor and trailer into Newbiggin Bay, covering the area from Blyth in the south to Amble to the north. Brian and I arrived at the station just after 6 o clock to meet the Senior Coxswain Jim Dawson and Richard Martin a member of the Launch Crew to discuss what was planned for the night. It was decided we would launch 30 minutes before the Lifeboat taking up a position half a mile east of the Church Point. For safety reasons Jim would be on the helm of the Lifeboat knowing our position, we carried flares and a VHF radio, Tyne Tees Coastguard were informed and recommended we leave our radio on channel 67 which they would be monitering and finally if we weren't discovered within 1 hour we were to return to the Lifeboat Station. The rest of the Lifeboat Crew were told they would be searching an area south from the River Wansbeck to the Lyne Bay in the north.

The weather was fair with a clear sky and half moon, sea conditions were calm with a 1 metre swell running off the Church Point headland, the tide was flooding from north to south. Launching off the beach to take up our position we paddled without any lights switched on, more than 10 metres apart and visual contact was lost, a slight swell would aid in our efforts to be lost in the darkness as we waited for the Lifeboat.

7.15 and although out of sight we heard the Lifeboat starting up its outboard engines crossing the beach on the launch trailer. As it speed across the bay the navigation lights indicated they were heading south to start the search, within minutes they began to run a zig zag pattern towards us as we watched the lights changing colour with every turn. At the briefing earlier Jim said they would be using the Night Vision Glasses and with the help of the moonlight we expected to be spotted sooner rather than later. With each sweep they continued until they turned to run west/east at about a distance of what seamed no more than 100 metres, sitting quietly we expected to be spotted on this leg but once again they continued out to sea.

Brian and I were about 8 metres apart as we watched the navigation lights change from red to green as they turned to run back inshore, passing less than 30 metres away we could see the lights of the consel in front of the coxswain and the whole Lifeboat was caught in the moons reflection on the water, still no reaction from the crew. At the end of the leg they were now turning north of our position and running out to sea away from us, sixty metres seaward of our position and we heard a shout, the Lifeboat turned towards us and 45 minutes after launch the Lifeboat reported us found. Paddling back towards the Church Point the Crew fired off 2 white Parachute Flares (pre arranged with the Coastguard) then followed us back to the beach near the Lifeboat Station.



With a crew change the Lifeboat headed off for an exercise at the River Wansbeck and over a cup of tea at the Boat House we talked over the exercise with Jim. How we had been found was not due to the hi tec night vision glasses which hadn't been working properly but at the start of the search Jim deployed 1 crew member to watch the reflection of the moon on the water all the time. Only when they had passed us and we were between them and the moon were we seen.

On the afternoon of October 8th Newbiggin's Lifeboat was launched to the aid of an overturned 4 metre dinghy north of the Church Point. 2 adults had been fishing over a offshore reef known as the Outer Carrs when they were capsized. After spending 30 minutes in the water clinging to the boat with no lifejackets they were spotted by a member of the Lifeboat Crew who raised the alarm. As we arrived at the Lifeboat Station on the wednesday night the 2 adults, holiday makers from the local caravan park had returned from a check up at the local hospital to collect their dinghy. Justifying the presence of the R.N.L.I station at Newbiggin.

-- International Sea Kayaking Association (UK) / Il Kayak Da Mare (I) / Paris-Kayak International (F) / Salzwasserunion (D) -----

The LSLA Buyer's Directory '98: Sea Kayaks* (Single: 233-568 litres)

by Udo Beier (Germany), Sergio Cadoni (Italy), Christian Gabard (France) and John Ramwell (United Kingdom)

- Many thanks for the informations we got from: D.de Angeli (I), K.Gjessing (N), Th.Küppers (D) and J.Strickland (S) -

Remarks

- In this survey there are only single sea kayaks, which can be bought in Europe, which have a length over 435 cm and two bulkheads (or similar: e.g. pod). With few exceptions the material is fibreglass (or similar: Diolen/Kevlar) or Polyethylene (PE) or Polyethylene-Sandwich (PES) or Plastic-Sandwhich (PS) (e.g. "Royalex"). The technical datas are based on informations given by the producer or seller. When the datas are written in "Italics", then they are approximated. The author or other persons have found them out.
- **: Circa weight of the sea kayak with standard fittings. The weight of a full equiped sea kayak will be higher, especially when the weight given fles under 25 kg. When the datas about the weight of the kayak are written in "italics", it is the rough weight of a sea kayak with all its equipment (e.g.: bulkheads, hatches, toggles, deck fittings, deck lines, compass, pump, rudder or retractable skeg).
- ***: Dimensions of the cockpit (inside edge): L (=Length), W (=Width), Hfi (=Hight-front-inside), Hro (=Hight-rear-outside); TB =Thigh brace;
- ****: The displacement depends on the position of the bulkheads.

1984 - 600 - 1 - 1664

- *****: Dimensions of the hatches (inside edge): R = round hatch; O = oval hatch; otherweise = rectangulare hatch (A);
- Sometimes there are problems to specify the volume. The reasons are different: (a) The volume of sea kayaks made by Lettmann depends on the height of the boats, thus the buyer can decide which volume he wants to have. (b) The specification of the volume you get from the manufacturer varies from the datas the author or other persons have found out. Therefore ask the manufacturer for the exact volume-datas. The datas about the volume written in "italics" are obtained by determining the amount of water that swamps the kayak.

Equipment (standard or optional)

- 1: with integrated retractable rudder:
- 2: with sea-trim-rudder à la Valley;
- 3: with traditional river-rudder;
- 4: with skeg-rudder;

9.5

- g-rudder; 5: with retractable skeg-rudder; actable skeg: 7: with retractable sword-skeg;
- 8: with retractable skeg; 7: with 8: with hinged rear rudder; 9: with
- 8: with hinged rear rudder; 9: without skeg/rudder; 10: with pod; 11: with half a pod (seat buikhead)
- 12: with fitted electric pump; 13: with fitted hand or foot pump;
- 14: with different fitted pumps to choose from;
- 15: with foam in the top of the bow and stern;
- 16: with special rear bulkhead to minimize cockpit-volume

- 17: with special watertight containers built in alongside the cockpit;
- 18: with hatches à la Valley or similar;
- 19: with hatches secured by straps or similar;
- 20: with hatches secured by an inner tube of a bicycle;
- 21: with hatches secured by a central screw-mechanism;
- 22: with screw hatches: 23: with fitted compass:
- 24: with spare paddle recess; 25: with recessed water bottle;
- 26: with three bulkheads;
- 27: bulkheads, deck fittings, toggles and pump are not standard;
- 28: with recessed place for a small container (e.g. for flares, tow line)
- 29: with deck made in plywood:
- 30: with elastic bulkheads (e.g. foam, thermoplast)

Model	Dimensions	Cockpit Size	Volume	/Displacement	Hatches	Company/Equipment
	(LxW;Weight)	(LxW;Hfi/Hro)	(Total)	(Fore/Mid/Aft)	(F;A:LxW)	
	cm kg**	cm***	Litres	Litres****	cm****	(/ = or)
olding-(Sea)-	-Kayaks:					,
reenland-Typ	550x49;18	Round: 37; 18/17	ca.190	(without bulkheads)		D: Cooymans (9; reproduction)
Raid I MKII ,	460x75;22	ca. 78x?	?	(without bulkheads))}	F: Nautiraid (3)
ouch-Eski	520x58;25	66x44;30-25/25	400 (?)	(without bulkheads)		D: Pouch (2),
(hatsalano S	532x80;22	79x39;30/27	ca.313 (?)	(with sea sock)		CDN: Feathercraft (2;9)
(lepper Aeriu:	s 450x72;27	112x41;38/35	ca.370+70	Δ (with Δair tubes, v	without bulkheads)	D: Kiepper (3)
			1		1	
Volume-Class				er windage; wetter rid		
		Mark the second		The state of the s	r a weekend-tour; ideal fo	
indurance	488x65;18	73x41;28,5/28,5	233	041/129/63	e.g.: R:18;R:18	I: Qajaq (7;14;18/19;23)
noustlk	430x50;15	61x36 (for children		035/145/055	R:18;R:18	F: Polyform (8/9;13;15;18)
aylhoa	474x55; ?	69x38;29/24,5	245	038/140/067	R:18;0:41x23	I: Qajaq (9;14;18;23)
xingudi	547x52;23	63x41;25/21	253	055/130/088	R:18;R:18 or 0:41x23	
iodthab	522x52;20	55x41;30/23	284°	048/135/072	each: 41,5x23-15	D: Lettmann (9;13;21;30)
cimitar-PE	482×58;23	81x44;29/26;TB	269/350	° 036/160/073	34x22-11;45x31-15	UK: Perception (3;19;30)
horeLine Jun	. 485x54;19	62x37; <i>26/23</i>	270	045/160/065	R:22,5;R:18+0:41x23	F: Polyf. (2/6/9;13;15;18/19;26;
lnas Acuta ;	523x55;20-24	57x38;29/21	275	060/135/080	R:18;0:41x23	UK: Valley (2/6/9;14;18;23;26)
uego	485x55;24	67,5x40;26/23	275/250	050/145/080	A:18;50x28	UK: NShore (2/8/9;14;18+19;23)
Sirlus S	518x52;27,5	58-88×39;28/24;T	B ca.275	070/115/090	R:18;0:41x23	UK: P&H (2/6/9;14;18;18;23-26)
(Itiwec-(I)	537x56;25	69×40;26/23,5	280	055/138/21+68	R:18;R:18+0:41x23	I: Qajaq (8/7;14;18;23;26)
igue de Bret	520x58;23	60,5x37,5;26,5/26	289	046/164/079	R:18;R:18	F: Plasmor (14,18)
latsuk ,	480x82;25	83x42;28/25	295	050/170/075	R:18;R:18	F: Plasmor (18)
angeoog	554x54;21	49x38;30/27	295	060/150/085	R:18;R:18	D: Welterer (9;14;18;23)
ardinia	513x53;24	69x38;29/24	300/282	050/160/30+60	R:18;R:18 + 0:41x23	I: Qajaq (2/6/7;14;18;23;26)
odthab XLDD	530x54:25.5	71x42;30/24,5	ca. 300°	050/180/085	each: 41,5x23-15	D: Lettmann (1;13;21;30)
OD	530x54;23 (DD	and OD differ only in	weight and	hatches)	0:41x23;0:42x30	D: Lettmann (1;13;18;30)
oise (485×58:18	67×41;26/24	300	050/175/075	R:18;R:18 or 0:41x23	F: Contre C. (18,29)
horeLine Sen	. 483x58;20	67x40;28,5/22	300	050/175/075	R:22,5;R:18+0:41x23	F: Polyf.(2/8/9;13;15;18/19,26;2
ucPolaris	500x55:?	88x40:?	ca.300	?	?	UK: NShore (2/6/9;14;18+19;23;2
intail	523×58:20-24		1 300	070/140/090	R:18;0:41x23	UK: Valley (2/6/9;14;18;23;26)
(1/98) For (urg (Germany) Tel. 040/5	83727,
					S. Elena / Cagliari (Italy)	
						e) Tel. 33(01)46807212 or
(continued ne	avt name)					ited Kingdom) Tel. 01942-842204.

