

THE SEA CANOEIST NEWSLETTER

Issue 71

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EDITORIAL

I never thought I would see the day when there was a topic heading devoted to sea kayaking racing in this newsletter. Although my views are well known, KASK and myself in particular cannot adopt a ostrich like head in the sand approach and ignore this potential growth sport. The edito-

rial by Julia Thorn, reprinted from the 'Auckland Canoe Club Newsletter', touches on the motivation, and pros and cons of racing, with a touch of humour thrown in.

Regarding my response to Grant Stone's 'Points to Consider when Buying a Kayak,' two letters and a email were received - a record in terms of correspondence - and I have included an article by Glyn Dickson, also reprinted from the 'Auckland Canoe Club Newsletter' which is his response to Grant's article on fibreglass/kevlar. I have included what I consider an excellent article on amateur kayak repairs by Phil Daligan from the 'Atlantic Coastal Kayaker' newsletter. Although we already have access to this information in the KASK Handbook, I considered Phil's article was well written, full of pertinent information with a touch of humour.

In mid September, Conrad Edwards and I set off from Noumea for a 550 mile anticlockwise circumnavigation of New Caledonia. I have included a brief synopsis of the trip. Transporting the Nordkapps by air took quite a bit of scheming, and entailed flying via Sydney to utilize both 767's and DC10's, but was not a problem. I can heartily recommend this magic place as a destination for magic scenery, challenging paddling and friendly locals.

The trip calendars for the sea kayaking networks have grown like topsy. So I have included only the contact addresses this time rather than attempting to reproduce a full listing of all the trips.

KASKFORUM

The 10th anniversary KASK Forum will be held at Mapua at Easter 1998.

Date: 10 - 13 April 1998

Venue: Mapua Leisure Park

Mapua is small village on the edge of Tasman Bay, some 20 minutes drive west from Nelson. This clothing optional leisure park fronts both Tasman Bay and the Mapua estuary, and is where Graham Egarr held the first forum in 1988. A magic place for a kayak meet.

The forum will include an overnight paddle to Kina Peninsula. The registration fee including lunches and two evening meals is calculated at \$90. You will need to bring breakfast food and gourmet food for the overnighter. A pick up and delivery for paddlers and kayaks is planned for the 5.30pm sailing from Wellington on Thursday 9 April, returning for the 10.30am sailing from Picton on Monday 13 April. Cost including kayak is \$40 return.

Accommodation needs to be booked at an early stage. The costs are listed below:

- cabins single \$9 per night
- cabins double \$36 per night
- tent sites \$9

Your must book your own accomodation with the Mapua Leisure Park. Phone: 03 540266.

More details separately with this newslettter.

Fuels for Portable Stoves

from Ray Forsyth
reprinted from the Canterbury
Sea Kayak Network Newsletter
No.20

Considerable confusion exists over the types of fuel for use in portable stoves. This is caused in the main by similar or generic names being used for fuel types where a very explicit fuel type is required. This is a very important subject since the wrong fuel in a stove is potentially lethal - at best you are left with cold, uncooked food! The problem is compounded by the same terms having different meanings in different countries, and also changes in meaning over time. The following article states the current situation in NZ and describes suitable products with their Kiwi terminology.

Fuels used in portable stoves vary from propane and butane (which are gases at normal temperature and pressure) to naphtha based solid fuels. In between are a wide and confusing array of liquids - known collectively as "White Spirits". For the purpose of this discussion the most important properties of these liquids are their flash points and their boiling points.

The flash point is defined as "the lowest temperature at which vapour rising from a sample will ignite on application of a flame under specified conditions."

The boiling point is defined as "the temperature at which a pure liquid is converted into vapour without change in temperature." In a complex mixture of liquids, as found in most stove fuels, boiling will take place over a range of temperatures as the different components boil off.

This is unimportant when using liquid fuels as they are removed from the reservoir in liquid form and therefore fractionation doesn't occur. However, fractionation does occur when using gaseous fuels such as propane and butane and for this reason gas bottles should be emptied completely before refilling.

Three types of liquid fuels are in common use for burning in portable stoves:

- gasoline type fuels
- alcohol type fuels
- kerosene (kerosene) type fuels

These three fuel types are collectively known as White Spirits (note the "s") yet one of the kerosene type fuels is also known as White Spirit. In many publications the term "White Spirit" is used to refer to the gasoline type fuels. This usage should be discouraged at every opportunity since it can lead to the volatile gasoline type product being used in a stove requiring a fuel of the kerosene type.