Model	Dimensions	Cackpit Size		/Displacement	Hatches	Company/Equipment
	(LxW; Weight) cm kg**	(LxW;Hfl/Hro)	(Total)	(Fore/Mid/Aft)	(F;A:LxW)	
	Cm Kg**	CIII	Litres	Litres***	Cm****	(/ = or)
Volume-Class	Medium 301	-350 Litres)		,		
Avel Dro	516×58;23	72x42;30/28	304	050/184/090	R:18;0:41x23	F:Plasmor (13;18;23)
Kentzal	499x58;22	69x37;28/27	304	072/174/058	R:18;0:41x23	F: Cayak (18)
Kitlwec (F)	537x56;25	63x42;24,5/23	305	050/170/085	R:18;R:18 + 0:41x23	F:Plasmor (2/8/7;14;18;23;26)
Ponant	518x58;18	85-84x39;28/19,		051/164/090	R:18;0:41x23	F: JF-Kayak-Mer (1;13;15;18;23;2
Sirius M	518x52;23	58-71x38;31/26;		055/150/100	R:18;0:41x23	UK: P&H (2/6/9;14;15;18;23-26)
≖W.Rudder		56-71x38;31/26;		070/130/100	(data output of a kayak	
Ulysse	504x62;20	77x42;??	305	060/165/080	?	F: Plasmor
Inuk Petrel	550x50;15-25	51x43;30/19	ca.305	070/135(?)/100	R:18;0:41x23	P/UK:MAR/Kirton(2/3/9;14;18;23;2
Orca-PS	560x52;25 473x57;24	58x38;30/26 84x40:29/26	305 ca.310/258	090/140/075	0:41x23;0:41x23	F: Karbone-14 (18)
Meridian	512x56:22	73x38;27/26	ca.310/258	036/121/101(?)	R:17,5;0:41x22	UK: Pyranha (3;9;19)
Asiak	500x57;25	78x41;29/26	ca.310°	050/150/110 050/155/100	R:18;R:18 40x24-17;50,5x33-25	UK: NShore (2/8;14;18) D: Lettmann (1;13;21;30)
Phylicas	460x60;20	60x44;29/26	310	058/198/058	R:18;R:18	F: Cayac (18)
Bahia 1014	480x80;20	80x44;29/26	310	056/196/058	R:18;R:18	F: Cochols(18) (similar:Phylleas)
Nordkapp	545x52;20-24	57-76x?;30/26,5	310	070/140/100	R:18;0:41x23 or R:18	UK: Valley (2/6/9;14;18;23;28)
Capella-PE	504x56,5;27	73x40:31/23:TB	315	055/170/090	A:24x24;A:36x36	UK: P&H (2/6;14,18,23;30)
Capella GRP	518x58;?	70x40;33,5/26;TI		055/170/090	R:18;0:41x23	UK: P&H (2/8/9;14;16;18;23-26)
Meridian	488×56;21	80x42; ?	ca.315	?	R:18;0:41x23	USA: Dagger (9;18;23)
Seeker-PE	488x80;27	86x48; ?	315	?	?	USA: Dagger (2;19;30)
Apostie-PE	518:80;31,5	81x43;28/25	315	?	R:24,5;R:18;0:41x27	USA: Dagger (2;19;26;30)
Viking	532x57	69x38;31/25	316	047/163/28+78	R:18;R:18+0:41x23	1: Qajaq (6/7;18;23;26)
Marathon S.S.		64x41;29/17	317	072/135/110	R:18;R:18	F: Patrice (22)
Esplora	530x52;23	88x40;28/26	320	050/190/080	R:18;041x23	D: Francesconl (4;13;18;23)
Baïkal	510x60;21	67x40;26,5/21	320	055/170/095	R:22,5;R:18+0:41x23	F: Polyf.(2/6/9;13;15;18/19;26;28
Viking	498x56;19	58-75x39; <i>30/26</i>	320	060/160/100	R:24;0:42x30	FIN: Kajak-Sp. (2/6;14;18)
Appel-Eski	500x64;21	83x45;33/24	320	060/160/100	R:18;R:18	D: Diez (2/3;13;18/22)
Skerray-PE Skerray GRP	514x58;23,5 518x58;22-24	54(-71)x38;31,5/		060/160/100	R:18;0:41x23	UK: Valley (5/8/9;14;18;30)
Sealution-PE	502x56;28	58-76x40;30,5/2 74x39; <i>32/33</i>	ca.325	080/160/100	R:18;0:41x23 34x18-10;34x24-18	UK: Valley (2/6/9;14;18;23;26)
Eskimo Côtier	513x80;23	63x41;28/22	325	060/165/100	each:R:18 or:55x35-28	USA: Wilderness (2/9;19;30) F: Patrice (22 or 19)
Oland	530x55;18-23	75×40;27/24,5	ca.325°	070/155/100	42x20-14;40x26-21	D: Pletsch (1;12;20;23)
with Valle		, 0440, 27, 24,0	04.025	070/733/100	R:18;0:41x23	D: Pletsch (1;12;18;23)
Albatros	505×80;25	58x38;30/29	325	080/150/095	R:18;0:41x23	F: Karbone-14 (18)
South Aurora	500x61;24	78x39;32/31	330	055/180/095	R:18;42x32	NZ: Qual.Kay. (2+11;13;18+19)
Horizon	500x80;23	77x39;32/31	330	080/170/095	R:18;42x32	NZ: Qual.Kay. (2+11;13;18+19)
cefloe	508x61;24	58-73x40;32/28	330	055/150/125	R:18;0:41x23	UK: P&H (2/8/9;14;16;18;23-26)
Selkie	503x60;20-24	57-76x?;30/26,5	330	050/180/100	R:18;R:18 or 0:41x23	GB: Valley (2/6/9;14;18;23;26)
Orlon	518x61;24	73x40;30/26;TB	330	055/150/125	R:18;0:41x23	UK: P&H (2/6/9;14;16;18;23-26)
VKN Svalbard		50x38;30,5/25	333	060/160/38+75	R:18;R:18+0:41x23	NL: KCB (2;6;9;11-15;18;23;24;26
	larger cockpit)	73x40;29,5/24				
SouthernSkua Dutlander	540x60;23 488x59;-	77x39;32/31	335	055/170/110	R:18;42x32	NZ: Qual.Kay. (2+11;13;18+19)
Calypso	515x55;22-29	73×39;30/25 58×40;26/24	335 ca.335	060/145/130 060/175/100	R:18;0:41x23	UK: P&H (2/6/9;14;16;18;23-26) UK: NShore (2/6/9;14;18+19;23;20
.egend	544x54,28	58x37;26/22	ca.335	2	40x19;R:18+50x28	NL/UK: Foster (8/9;14;18;23;26)
cean	513x80;25	63×40;29/23	336	062/171/103	2x: R:22 or 54x34-26	F: Patrice (6;14;19;22;25;27)
(SU Noctiluca		50x38;30/40	337	080/160/47+70	R:18;R:18+0:41x23	NL: KCB (2;6;9;11-15;18;23;24;26
	larger cockpit)	83x45;29,5/24)	007	000/100/41.70	N. 10,11.10 . 0.41x25	NE. NOD (2,0,0,11 13,10,23,24,20
Catchiky C.H.	535x54;25	63x41;26,5/25	338	054/180/104	0:41x23;0:41x23	F: Plasmor (14,18)
fariner	515x55;21	61 ??	340	055/180/105	R:18;R:18	UK: NShore (2/8/9;14;18;23)
larval	515x55;22	67x40;29/22	340	055/180/105	R:22,5;R:18+0:41x23	F: Polyf.(2/6/9,13;15;18/19;26;0)
quale	580x50;18	64x40;25/23	340	070/160/110	R:12;R:18	F: Polyform (2/6/9;15;18+22)
Baldarka	514x52;25	58x39; ??	340	080/150/110	R:18;0:41x23	UK: P&H (2/6/9;14;16;18;23;26)
Magellan-PE	503x58;27	82x41;29/23	340	???	R:24,5;0:41x27	USA: Dagger (2;19;23;30)
oint K1R	525×57;23	78×40;??	340	?	R:18;0:41x23	S: Point (3/6/9;18)
ooksha IV-PE		79x45;28/29;TB	ca.342	???	0:29,5x20;0:37x26	CDN: Necky (2;19;30)
irius L	500x57;28	82x41;31/26;TB	ca.345°	057/169/080 (?)	R:23;0:44x25,5	USA: Perception (3;18)
	518x52;24	72x41;35/29;TB	345	060/180/105	R:18;0:41x23	UK: P&H (2/6/9;14;16;18;23-26)
lordsee	543x53;26	70x42;34/27,5	345	080/165/100	R:18;0:41x23	D: Diez (9:13:18)
nadyr anseat	530x55;24 525x58;20	89x42; ??	ca.346	?	0:41 222 0:40 22	1: Janautica (9;22)
miak	525x58;20 560x48;19	71x43;31/27 62x38;31/25	347 350	057/195/095 (optional)	0:41x23;0:42x30	D: Lettmann (1;13;18;30)
arzol	540x54;20	63x36;27/24	350	(optional) 060/190/100	(optional) R:18;R:18+0:41x23	D: Meier (1;13;18/20;27;30) F: Plasmor (18)
		83x42;31/28	350	064/180/098	R:24;R:24	F: Rotomod (18;30)
ontiki Sen.PF		68x40;27/22	350	065/175/110	R:22,5;R:18+0:41x23	F: Polyf.(2/6/9;15;18/19;26;28)
	530x58:23			085/180/105	R:18;0:41x23 or R:18	UK: Valley (2/6/9;14;18;23;26)
kyros	530x58;23 550x54;24	55-82x41;32/25	350	003/100/103		
kyros ordkapp Yubi	550x54;24	55-82x41;32/25	350	003/100/103		
kyros ordkapp Yubi Volume=Class	550x54;24	55-82x41;32/25 90 Litres)				
Volume=Glass:	550x54;24 ***********************************	55-82x41;32/25 70 Litres) 82x <i>39;32/23</i> ;TB	353	087/170/098	R:24;R:18 + R:24	UK: Dennis(2/8/9;14;18;23;26)
kyros ordkapp Yubi Volume=Class	550x54;24 **Large*** (35)7=40 489x54;24 560x59;25	55-82x41;32/25 20 Litres) 82x <i>39;32/23</i> ;TB 88x42;28/22	353 355	087/170/098 085/190/100	R:24;R:18 + R:24 R:18;0:41x23	UK: Dennis(2/8/9;14;18;23;26) F: Plasmor (18)
kyros ordkapp Yubi Volume-Class omany ialivac	550x54;24 ***********************************	55-82x41;32/25 70 Litres) 82x <i>39;32/23</i> ;TB	353	087/170/098	R:24;R:18 + R:24 R:18;0:41x23 40x24-17;50,5x33-25	UK: Dennis(2/8/9;14;18;23;26) F: Plasmor (18) D: Lettmann (1;13;21;30)
kyros ordkapp Yubi Volume Glass omany ialivac ordstern	550x54;24 "Large" (351-40 489x54;24 560x53;25 550x57;26	55-82x41;32/25 70 Litres) 82x39;32/23;TB 88x42;28/22 78x41;29/25	353 355 ca.360°	087/170/098 085/190/100 060/177/120	R:24;R:18 + R:24 R:18;0:41x23 40x24-17;50,5x33-25	UK: Dennis(2/8/9;14;18;23;26) F: Plasmor (18)