Gasoline Type Fuels

The liquid fuels with the lowest flash points, and thus the greatest potential danger, are the gasoline type. The flash point is below -22deg C and the boiling points between 55 and 120 deg C.

The fuel used in Gasoline Stoves is often referred to as unleaded Petrol but is NOT automotive fuel. Unleaded automotive fuel is 91 octane whilst the fuel for stoves is about 73 octane. Unleaded automotive fuel is designed to explode efficiently in the engine cylinder and to enhance this explosion various additives are included in the fuel. There is/was a popular brand of portable stove produced in the USA and designed to burn their unleaded automotive fuel. It is strongly recommended that you don't burn the present NZ 'unleaded' fuel as it contains toxic alternatives to lead additives

The fuel for petroleum type stoves should be purchased by specific brand name or by technical solvent name. These are:

Britolite (BP),
Calite (Caltex)
Pegasol AA (Mobil),
Shellite (Shell)
or Shell X55
Coleman Fuel (Naphtha) (Wells Agencies)
Avoid the use of more generic terms such as Stove Naphtha, Unleaded Petrol, White Gasoline, White Fuel or Naphtha Gas as these are not well defined and can lead to confusion.

Alcohol Type Fuels

The fuel in common use for this type of stove is Methylated Spirits. This is denatured ethyl alcohol. It has a flash point of 14 deg C and a boiling point of 78 deg C. There is no confusion for this fuel as the product is known universally by the same name. It has limited use as a fuel at high altitudes because of its low heat output but stoves using this fuel are simple to operate and are often used in outdoor education. It is used as a pre heating fuel for some kerosene type stoves. It is usually dyed purple for identification.

If using alcohol fuels, remember that they burn with an almost invisible flame. Methanol is not normally available, and should not be used. If used, remember that it gives off a particularly toxic vapour, which is hard to detect by smell.

Kerosene Type Fuels

There are two distinct products in this category. The product technically known as "White Spirit" (no "s") or Stoddard Solvent is a light kerosene type product with a flash point of 36 deg C and a boiling point range of about 150 - 200 deg C.

This fuel can be used in any stove requiring "Kerosene or White Spirit", however, the use of the term White Spirit should be avoided to prevent possible confusion with the gasoline type products. Instead brand names or solvent type should be specified:
All Purpose Solvent (Mobil)
Mobil Dry Cleaner (Mobil)
Pegasol (Mobil)
Shell White Spirit (Shell)
Stoddard Solvent (BP)
Stoddard Solvent (Caltex)

The other product in the kerosene category is Lighting Kerosene. It has a minimum flash point of 43 deg C and a boiling point range of 150 - 250 deg C. This fuel is very similar to Stoddard Solvent but is not as clean burning and its use in portable stoves will result in the need for frequent cleaning. When available Stoddard Solvent should be used in preference to Kerosene.

There is no confusion for this type of fuel as it is universally known as Premium grade Kerosene or Lighting Kerosene. It is normally water white but is sometimes dyed blue for identification. Kerosene stoves may require pre-heating with Methylated Spirits.

Examples of Stove Specifications

Optimus 324 Rider.

This stove specifies the use of White Gasoline. This is a gasoline type stove and the correct fuel is Britolite, Calite, Pegasol AA, Shellite or Shell X55 or Coleman fuel.

Optimus 8R

The instructions with this stove specify the use of:

Camp stove fuel only

No automotive fuel permitted (USA or Canada)

Use only low grade petrol (UK)

This is a stove needing a gasoline type fuel and therefore the correct fuel for this stove is the same as for the Optimus 324 Rider.

SunPower R-808

This is a copy of the Optimus 8R and should use the same fuel..

Whisperlite

This stove is available in two different versions - standard and international. The standard version is designed for White Gas whilst the international version burns either White Gas or Kerosene, but requires the jet to be changed when using different fuels.

The White Gas version uses the gasoline based fuel and thus the correct fuel is Britolite, Calite, Pegasol AA, Shellite, Shell X55 or Coleman Fuel.

The Kerosene version can use ordinary Lighting Kerosene but when available Stoddard Solvent will give more satisfactory results because of the cleaner burning, slightly lower flash point and lower boiling point range.

General Comments.

In all cases where a stove requires pre-heating it is essential to ensure that this is carried out sufficiently to vaporise the liquid fuel completely. If fuel is emitted in liquid form a flare up

will occur. Stoddard Solvent is recommended for pre-heating in preference to methylated spirit because of the greater heat output. Remember that cooling of the pre-heating tubes can occur after the stove is alight and this will also result in flare ups. This is particularly important with stoves such as Whisperlite and Optimus 8R where the priming pan is in thermal contact with the pre-heating tube. Care must be taken not to place these stoves in direct contact with snow or ice. In the event of a flare up, cover the stove quickly with an upturned billy, wet towel etc - don't try to move the stove.

Finally, always let the stove cool down before re-filling it and never refill inside a hut. Take the stove outside and use a torch not a candle. Do not use a stove inside a tent. And never leave a lit stove unattended in a building

Red and Yellow fuel identifying stickers are available for the various stove types. C.O.W (Canoe & Outdoor World) have a supply of stickers

NZ Mountain Safety Info Bulletin 1991 #35.

Submitted and amended by Ray Forsyth

***NEWLIGHTWEIGHT
WATERPROOFVHF
RADIO***

Information pamphlet from Michael Swift.

A VHF Radio that is completely waterproof. The right size, weight, and price for sea kayakers. Michael has negotiated to supply these units direct from the importer to the kayak networks in New Zealand.

Features include:

- waterproof
- triple watch mode
- priority channel start-up
- one touch channel 16/9
- 10 weather channels
- weather alert
- international USA channels
- all channel scan
- table mounted charger
- rechargeable battery pack
- key lock

- back lit display
- belt clip
- wrist strap
- weight = 235 gms
- size 120x60x30mm
- battery indicator allows monitoring of battery charging conditions to allow peak performance
- LCD display allows visibility from any angle
- PRICE = \$348
- Insured courier post North & South Islands, \$4

Information & Sales:

Michael Swift
33 Chorley Ave,
Massey,
Auckland.
Ph: 09 833 8124
Fax: 09 833 7894

In areas with VHF coverage, this new radio can be a life saver. The benefit of such a radio was fully utilized during the 1997 Wellington KASK Forum when Grant Rochfort called up a rescue for a paddler unable to cope with the conditions.

The facility to monitor weather channels and maintain communication between groups on the water is a real boon with such a radio. The price and weight appeals to me.

***TOPSPORTSHAVE
MOVEDSHOP***

Topsport Kayaking, Christchurch, has moved to 1091 Ferry Rd., which is on the estuary on the way to Sumner, just before the Ferrymead Bridge next to the Ferrymead Tavern. If you can't find the new location, the phone no: (03) 384 0405.

E Mail addresses

(Peter Simpson & Cathye Haddock)
simpson.haddock@xtra.co.nz
(Nigel Marsden)
nigelm@clear.net.nz
(Chrissie Williams)
chrissiew@netaccess.co.nz
(Sandy Ferguson)
a.ferguson@chem.canterbury.ac.nz
(Eddie van den Hurk)
"vdh"@xtra.co

TRIPREPORT

Hinchinbrook Island Trip

by

Alistair Suren and Steph Brown.

The dense rainforest formed an almost impenetrable canopy overhead, and only scattered shafts of light slanted their way tentatively to the dappled forest floor below. A mass of vegetation jostled busily skyward in a disorganised quest for light, and beneath this enchanted canopy a narrow path carelessly meandered its way to the beach between large buttress roots and sturdy strangler figs.

Upon walking into the open, we were struck by the sharp contrast to the shaded coolness of the rainforest. The brilliant midday sun reflected from a crystal clear sea and bounced its rays off the golden beaches than lay sandwiched between the sea and the rainforest. It took some time for our eyes to adjust to this sharp glare after the coolness of the rainforest as we walked slowly back to our camp. Our bare feet squeaked in the hot sand as we carried 10 litres of fresh, cool streamwater over our shoulders. Sweat pooled on our foreheads and trickled down our backs, over our freshly washed skin.

We looked to the sea, which had retreated to its lowest level as if avoiding the midday sun, and saw our kayaks lying half way up the sandy beach: a couple of stranded pilot whales patiently awaiting the return of the next high tide. High tide was over 5 hours ago, and the beach was now littered with the abstract expressions of the myriad of mud crabs that daily dug out their burrows which were flooded on the high tide. I was reminded of frozen fireworks in the sand, and amazed at the simple tenacity of these tiny animals that twice a day re-excavate their homes following the damaging high tide that inundates them.