Model	Dimensions	Cockpit Size	Volume	/Displacement	Hatches	Company/Equipment
	(LxW; Weight)	(LxW;Hfi/Hro)	(Total)	(Fore/Mid/Aft)	(F;A:LxW)	
	cm kg**	cm***	Litres	Litres***	- cm*****	(/ = or)
Volume-Class	"Large" (351-4	00 Litres) (continue) }			1 (2007)
Arctic	525×58;26	78x41;30/26	I 361°	052/194/115	1 40x24-17,50,5x33-25	
KSU Hellaster	535x55;22	83x45;28,5/22	363	073/160/45+85	R:18;R:18+0:41x23	NL: KSU (2;6;9;11-15;18;23;24;26
Chinook-PE	488×61;25	80x43; ?? TB	367/29		R:14;45x35	UK: Perception (3/9;19+22;30)
Caribou	533x60;24	78x42;32/28	370	060/200/080	R:23;R:23	S: Aqua. (8/9;12;15,18)
Tümmler	548x52;22	70x40;31/25,5	370	062/192/116	44x15;44x25	D: Clauß (6:13;17;19)
Yukon-E	505x55;14~22	83x45;31/26	370	ca.040/270/060(?)	45x13-22;44x24-30	D: Prijon (2;13;19)
Kyook-PE	457x63,5;27	81x44;31/28-31;		075/180/115	0:27x18;0:36x26	CDN: Necky (2;19;30)
Caribou-IC Storm-PE	533x60;24	78x42;32/28	370	ca.080/120/ca.110	1	S: Aqua. (8/9;12;15;18)
Buccaneer	517x61;29 530x55;22	81x44;34/27 65x39;28/24TB	ca.372 ca.375	?	R:18;?	CDN: Current (2;18+19;23)
Seayak-PE	490x80;26	73x38;30/27;TB		090/170/115 ca.042/228/110(?)	40x19;R:18+50x28 44x22;44x30	UK: NShore(2/6/9;14;18+19;23;26)
Baidji GH	560x57:24	73x41;30/27		ca.070/190/120 (?)		D: Prijon (2;13;19;30) 3 F: Polyf.(6/9;13;D15;18/19;26;28)
Kreta	550x64;23	82x45;31/30	380	080/180/120	R:18;0:41x23	D: Diez (2/3;13;18/21)
Romany Expl.	538x55;24	82x39; ??TB	380	105/160/115	R:24;R:18+R:24	UK: Dennis (2/6/9;14;18;23;26)
Fighter	500x59;22	73-87x41; ?	385	085/170/130	R:18;0:41x23	S: Clifford (3;14;18)
Artisan 2000	559x56;23	55-75x41;32/29	390	070/205/115	R:24;0:42x30	FIN: Kajak-Sp. (1/8;14;18)
Narpa-PE	500x61;28	79x43;30/31;TB	390	080/200/110	0:27x16;0:37x26	CDN: Necky (2;19;30)
Amrum	550x55;24	75x40;33/32	390	100/165/125	39x18;36x26	D: Pletsch (1;12;20;23)
Looksha II	610x51;21	73x40;30/25	ca.392	???	0:30x22;0:36x27	CDN: Necky (2;19)
Touring E1	502x60,5;28	83x42;32/28	395	053/194/131	R:18;0:42x30	D: Helmi (2;13;18)
Belouga 1 Skerray XL	509x68;28	83x44;26/21	395	075/200/120	R:18;0:41x23	F: Plasmor (14,18)
Måsen-Elit	538x61;25 530x60;24	69x41; ?? 96X42;37/31	395 395	075/200/120 100/150/145	0:41x23;0:41x23 33x25;54x32	UK: Valley (2/6/9;14;18;23;28)
Seaguil Elite	530x60;23	96x42; ??	395	100/150/145	33x25;54x32	S: Clifford (3;19) S: VKV (8;19)
		86x46;??	400	090/195/115	0:41x23;0:42x30	FIN: Kajak-Sp. (2/6;14;18)
				s: higher windage; drie		7117. Rujum op. (2) 0,1 4,1 0)
					for a tour lasting several	weeks; ideat for heavy/larger people)
Nordnes SK	525x58;?	(large)??	ca. 400?	095/-?-/135	?	N: Nordnes (3;19)
Hasle Explorer		79x40;30/28	401	069/221/111	R:26;R:26	N: Hasle (PE-S;4/9;13;22;30)
Seallon-PE	523x57;27	83x43;30/26;TB	405 (?)	057/169/080 (?)	34x21-10;44x30-20	UK: Perception (3;19;30)
Calypso Mono	475x61;24	88x41; <i>29/26</i>	405	075/200/130	40x28;R:18+50x30	F: Polyform (2;13;15;18/19;26;28)
Puffin-PE	500x61;29	85×45;29/28;TB	410	ca.095/135/ca.180		NZ: Qual.Kay. (2;8;10;13;18+19)
Puffin Light-PE	·	85x45;33/32	410	ca.100/160/150	R:18;42x32	NZ: Qual.Kay. (2;13;18+19;30)
Seaguli Offsh.		96x42; ??	410	100/150/160	33x25;52x32	S: VKV (8;19)
Aquila	528x60;25- <i>32</i> * 575x57;28	78x40; <i>32/30</i> 78x42;32,5/25,5;	410	100/160/150	42x20-14;40x26-21	D: Pietsch (1;12;20;23;24) UK: Valley (2/6/9;14;18;23;26)
Express	500x56;21	75x40;34/31	ca.420	090/180/150 (optional)		D: Meier (2/3;13;18/20;27;30)
Sitka	544x56;27;TB	79x41;33,5/27	ca. 420	?		USA: Dagger (1;18;23;26)
Seaguil Ocean	530x63;25	96×45; ??	430	060/210/160	25x33(or:R:19);53x35,	S: VKV (8;19)
Thema	550x57;26	83x42; ??	430	ca.070/220/140	??	D: KSK (5;13;18)
Seelöwe	520x80;21	83x40;34/31	450	090/180/180	(optional)	D: Meier (2/3;13;18/20;30)
Garkast HK-1	580x55,25	58x39	ca.460?	135/-?-/155	R: R:24;R:15?;R:24	S: Svärdsklova (8:18+22;26)
	520x80;21	75x40;30/28	469	(optional)	(optional)	D: Meier (2/3;13;18/20;27;30)
C-Trek	566×58,5;29	81x42;28/25	490	130/190/60+110		UK: Kirton (2/6;14;18;23;26);
Ny-Aaland	533x61;24	74x?;36/35	502	092/190/220	41,5x23-15	D: Haif (1;13;21;23)
VKN Skarabee		59x41;29,5/25,5	568	148/207/65+150	R:24;R:18+R:24	NL: KCB (2;8;9;11-15;18;23;24;26)
= G (with la		77x42;30,5/25,5				
Looksha S-PE		79x44;27,5/28;TB		???	o:28x19.5:0:35x25	CDN: Necky (2;19;30)
Eskia	497x61;25	70x38;??	2	???	R:?;R:?	D: Bavaria (3/9:13:22)
	40/10/120				11. 1 , 11	D. Davana (0/0,.0,m2)
Shark			??	? 1	R:18:0:41x23	E: Omei (2:9:14:18)
Shark Inuit	446(!)x58;19	84x42; ??	?? ??	?	R:18;0:41x23 R:18;041x23	E: Omei (2;9;14;18) E: Omei (6;9;14;18)
	446(!)x58;19 510x57;21					
Inuit Kratouna 1007	446(!)x58;19 510x57;21 523x60;22	84x42; ?? 64x41; ??	??	?	R:18;041x23	E: Omel (6;9;14;18)
Inuit Kratouna 1007	446(!)x58;19 510x57;21	84x42; ?? 64x41; ?? 80x45; ??	? ??	?	R:18;041x23 R:18;R:18	E: Omel (6;9;14;18) F: Cochois (22)
Inuit Kratouna 1007 Manille 1015 Skybou	446(!)x58;19 510x57;21 523x60;22 535x59;22	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ??	?? ? ?	? ? ?	R:18;041x23 R:18;R:18 R:18;R:18	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3)
Inuit Kratouna 1007 Maniile 1015 Skybou Alto Ulysse PE	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ??	?? ? ? ?	? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ulysse PE Ysak PE	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? ?? 75x41;??	?? ? ? ? ?	? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? ? R:18;R:18;0:41x23	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26)
Inuit Kratouna 1007 Maniile 1015 Skybou Alto Ulysse PE Ysak PE Greeniander	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;?	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? ?? 75x41;?? ?	? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? ? R:18;R:18;0:41x23 R:?;R:2;R:?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26)
Inuit Kratouna 1007 Maniile 1015 Skybou Alto Ulysse PE Ysak PE Greeniander Huntsman	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 66x45; ?? ?? 75x41;?? ? Round:44;??	?? ? ? ? ??	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? R:18;R:18;0:41x23 R:?;R:?;R:?	E: Omel (6;9;14;18) F: Cochois (22) F: Cochois (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochois (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ulysse PE Ysak PE Greenlander Huntsman Kodiak	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? ?? 75x41;?? ? Round: 44;?? ?	?? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? R:18;R:18;0:41x23 R:?;R:?;R:?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty
Inuit Kratouna 1007 Manilie 1015 Skybou Alto Ulysse PE Ysak PE Greeniander Huntsman Kodiak Svalbard	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? 77 75x41;?? ? Round: 44;?? ?	?? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? R:18;R:18;0:41x23 R:?(R:?;R:? ?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty
Inuit Kratouna 1007 Manilie 1015 Skybou Alto Ulysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? ?? 75x41;?? ? ? ?	?? ? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? R:18;R:18;0:41x23 R:?;R:?;R:? ?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty UK: McNulty UK: McNulty
Inuit Kratouna 1007 Manilie 1015 Skybou Alto Ulysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan Seasure	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x56;22	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? 75x41;?? ? Round: 44;?? ? ?	?? ? ? ? ? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? R:18;R:18;0:41x23 R:?;R:?;R:? ? ?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: Menulty
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ulysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan Seasure	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x56;22 525x56;20-35	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 66x45; ?? 75x41;?? ? Round: 44;?? ? ?	?? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? R:18;R:18;0:41x23 R:?;R:?;R:? ?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty UK: McNulty UK: McNulty
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ulysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan Seasure Svalbard Vyneck	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x58;22 525x56;20 549x52;?	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? 75x41;?? ? Round: 44;?? ? ?	?? ? ? ? ? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? R:18;R:18;0:41x23 R:?;R:?;R:? ? ?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ulysse PE Ysak PE Greeniander Huntsman Kodiak Svalbard Alaskan Seasure Svalbard Vyneck Fire	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x56;22 525x56;20-35 549x52;? 530x54;23	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 66x45; ?? ?? 75x41;?? ? ? ? ? ?	?? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? R:18;R:18;0:41x23 R:?;R:?;R:? ? ? ?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty UK: McNulty UK: Mega N: Fritid (3;14;18+19) NL: Foster (2/6;18;23;d26))
Inuit Kratouna 1007 Manilie 1015 Skybou Alto Ulysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan Seasure Svalbard Vyneck Fire	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x56;22 525x56;20-35 549x52;? 530x54;23 575x54;7	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? ?? 75x41;?? ? ? ? ? ? ? ?	?? ?? ?? ?? ?? ??	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;O:41x23 ? R:18;R:18;O:41x23 R:?;R:?;R:? ? ? ? R:18;R:18;O:41x23	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty UK: McNulty UK: Mega N: Fritid (3;14;18+19) NL: Foster (2/6;18;23;d26)) NL: Nova (6/9;14;18;23)
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ulysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan Seasure Svalbard Vyneck Fire	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x56;22 525x56;20-35 549x52;? 530x54;23	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? 75x41;?? ? ? Round: 44;?? ? ? ?	?? ?? ?? ?? ??	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? ? R:18;R:18;0:41x23 R:?;R:?;R:? ? ? ? ? R:18;R:18;C:41x23 R:18;R:18+0:41x23 R:18;R:18+0:41x23 O:41x23;O:41x23	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty UK: McNulty UK: Mega N: Fritid (3;14;18+19) NL: Foster (2/8;18;23;d26)) NL: Nova (6/9;14;18;23) NL: Nova (6/9;14;18;23;26) NL: T.Best (1/6;14;18;23;26) NL: Watermark (14;18)
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ullysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan Seasure Svalbard Vyneck Fire Fiame Surviver Silhouette	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x58;22 525x56;22 549x52;? 530x54;23 575x54;7 520x55;24	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 66x45; ?? 75x41;?? ? ? Round: 44;?? ? ? ? ?	?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? ? R:18;R:18;0:41x23 R:?;R:?;R:? ? ? ? ? R:18;R:18;C:41x23 R:18;R:18+0:41x23 R:18;R:18+0:41x23 O:41x23;O:41x23	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty UK: McNulty UK: Mega N: Fritid (3;14;18+19) NL: Foster (2/6;18;23;d26)) NL: Nova (6/9;14;18;23) NL: Nova (6/9;14;18;23;26) NL: T.Best (1/6;14;18;23;26) NL: T.Best (1/6;14;18;23;26) NL: Watermark (14;18) NL: Watermark (14;18;28)
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ullysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan Seasure Svalbard Vyneck Fire Flame Ssurviver Silhouette Shadow	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x58;22 525x56;20 532x58;20 532x58;20 532x58;20 532x58;20 532x58;20 532x58;20 532x58;20	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? 775x41;?? ? ? Round: 44;?? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	?? ???????????????????????????????????	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? ? R:18;R:18;0:41x23 R:?;R:?;R:? ? ? ? ? R:18;? ? R:18;? ? R:18;0:41x23 R:18;R:18+0:41x23 O:41x23;0:41x23 O:41x23;R:18;0:41x23 R:?;0:?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty UK: McNulty UK: Mesulty UK: Watermark (14;18;23;26) USA: Oagger (4,19)
Inuit Kratouna 1007 Manille 1015 Skybou Alto Ulysse PE Ysak PE Greenlander Huntsman Kodiak Svalbard Alaskan Seasure Svalbard Vyneck Fire Fiame Surviver Silhouette Shadow Atlantis-PE	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x56;20-35 549x52;? 530x54;23 575x54;7 520x55;24 541x52 545x58	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 66x45; ?? 75x41;?? ? Round: 44;?? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	?? ???????????????????????????????????	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;O:41x23 ? R:18;R:18;O:41x23 R:?;R:?;R:? ? ? ? ? R:18;P:18;O:41x23 R:18;R:18+O:41x23 R:18;R:18+O:41x23 O:41x23;O:41x23 O:41x23;R:18;O:41x23 O:39x23;O:48x33	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: Moga N: Fritid (3;14;18+19) NL: Foster (2/6;18;23;d26)) NL: Nova (6/9;14;18;23) NL: Nova (6/9;12;18;23;26) NL: T.Best (1/6;14;18;23;26) NL: Watermark (14;18) NL: Watermark (14;18) USA: Oagger (4,19) USA: Wilderness (2/9;19;30)
nuit Kratouna 1007 Manille 1015 Skybou Alto Jlysse PE Fsak PE Greenlander Huntsman Kodlak Svalbard Alaskan Seasure Svalbard Jyneck Fire Flame Burviver Silhouette Shadow Atlantis-PE	446(!)x58;19 510x57;21 523x60;22 535x59;22 502x58;20 518x51;? 480x60;25 505x57;23 537x53;? 510x57;25 510x57;25 525x56;25 548x59;34 532x56;22 525x56;20-35 549x52;? 530x54;23 575x54;7 520x55;24 541x52 545x58 523x58;32 442(!);58,5;25 500x56;26	84x42; ?? 64x41; ?? 80x45; ?? 69x42; ?? 68x45; ?? 775x41;?? ? ? Round: 44;?? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	?? ???????????????????????????????????	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	R:18;041x23 R:18;R:18 R:18;R:18 R:18;0:41x23 ? ? R:18;R:18;0:41x23 R:?;R:?;R:? ? ? ? ? R:18;? ? R:18;? ? R:18;0:41x23 R:18;R:18+0:41x23 O:41x23;0:41x23 O:41x23;R:18;0:41x23 R:?;0:?	E: Omel (6;9;14;18) F: Cochols (22) F: Cochols (22) F: Quest (13;18;23) F: Polyform (3) F: Plasmor F: Cochols (1/9;18;26) UK: Dennis (6/9;14;18 26) UK: McNulty UK: McNulty UK: McNulty UK: McNulty UK: Mesulty UK: Watermark (14;18;23;26) NL: Watermark (14;18) NL: Watermark (14;18) USA: Oagger (4,19)

```
Manufacturer
 Aquanova Kajakers AB
Bavaria - H.Bösch
                                                                                    Torslanda (Sweden);
Gewerbegebiet 12, D-83093 Bad Endorf (Germany);
La Centrale du Kayak, 2 bis, rue Michelet, F-94700 Maisons Alfort (France);
 Cayac
Clauß GmbH
                                                                                  La Centrale du Kayak, 2 bis, rue Michelet, F-94700 Maisons Alfort (France);
Marienstr. 10, D-67063 Ludwigshafen (Germany);
Kajaker & Kanadensare, Foruminnesvågen 7 B, S-26371 Jonstorp (Sweden);
Dankwerthstr. 12, D-24106 Kiel (Germany);
Z.A. Les Plaines, F-26320 St. Marcel-Les-Valence (France);
c/o Jean-Pascal Le Han - 76, Boulevard Jules Verne, F-44300 Nantes (France);
(Canada): Import: Helmi-Sport, Eilvese an der B6, D-31535 Neustadt a. Rübenberge (Germany);
(USA): Import: Mobile Adventure, Bridge Works, Knighton Fields Rd. West, Leicester LE2 6LG (UK)
Kayaks Ltd. (c/o ASSC, Porthdafarch Rd., Holyhead, Gwynedd LL65 2LP, N.Wales (United Kingdom));
Koblenzer Str. 13, D-65582 Diez/Lahn (Germany);
 Clifford, Lars
 Cooymans, Rudi
  Cochois
 Contre Courant
  Current-Design
 Dagger
 Dennis, Nigel
 Diez Bootswerkstätte
                                                                                   1244 Cartwright Street, Vancouver, British Columbia, V6H3R8 (Canada);
Canoing Ventures, 5, Tan-y-Bwich, Mynydd Llandegai, Bethesda, Gwynedd, LL57 4DX (United Kingdom)
J. van Leeuwen, Kuipersweg 13, NL-4338 PH Middelburg (The Netherlands);
made by: R. Bulczak, An der Stadtmauer 3, D-34587 Felsberg (Germany);
 Feathercraft Products Ltd.
 Foster, Nigel

+ made by: Watermark
Francesconi Canoe
Fritid,E.
Half, Wolfgang
Hasle Arne AS
                                                                                    Mjöndalen (Norway);
Bordumer Str. 17, D-26316 Varel-Dangast (Germany);
Vestre Ringy. 1, N-1800 Askim (Norway);
 Helmi-Sport
                                                                                  Eilvese an der B6, D-31535 Neustadt a. Rübenberge (Germany);
Tekno Sport s.r.l., 21, via del Commercio, 1-20040 Bellusco (Italy);
J.-F.Jehl, 2, rue du Château, F-30420 Calvisson (France);
Suidwal 9, NL-4341 CG Arnemünden (The Netherlands);
Matti Valonen, Tohkantie 6, FIN-27100 Eurajoki (Finland);
31, Impasse du IV Septembre, F-33130 Begles (France);
Kanocentrum de Biesbosch, (G. de Bruun) Calandstraat 26, NL-4251 NZ Werkendam (The Netherlands);
Marsh Lane, Crediton, Devon, EX17 1ES (United Kingdom);
H.S. Walther GmbH, Klepperstr. 18, D-83026 Rosenheim (Germany);
kanu-sport Klein-Impelmann, Weseler Str. 12, D-46519 Alpen (Germany);
Franz-Haniel-Str. 53, D-47443 Moers (Germany);
Travessa Da Arribel, Pavilhao 5 Mosteriro, 4480 Vila do Conde (Portugal);
Corstorphine Town, Commercial Road, SouthShields, Tyne & Wear, NE33 1RZ (United Kingdom);
                                                                                   Eilvese an der B6, D-31535 Neustadt a. Rübenberge (Germany).
 Janautica
JF-Kayak-Mer
Inuit-Kanusport
Kajak-Sport OY
 Karbone-14
 KCB
 Kirton Kayaks Ltd.
 Klepper-Faltbootwert
  Lettmann - Sport GmbH
 M.A.R. Kayaks
                                                                                   Corstorphine Town, Commercial Road, SouthShields, Tyne & Wear, NE33 1RZ (United Kingdom);
 McNulty
Mega
Meier
                                                                                    (United Kingdom);
                                                                                   Heinrich-Osterath-Str. 256, D-21037 Hamburg (Germany);
Zone Industrielle, F-53480 Vaiges (France);
(Canada): Import: KAGO-Sportartikelhandel U.Goetz, Postfach 701124, D-22039 Hamburg (Germany);
Nautiraid
Necky Kayaks
Nordnes Batsport
                                                                                    N-5000 Bergen (Norway);
                                                                                  N-5000 Bergen (Norway);
Tanton Hall Farm, Stokesley, Middlesbrough, Cleveland TS9 5JT (United Kingdom);
Factory 10B, NL-16589 AL Zwaag (The Netherlands);
C/Sagasti, 30 - E-20100 Lezo (Guipúzcoa) (Spain);
5, Rue des Orangers - Port de Plaisance, F-64700 Hendaye (France);
Bellbrook Business Park, Uckfield, East Sussex TN22 1QU (United Kingdom);
The P&H Company Ltd., Station Road, West Hallam, Derbys DE7 6HB, (United Kingdom);
North Shore
 Nova Werf
 Omei - Canoas & Kayaks
 Patrice
Perception Kayaks
                                                                                 The P&H Company Ltd., Station Road, West Hallam, Derbys DE7 6HB, (United Kingdom); Sportboote, D-25852 Bordelum (Germany);
Z.A. Saint Léonard Nord, F-56450 Theix (France);
Z.A. La Montgervalaise, 2 - F-35520 La Mézière (France);
Styrmansg 23, Box 24088, S-10450 Stockholm (Sweden);
Import: Point 65°N, 6 rue Monsigny, F-75002 Paris (France);
Bitterfelder Str. 24, D-06774 Pouch (Germany);
Innlände, D-83022 Rosenheim (Germany);
Marina Village, Preston Brook, Runcorn, Cheshire WA7 3DW (United Kingdom);
Resinvetro, Via de Nobili 16, Brugnetto (AN) 60010 (Italy);
(New Zealand): Import: H.Gadermann, Wilstedder Weg 37, D-22851 Norderstedt/Hamburg (Germany);
Pai du Moustoir - BP216 - F-56402 Auray (Crach) (France);
Z.I. Jean Malèze, F-47240 Bon Encontre (France);
Nyköpings Kanotcenter, S-61193 Nyköping (Sweden);
  Pietsch - Pietsch & Hansen
 Plasmor
Polyform
Point 65°N
 Pouch Boote GmbH
 Prijon-Vertrieb GmbH
 Pyranha-Mouldings Ltd.
 Qajaq-Sea Kayaks
Quality Kayaks
Quest Composites
Rotomod
                                                                                  Nyköpings Kanotcenter, S-61193 Nyköping (Sweden);
Siddeburen (The Netherlands);
Private Road 4, Colwick, Nottingham NG4 2JT, (United Kingdom);
AB Vituddens Kanotvary, Kanotvägen 2, 59338 Västervik (Sweden);
 Svärdsklova
 The Best-Polyestserbouw
```