We were in the middle of our 9 day kayak trip around Hinchinbrook Island, some 150 km south of Cairns,

and far enough North to escape most of the chills of the Christchurch winter. This particular beach that we were camped on offered all the superlatives that Hinchinbrook is famous for: rugged skyline, dense rainforests and mangrove swamps, pristine streams and almost deserted beaches that carried the footprints of only fellow kayakers and the occasional boater, as well as the odd trampers who were making the 4 day walk along the island's eastern seaboard.

Hinchinbrook Island is the world's largest World Heritage Island and is clothed in a rich tapestry of untouched tropical vegetation that contains some of the worlds oldest flowering plants. The island itself covers an area of 635 km², and rises to an altitude of 1142 m. Such a high relief in this small geographic region produces some sharply defined vegetational zones, from the high sub alpine fern and shrub fields to the lowland tropical rainforests and dense coastal mangroves.

These were especially fascinating, and it was a joy to be slowly gliding up some small coastal creek looking at the tangle of air breathing roots thrusting vertically skyward like stalactites in some surreal inverted cave. Mangroves are the true amphibians of the plant world, and appear just as happy growing in mud flats as they do drifting about on the high seas as young plants before they reach the next shore. Mature plants produce remarkably resistant "seedlings" that fall into the water and drift for weeks in the sea without any apparent deleterious effects. Indeed we often paddled past countless numbers of these small drifting lifeboats, wonderful testimony at the effectiveness of their dispersal method.

Mangrove seeds were not the only vegetation drifting off Hinchinbrook Island: countless coconuts also spent days bobbing just below the water surface. At first it was difficult to distinguish these from the heads of green sea turtles that slowly and myopically peered at us as we paddled past, but the coconuts never dived in such a graceful manner when we got

too close. These magnificent reptiles were numerous throughout the trip, and our silent mode of transport gave us a unique opportunity to paddle to within a few meters of these graceful animals before they silently dove into the welcoming depths of the translucent sea. Other animals commonly encountered from our kayaks were dolphins and dugongs, although never from close range. Starfish and crabs were also abundant on the warm granite cliffs that dropped precipitously into the water. That was one of the great things about this place, to be able to paddle alongside almost sheer cliffs that plunged into the water, and to hear the scurry of little crabs jumping into the sea as one slowly paddled by.

Most of our days paddling were for only about 4 hours, after which time there was ample opportunity to snorkel among wonderful reefs, or lie on a beach and watch the shadows quickly lengthen with the retreating day. Nightfall comes quickly to the tropics, and it was usual for us to be sitting in our camp cooking and eating a meal at 7pm in the dark. The Island is managed by the Queensland National parks authority, and permits are required for all overnight stays on the island. As part of issuing this permit, people are reminded of the no fire rule, and asked to always bring their own cookers. Water is no problem, as ample supplies are found at a number of small streams flowing from the cloud covered mountains. This is when the shear benefits of sea kayaking become apparent, as we were able to carry 15 litres of water each in our boats along with ample fresh food. Correctly packed against the hull of the boat where they were kept relatively cool by the sea, perishable items such as cheese and margarine remained relatively fresh for the 9 day trip, despite the afternoon highs in the mid 20s. Carrying a similar amount of food in packs would make for slow travel and sore backs, not to mention very rancid cheese!

We had just been for a walk up to an amazingly beautiful place called Zoe Falls where we lounged in a deep aquablue pool for a few hours, enjoying the freshwater against our skin for

the first time in about 5 days, and washing our salt encrusted clothes. These falls tumbled over mossy covered granite bedrock, falling into a deep circular pool, some 10 meters in diameter. Diving in to this, one saw schools of freshwater fish swimming around their watery playground, and over and around a silt covered tree branch nestled deep in middle of the pool. We needed to collect some more drinking water, which we had just finished carrying back to our camp, nestled on the boundary of the forest and the sand. Apart from a few trampers that were camped nearby, we had the beach to ourselves, and it was a real delight to lie under a tree breaking open coconuts and sharing stories about the joys of kayaking with our earthbound companions. The advantages of kayaking became apparent to them as we often met up with them over the next few days, tired from a 6hr walk through humid rainforests and finding relief to remove their heavy packs and lie on the beach where we had been resting after only a gentle 4 hour paddle, and quenching our thirsts on fresh coconut milk and Southern Comfort.