Kreuzstr. 9, D-28203 Bremen (Germany); Vryenbanselaan 31A, NL-2612CL, Delft (The Netherlands); (USA): Import: Bavaria Boote, H.Bösch, Gewerbegebiet 12, D-83093 Bad Endorf (Germany).

Valley Canoe Products Ltd.

Weiterer, Udo Watermark Wilderness Systems

TOURING CALENDAR 1998

DATE(S)	AREA	KAYAK / CANOE	GR/	ADE	TOU	R NO
MARCH		CANCE				
SUN 8	TAY ESTUARY	К		Α		1
APRIL						
SAT 4 / SUN 5	LOCH LOMOND	K		Α		2
SUN 5	SOUTH ESK	С		B/C		3
SAT 25 / SUN 26	2 DAYS FROM ARDUAINE	K		AVB		4
SUN 26	NORTH ESK	С		Α		5
MAY						
MOST SUNDAYS II	N MAY - DAY TRIPS FROM LARGS	К		Α		6
SAT 2 / SUN 3	INTRODUCTION TO TIDAL PADDLING	K		A/B		7
SAT 2 / MON 4	RIVER DEE	С		A/B		8
SAT 2 to SAT 9	A WEEK OUT FROM KYLE OF LOCHALSH	K		A/B		9
SUN 3	HELENSBURGH	K		Α		10
SAT 9 / SUN 10	LOCH FYNE / LOCH RIDDON	К		Α		11
SAT 16 / SUN 17	LUING AND SEIL	к		A/B		12
SAT 23 / SUN 24	2 DAYS ON THE FIRTH OF FORTH	K		Α		13
SAT 23 / SUN 24	ROUND LISMORE	К		В		14
FRI 29 / SUN 31	LOCH MULLARDOCH	С		Α		15
FRI 29 / MON 1ST	BENDERLOCH / APPIN	K		В		16
JUNE	(LOCH ETIVE to BALLACHULISH)				_	
MOST SUNDAYS I	N JUNE - DAY TRIPS FROM LARGS	К		Α		17
SAT 6 / SUN 7	NORTHUMBERLAND COAST &. THE FARNES	к		B/C		18
SUN 7	CLYDEPORT (GLASGOW / ERSKINE / GREENOCK)	K)		Α		19
SUN 7	ARBROATH CLIFFS	С		В		20
SAT 13 / SUN 14	KIRKCUDBRIGHT COASTLINE	К		A/B		21
SAT 13 / SUN 14	GARVELLACHS	К		В		22
SAT 13 / SUN 14	ROUND MULL OF KINTYRE	K		B/C		23
SUN 14	DEE TOUR	K		Α		24
SAT 20 / SUN 21	CAITHNESS CRUISING	K		B/C		25
SAT 20 / SUN 21	TRIPS OF ALL STANDARDS - BASED AT ARDUAINE	К		A/B		26
FR1 26 / MON 29	SOUND OF ARISAIG	K		B/C		27
SAT 27 / SUN 28	LOCH SUNART	К		A/B		28

TOURING CALENDAR 1998 (Cont'd

	TOURING CALENDAR 1	998 (Con	<u>t'd)</u>	
DATE(S)	AREA	KAYAK /	GRADE	TOUR NO
JULY				
FRI3/MON6	SHETLAND SEA KAYAK SYMPOSIU	М		29
SAT 4 / SUN 5	BENDERLOCH / LOCH ETIVE	к	A/B	30
SAT 4 / SUN 5	CROWLIN ISLANDS	к	8	31
	PAPA STOUR MEET - SHETLAND ISLANDS	К	A/B	32
SUN 19	BANFF COAST	к	A/B	33
SAT 25 / SUN 26	FIFE COAST	к	A/B	34
AUGUST				
SAT 1 / SUN 2	MYSTERY TOUR	K	A/B	35
SAT 8 / SUN 9	CRAIGNISH	K	A/B	36
SAT 15 / SUN 16	EAST COAST WEEKEND	к	A/B	37
SAT 29 / SUN 30	2 DAYS ON THE FIRTH OF CLYDE	K	Α	38
SEPTEMBER				
FRI 4 / SUN 6	ROUND ISLE OF BUTE	K	A/B	39
SAT 12 / SUN 13	NORTH COAST	к	B/C	40
SAT 19 / SUN 20	"BEACHWATCH" (WATCH PADDLES	R FOR FURTH	HER DETAILS	41
SUN 20	HELENSBURGH	к	Α	42
OCTOBER				
SAT 10 / SUN 11	LOCH LOMOND	С	A	43
NOVEMBER				
SAT 21 / SUN 22	2 LAKES TOUR - LAKE DISTRICT: ULLSWATER AND WINDERMERE	К	Α	44
GRADINGS:	A = UP TO PROFICIENCY B =	PROFICIE	NCY+ C=	ADVANCED
23-25th May	Jersey Sea Kayak Symposium	Jersey, Channel	Isles	Tom Tumer, 6, Glos Alexa La Rue Sara St Lawrence, Jersey, JE3 1
4-7 July	Shetland Sea Kayak Symposium	Island of Roe	Muckle	K.Linklater, Waltham, Ireland, Bigton, Shetland.

TOURING CALENDAR ORGANISERS 1998 (Cont'd)

	TOUR	RING CALENDAR ORGAN	ISERS 1998 (Cont'd)			TOU	IRING CALENDAR ORGA	NISERS 1998	
				•)	-	
TOUR NO		ORGANISER	TEL	EPHON. D	TOUR NO		ORGANISER		TELEPHONE NO
23	JIM WEIR, 6 TU	RNBERRY DRIVE, BRIDGE OF WEIR		01505 613048	1	MIKE DALES, BEAU 01738 850776	TYFIELD HOUSE, ABERARGIE, PERT	H PH2 9NF	
24	ABERDEEN KA	YAK CLUB C/O FIONA DOUGLAS	AD43 NUD	01224 735523	2		ENSHAW ROAD, BISHOPTON, RENF	REWSHIRE PA7 5HN	01505 863885
		RESCENT, MILLTIMBER, ABERDEEN A	35 13 ONF		3	STEFAN JANIK, 31 N	MERTON AVENUE, LOCHEE, DUNDER	E DD2 3LY	01382 611374
25	SHEPHERDS C	DOD, COTTAGE, BARROCK MAINS, LYTH, W	ICK. CAITHNESS	01955 641367	4	LINDA GODFREY, 43	COLL GARDENS, DREGHORN, AYR	SHIRE KA11 4EA	01294 216273
26	RON MATHER.	11 REDWOOD CRESCENT, BISHOPT	ON, RENFREWSHIRE	01505 863694	5	MARY CONACHER,	81 DUNDEE ROAD, WEST FERRY, DU	UNDEE DD5 1LZ	01382 776021
27	MALLAIG & DIS DRIMSALLIE M	STRICT CANOE CLUB. C/O ROGER BA IILL, GLENFINNAN PH37 4LT	RNES.	01397 722355	6		CLUB C/O DUNCAN WINNING ROAD, LARGS, AYRSHIRE KA30 8QX	<	01475 673787
28	SANDY DONAL	.D, 15 SMEATON AVENUE, TORRANC	E. STIRLINGSHIRE G64 4BG	01360 622541	7		I, MILL OF FOCHEL COTTAGE, BARTI EENSHIRE AB51 8TH	HOL CHAPEL.	01651 806230
29	KEVIN LINKLA	TER, WALTHAM, IRELAND, BIGTON, S	SHETLAND ZE2 9JA	01950 422325	8		KENMAY GARDENS, DUNDEE DD4 7	7TU	01382 462504
30	COLIN BROWN	N, MILL COTTAGE, SLOCKAVULLIN, LO	OCHGILPHEAD PA31 8QG	01546 510319	9		RENSHAW ROAD, BISHOPTON, RENF		01505 863885
31		MSON, MILL OF FOCHEL COTTAGE, B BERDEENSHIRE AB51 8TH	ARTHOL CHAPEL.	01651 806230	10		TONEFIELD, SHORE ROAD, CLYNDE		01436 831664
22		TER, WALTHAM, IRELAND, BIGTON, S	SHETI AND 7E2 9JA	01950 422325	11	LYNNE WALKER,			01369 702607
32 33		E, CORONADO, INVERUGIE, PETERHE		01779 838424		41 CAMMESREINAC	CH CRESCENT, HUNTER'S QUAY, DU	INOON PA23 8JZ	
34		2 VICTORIA AVENUE, MILNATHORT,		01577 862600	12		IERIE AVENUE, CROSSLEE, HOUSTO	ON PA6 7BQ	01505 612687
35		, 11 REDWOOD CRESCENT, BISHOP		01505 863694	13		AK CLUB, C/O KEN SPENCE, ARK, EDINBURGH EH16 5PS		0131 667 8277
36		N, MILL COTTAGE, SLOCKAVULLIN, LO		01546 510319	14	JIM WEIR, 6 TURNB	ERRY DRIVE, BRIDGE OF WEIR		01505 613048
37	MIKE DALES,	BEAUTYFIELD HOUSE, ABERARGIE,	PERTH PH2 9NF		15	RONALD CAMERON	N, 8 WELL STREET, TAIN IV19 1HJ		01862 892538
38	01738 850776 LINDA GODES	REY, 43 COLL GARDENS, DREGHORN,	AYRSHIRE KA11 4EA	01294 216273	16	HUGH KERR, 14 BR	IERIE AVENUE, CROSSLEE, HOUST	ON PA6 7BQ	01505 612687
39	GRAEME BRU	JCE, 7 THE COTTAGES, GREENHILLS	i, by BEITH, AYRSHIRE KA15 1H	J 01560 484579	17		CLUB C/O DUNCAN WINNING I ROAD, LARGS, AYRSHIRE KA30 8Q	x	01475 673787
40	BOB SILVERV SHEPHERDS	VOOD, COTTAGE, BARROCK MAINS, LYTH, V	WICK, CAITHNESS	01955 641367	18	JOHN RAE, 33 MEADOWRIGGS, ALNWICK, NORTHUMBERLAND			01665 603176
41		BEAUTYFIELD HOUSE, ABERARGIE.	PERTH PH2 9NF		19	IAN WEBSTER, 29 F	RENSHAW ROAD, BISHOPTON, RENF	REWSHIRE PA7 5HN	01505 863885
42	01738 850776 JIM MCCULLO	OCH, STONEFIELD, SHORE ROAD, CL	YNDER G84 0JH .	01436 831664	20	STEFAN JANIK, 31 I	MERTON AVENUE, LOCHEE, DUNDE	E DD2 3LY	01382 611374
43	GRAHAM SM	ITH, 70 KENMAY GARDENS, DUNDEE	DD4 7TU	01382 462504	21		CLUB C/O BILL DUNLOP DALRY, AYRSHIRE KA24 5AS		01294 833401
44	NIGEL LONG! NR PENRITH	WORTH AND ALISON SMITH, STAG C , CUMBRIA CA10 1HB	OTTAGE, MELMERBY,	01768 881066	22		MORAR CRESCENT, BISHOPTON, RE	ENFREWSHIRE PA7 50	
-		EVENTS PAGE 1998	3						
DATE		EVENT.	LOCATION	DETAILS FROM	28-	31st August	Festival of the Sea	Portsmouth	Building 1/78,
21-23rd	August	Swedish Sea Kayak Symposium	Island of Orust Sweden	Karin Mentzing, Repslagaregatan 13 S-611 32 Nykoping. Sweden.					The Parade, Post Point 16, H.M.Naval Base, Portsmouth, PO13NH
2-4th Ma	ay	Anglesey Sea Symposium	A.S.S.C. Holyhead Anglesey.	Nigel Dennis, ASSC, PorthDafarch, Trearddur Bay, Holyhead, Anglesey, N. Wales, LL65 2LP	21s	t June.	Coquet Canoe Club Round the Island Race	Amble, Northumberla	Martin Meling, nd 20, Windermere, Cleadon Village, Sunderland, SR6 7QQ

..... RIC FREEMAN

" Nahanni Expeditions "

Hallcliffe House, DerbyShire, DE6 IQA Tet: 0966 - 138158.

The 1st Solo Circumnavigation Of The Whole Of The British Isles By Sea Kayak.

Dear fellow paddler.

On March 1st 1998 I will start off on my expedition to circumnavigate the whole of the British Isles (Including Ireland) in my sea kayak, This literally will by a paddle around the outermost seaward side of all inhabited land. A journey of approximately 3340 Miles.

The expedition has been registered with The Royal Geographic Society, Kensington Gore, and has been classified to fall into the category of "A Singular Event" by Guinness publishing, London, therefore having no time limit for completion. I would like to do the whole journey in 9 Months, but we all know just how Bad weather can total wreak well laid plans and it may well extend up to a year.

Although I am doing this primarily as a "solo" trip I would love to meet as many ISKA members, and their friends, family, Local Canoe Clubs, Scout Groups or solo paddlers joining me for a days (or More) paddle whilst I am in/near there area. <u>But I will need AT I.EAST 4 weeks advanced notice of this!</u>!

If anyone would like to write to me with any suggestions of things that they feel would make a nice spot for a visit, photograph or an overnight camp, I would be love to here from them -

It is <u>vital</u> that you Write "FROM LS.K.A." on the Top on the front of the envelope - or it may not be opened until the end of my trip!!

10-12 July.	Papa Stour	Shetland.	K.Linklater (as above)
5-14th October	Sea Kayaking World	Manus Province	SKWC Office
	Cup	Papua New Guinea	P.O.Box 448, Lorengau, Manus Province Papua New Guinea
21-23 August	Arbroath SEA FEST	Arbroath, Montrose, Scotland	Jeudi Hunter, Angus Council, Harbour Building, Ferryden, Montrose, DD10 9SL
14-15 March	Dutch Canoe Exhibition	Sportcomplex, Merwestein, Utrecht.	NKB Postbus 1160, NL-3800 BD Amersfoort, The Netherlands.

Arbroath SEA FEST took place for the first time in August 1997, and was declared a resounding success, attracting at least 15,000 people over the weekend. The festival programme attracted excellent pre and post event local and national media coverage, including the BBC and ITV.

The festival is project managed by Angus Council, supported by Scottish Enterprise Tayside and Angus and Dundee Tourist Board. Angus Council are main co-ordinators of the festival, strongly supported by a steering group of local organisations who manage different elements of the programme.

Arbroath SEA FEST is a unique coastal festival because of the content of the programme, especially the Fisher Wedding Procession and the Smokie Trail. It's charm and attraction also stems from the combination of vigorous and lively community involvement underpinning the authentic themed programme. The result is a wonderful festival atmosphere full of spontaneous fun events which delight both locals and visitors to the town.

The SEA FEST programme is located mainly around the harbour area, with a range of sea food, water, arts and community based events ongoing throughout the three days. The range of high quality sea food available in Arbroath is a highlight of the experience for many visitors. Market research shows that the vast majority of visitors were delighted with the programme and felt the event was very good value.

The festival organisers are now planning to build upon this year's success for next year. The core of popular events will be retained and programmed with the same creative flair which gives the event its unique flavour. New elements to the programme are planned, many of which are innovative, but also events which underpin the wholesome family day out by the sea. This year the programme is planned to extend to other parts of the town including Arbroath High Street and Arbroath Abbey. A good balance of events will ensure visitors have plenty to do, and leave Arbroath with unforgettable memories of warmth and welcome.

Brief lives

THE WEATHER

Here is one of life's insoluble mysteries. If there's been a bit of bad weather, why is it always the biggest item on the news? We didn't need to be told last week that 'Britain has been lashed by gales'. We already knew . . .

The Newspaper Beaufort scale: 0, no media interest in weather; 1, slight interest on science pages; 2, Long to rain over us! It's the wettest January since records began; 3, two-page feature by Suzanne Charlton; 4, The Weird World of Weather, a 10-page celebrity special; 5, local radio

warns: stay at home;
6, Britain lashed by
gales; 7, It's
hurricane night
on BBC2
Early forecasts:
One of the longeststanding weather
forecasts insists that if it
rains on St Swithinf's
Day — July 15 — it will
rain for the next 40

days. This seems to be

based on an incident

in 971, when the

bones of St Swithin were to be reburied in Winchester Cathedral, When it rained, the job was postponed until the next

sunny day, which came 40 days later Weather folklore: by the standards of the day, the St Swithin's Day forecast was quite sophisticated. Most forecasts were based on wisdom passed down the generations in easy-to-remember rhyming form: "When the beggar with the plague is a-scratching of his sores, there's a low-pressure area coming in from the Azores"

Modern folklore: "Red sky at noon,

it's Richard Branson's balloon. Red sky in the morning, it's taken off without warning. Red sky at night, he's abandoned the flight'

Weather victims: Roy Sullivan, a park ranger in Virginia, is listed in the Guinness Book of Records as the man most often

> struck by lightning. He was hit seven times. once losing a toenail and once losing an eyebrow. He survived them all, only to commit suicide in 1983, apparently following a doomed love affair Nasty bit of weather: if you're recovering from the gales, be thankful you don't live in Commonwealth Bay, Antarctica, where winds of up to 200mph have been recorded. Not only that, but the nightlife's terrible

The future: after 40 days and 40 nights of continuous rain, Ford unveils its latest model, an ark. It runs on unleaded fuel and can carry animals two by two (4x4 also available). "It's got a spacious leather interior and has our-powered acceleration that can reach 60mph in five days," reports Jeremy Clarkson. "If it were a bloke, this new Ford could remove a bra by tickling a woman under the arms. It's a Revelation"

Dear John,

Apologies for the lateness in paying my subs.

The treatise on Optimus stoves in the recent newsletter filled me with nostalgia. Now in my mid-fifties I've been active in outdoor pursuits since my teens. One of the earliest pieces of equipment that I purchased was an Optimus stove, and it's still going strong. Apart from washer replacement and once employing our local plumber to braze on a bit which had broken off, its performance has been trouble-free.

When meths has been unavailable I've simply used paraffin in the burner tray with a lighted match as a wick. A bit sooty but its better than cold soup. We were out of meths once on a trip from Ayr to Arran to Kintyre and back. A forage inland found us in a wee chemist's shop with the wee chemist peering at us over his spectacles and a large register stating that he couldnae sell us meths without being satisfied about our intended use for it. Admittedly our appearance had, and probably smelt, that no-fixed-abode air. 'Where did ye spend last nicht?' Truthfully we weren't sure and without the map we couldn't point out our camping place. In the awkward silence that followed it seemed as if we weren't to receive any meths and were likely to be reported a vagrants to the local constabulary. But eventually he believed our story of camping just above a beach overlooking the sea. Smiling, he wrote in his register and asked us to countersign his entry - 'Present address - Sea View Guest House, Arran'

Martin Julian Leeds From: david powell <dhpowell@clara.net>

To: jramwell@provider.co.uk Subject: article for ISKA newsletter Date: 03 January 1998 22:57

The Dover Strait

For such a tempting paddle, one does not hear much about paddling across the Dover Strait. Perhaps paddlers are intimidated by the cross-channel traffic? Common sense can minimise the risks; by this I mean paddling north of a line between Dover to Calais; or south of a line between Folkestone to Boulogne. One compelling reason for choosing Calais or Boulogne as your objective is that you can get the ferry back, and relax with a cold beer afterwards! Here are two paddles I did in August 1991.

Deal-Calais

This is a sensational paddle, about 20 miles; it took me around 6 hours. Paddling straight out from Dover is intimidating and probably reckless, to say the least, so I started at Deal. On a clear day you can see the outline of Cap Gris-Nez from here and conditions were sunny and excellent. About 5 miles out, I hit a lumpy sea for about an hour. I didn't realise it at the time, but this was the Goodwin Sands, a dangerous place to be in anything but calm weather. Farther out, conditions improved, occasionally cresting waves with a SW breeze. I was soon in the southbound shipping lane about 5 miles off South Foreland. The first freighter passed close in front of me; it's surprising how rapidly they bear down when they are heading straight for you! I quickly learned to stop and wait for close ones to pass. Later on a huge ferry probably heading from Ostend to Dover crossed my path well ahead. Most of the time I could see around 20 tankers, all around me, but they're dead predictable, and in good visibility are not really a problem.

By midway, I could see Calais clearly, now directly south, and I passed lots of huge bouys about half an hours' paddling distance apart. About 5 miles off Calais I kept my eye on coastal ferries trailing plumes of spray on the horizon, but they didn't come near me. I landed on a beach about 2 miles east of Calais, after a close encounter with a hovercraft. I first saw it about a mile behind me when I was about a mile off the beach, and I had difficulty judging its direction of travel. It passed about 100m away, and roared off up the beach and was gone as quickly as it had appeared. I had inadvertently landed on the hoverport beach!

Folkestone-Boulogne

I did this gripping crossing with two friends from London, Dom Gribbin and Dave Godwin. It's about 30 miles, and took us 9 hours. Poor visibility at Folkestone; England disappeared after about one hour. There was a distinct lack of shipping, only about two ships heading south; a very long stretch in mid channel with no traffic; 3 or 4 ships heading north in the French lane. We could often hear the drone of tankers, but seldom saw them. Sometimes we thought we saw a buoy or a ship, but nothing ever materialised or it turned out to be a seagull. Conditions were rather trying.

6 hours into the trip we spotted a ferry, a long way off, emblazoned with P&O livery. It was heading SE and we knew it must be headed for Boulogne. We used it to check our bearing before it disappeared. Another couple of hours and faint landmarks slowly appeared out of the haze. We had arrived bang on target, which was absolutely bloody incredible given the circumstances!

"THEM WERE'T DAYS"

by Rick Jones, Matlock, Derbyshire.

When I was a lad I'd only done a little bit of sea paddling.

One day, early May, I went to Anglesey. I was to take part in one of the early Nordkapp meetings - you know, the one's where you got in free if you owned a Nordkapp sea kayak. so I turned up with my 'Hutchinsons' Armchair'.

There were'nt many people but they were friendly. If like me you had not done much on the sea they looked after you, kept an eye on you, encouraged you. This was very important to me, - that support and advice. I still remember chewing on Christine Carter's flapjack.

At last year' Nordkapp Symposium a few of us old codgers gave thought to what we could remember; how is stuck in our memories, how it gave us such delight and enjoyment that we returned every year.

So at this year's Symposium there will be a couple of days on which such civilised and friendly paddles will be on offer. It serves a good purpose. If you haven't done much on the sea or don't get on it that often it gives you the opportunity to be out with a group with a variety of experience. There won't be a feeling that you have to 'perform' or prove yourself. This was something I appreciated that first time.

These paddles will be on the Saturday and Sunday, we meet in the marquee in the morning to find out who and how many want to come and then we explain where we are off to and what to expect. Remember you'll need to have plenty of grub.

So if you feel that you would like to be looked after a little, you will be. More so if you bring some nice cakes!!

If you require a kayak on loan then ring Nigel Dennis at A.S.S.C. on 01407 762525 well in advance of the May Symposium.

Make sure you bring some nice weather with you and we should have a great day.

To: jramwell@provider.co.uk Subject: iska

Date: 05 January 1998 19:53

Just trying out the technology - subs heading your way by post. If you do "Sits Vac" in the newsletter the following may be of interest to members or their contacts, as we are doing more and more expedition paddling using both doubles and sea boats:

Outward Bound Scotland has vacancies for a permanent instructor and a number of fixed term contracts. Applicants should possess high level NGBs in more than one discipline and several years experience in this type of work. Responsibilities to eventually include course directing, and work across the range of the Centre's programmes. Fixed term contracts will be for a max of two years.

Further details or send CV to: Tony Shepherd, General Manager, Outward Bound Scotland, Fort William, Inverness-shire, PH33 7NN.

Regards John Greener

Brixham Devon TQ5 9UW fom Hutchinson

Some fellow paddlers may be interested in saving on radio batteries when on sea trips, or wherever else they may venture in 1998. I recently bought an excellent dynamo and solar powered transistor interest other sea paddlers, I attach a copy of the original newspaper advertisement Daily 7 E. a battery radio (with

In case it might

newspaper.

Amazıng wind-up. inpact, portable, excellent reception

solar powered portable radio requires no external power source only £,19.95

This clever, compact AM/FM radio requires no external power source, and yet gives you high sensitivity reception and superb crystal clear sound. Using the very latest precision circuitry it features an internal, rechargeable battery which can be charged by an integral dynamo, manually wound by turning the handle on the side, the in-built solar panel or via

Choose a type of recharging to suit your circumstances. If you're outdoors or on the move simply wind the dynamo or rely on sunlight to keep battery power topped up. When indoors use a DC adapter (not supplied). When fully charged, the battery can provide up to 8 hours of continuous listening pleasure. And on those occasions when you decide to use more conventional power sources, simply slip in a pair of AA batteries (not supplied). The perfect finishing touches are an LED station indicator and a high fidelity loudspeaker. This superb radio is ideal for travelling and holidays, but is equally suited for use at home. Order today for just £19.95 - and never worry about batteries again.

ORDER BY PHONE OR BY POST

CALL 01509 638625

24 hours a day, 7 days a week, to place an order paying by credit card service. Enquiry lines open 8.30 to 19.00 Monday to Friday, 8.30 to 16.30 Samrday and Sunday. Please quote Ref. V1771

W USE THE COUPON

order (name and address on back), or quoting your credit card number. PLEASE DO NOT SEND CASH

Send your payment and coupon to: THE DAILY TELEGRAPH SOLAR/DYNAMO RADIO OFFER (V1771), BELTON ROAD WEST. LOUGHBOROUGH, LEICS LEI1 5XL.

DELIVERY
Can only be made to addresses in the UK. Although we aim to despatch as soon as nossible nlesse allow

V1771.H464 Solar/dynamo radio		€19.95	
Please indicate us box quanoty required. I enclose crossed cheque/PO value_ TELEGRAPH OFFERS (no cash please) or di Delta/MasterCard/American Express account Cited Number Please use block capitals Expiry Mr/Mrs/Miss (Initials) Address Address	ebit m	y Access/	Visa/

Dear Paddlers.

In the meantime, thanks for sending me the excellent ISKA newsletter

We are very happy to introduce to your club members Terra Santa Kayak Expeditions - sea kayak tours in Israel & Sinai.

We are the first to run expeditions on:

The Red Sea

The Sea of Galilee

The Mediterranean Sea

We offer:

- Small Groups B.C.U. Instructors
- Quality Equipment
- Sunny Weather
- Sandy Beaches

- Historical Sites
- Surfing
- Coral Reefs (Snorkeling)
- Oriental Food

For further information contact us at:

Terra Santa Kayak Expeditions

Tel: +972-3-972-1804 Fax: +972-3-979-1192 E-mail: dy@netvision.net.il

P.O.Box 1064 Shoham Israel

Dear John

Keeping a Weather Eye Out

Understand weather terminology and be able to read weather conditions before you pack your gear

By Shelley Johnson

ince even the most powerful supercomputers are unable to accurately predict weather on a local scale, people often shrug and accept what comes. For kayakers, this approach is foolhardy.

Preparing for the weather starts long before you pack your gear and load your boat. You need to monitor both weather reports for your area and national weather maps to ascertain developing patterns that could affect your pad-

dling. Small weather radios, Internet weather sites, and local TV weather reports all make it easy to pick up current weather information.

Get familiar with weather terminology and understand what it means. Chapman Piloting is an excellent source of weather definitions and explanations for small boaters. For instance, know that wind directions are reported as blowing from (SE, NW, W, etc.) or blowing to (offshore, onshore). Knowing the wind direction of offshore breezes for your paddling area is critical. You might be comfortable paddling in a 15- to 20knot wind, but not if it is blowing offshore. This knowledge is essential for trip planning, even for an afternoon paddle.

Since wind is such a critical factor for sea kayakers, get in the habit of observing water and land features at different wind velocities. Watch how the surface of the water can change from ripples to whitecaps to streaks, or how trees sway as the wind velocity changes. A handy reference for relating wind velocity to water conditions is called the Beaufort scale. Get a copy and relate it to what you observe in your own paddling area.

can be dangerous; winds may shift and increase dramatically. However, the other side of a cold front can be delightful paddling, so timing is everything. Know that an offshore breeze is a condition to be taken seriously. Be aware of those wind directions whose effects are magnified by such topographical features as narrow channels, headlands, shoals, and the like.

Review the relationship between your tides and the forecast direction. If a strong tidal flow is opposed by a strong wind, yo expect chop and steepening waves. In a constricted area such as a river mouth, this can be dangerous. By listening to weather reports and relating them to the chart of your paddling area, you can avoid this situation.

Weather changes rapidly, and wind direction may shift over the course of a day. Local sea breezes may develop during the afternoon or weather fronts moving into an area may cause a significant change in the wind's direction and velocity. Watch cloud movements and formations; they are enormously useful in predicting the local weather pattern. Observe how fast they are moving. Look for ragged edges on clouds or the towering anvil shape of a cumulonimbus cloud, or thunderhead, which suggests violent forces aloft and instability.

If you're planning a multi-day excursion, look for cloud patterns that signal changes in the weather: high wispy clouds that lower and gradually thicken, for example, or clearly defined front lines. Compare your observations to the weather reports to test your predictions.

Knowing weather is essential for any boater.