Most days we started paddling late, at about 10 or 11, when the tide had slowly started to come in again. Paddling conditions around the island are relatively protected, and although the afternoon trade winds usually picked up to about 15 - 20 knots, there was never too much of a swell to make paddling more than uncomfortable. It was however, amazing to often see high seas on the horizon beyond the outer reef some 20 km away, but luckily these swells never came inside the reef. Although one could paddle around the island in a day or two, we took the easy approach and only paddled for short times, at a fairly leisurely pace. Our longest day was the last, when we paddled from a small 2 ha islet called Garden Island back to the town of Cardwell. We had camped on Garden Island for the night, and felt like Robinson Crusoe cast upon a Pacific Island. This Island was small enough to be able to walk around in about 1 hour, and was full of lush rainforest plants surrounded by coconut palms. There was a artesian well

in the centre of the island, which although slightly tainted with sulphur, would have quenched many a sailor's thirst. After a relatively early night (no more Southern Comfort left) we made an early start, and were up just on sunrise. A quick breakfast saw us packing the boats and setting off, as we intended to make the most of the incoming tide and to reach Cardwell near high tide. Such a plan was to save us a long portage across the exposed mud flats if we had not arrived with the tide. This was our longest day paddling, and after almost 6 hours of slowly seeing the majesty of Hinchinbrook slide away on our port side, we finally landed at Cardwell, and ended our trip around paradise.

Unfortunately, the "paradise" as we experienced it may be lost, as plans for a large marina just north of Cardwell will surely mean the end of the deserted beaches and seas. One of the very sad things we both saw on this trip were the absurd quantities of flotsam and rubbish that littered some of the beaches that we camped on, or chose not to camp on. Most of this was refuse from the boatie brigade and fisherman, and consisted of fishing nets and lines, plastic drink containers, floats, beer cans and other disposables of the twentieth century. I carried out a whole front bulk head full of rubbish, but this made little difference to the actual amounts of rubbish washed up on the beaches. It's a pity that developers see only the dollars and cents when proposing developments near World Heritage areas, and do not have the sense to do something to minimise any adverse impact that their proposals may have on this northern Queensland jewel. Some call it progress: I can see only too well that we will have to travel even further to get to wilderness areas for our next trip.

Alistair Suren and Steph Brown.

SEAKAYAKRACING

The following is an editorial written by Julia Thorn for the October 1997 'Auckland Canoe Club Newsletter'. With the receipt of two letters regarding sea kayak races, I feel Julia's editorial places a personal, humorous perspective on the motivation and pros and cons of racing.

This seems to be a quiet time of year on the water. Quite a few trips have had to be cancelled, and in general it isn't always so easy to energise the old body for a couple of hours on the cold grey stuff.

But things will soon be looking up. The trip calendar is starting to fill up, and watch out for some excellent events later in the year. I notice that the racing scene is warming up too. There are lots of races, long and short, between now and the end of this year, after a sparse couple of months.

I often wonder why people race. Coming from a running and cycling background I've had quite some experience of races. At some point during almost every race I have questioned why I am out there doing this, and why I didn't just stay in bed, or better still go out for breakfast with the rest of the family.

So what is it about racing that gets people out there?

First and foremost you get through the scenery fast. Who wants to linger and take photos or stop to sigh over a breath taking view? Why bother to identify bird species along the way? Travel slowly and you run the risk of noticing too much, getting bogged down with details, getting drunk on the richness of it all. Anyway, you can always come back again later to check it out properly. Next year's race. Faster.

You can buy lots of fancy new gear to help get you round the course faster. Much expense can compensate for a multitude of inabilities. So the sports gear industry would have us believe.

I've swallowed it for one. You need an aerodynamic sprayskirt and a selection of paddles with variously shaped blades (like wing blades that help you fly faster). You need at least six kayaks to be fully prepared for any conditions on the day.

Also you don't have to chat to your companions during a race. You didn't select this sport to be sociable, did you? You can keep well away from anyone else in the race that you know, or at least that will be your aim, in surging ahead of them - dream on. In road races the silence of the early kilometres is eerie, until runners realise that they are not going to win after all and start chatting to each other.

Another good thing about racing is the complete exhaustion it brings by the end of the race. You won't be able to do much afterwards. If you're lucky there will be a team of keen supporters anxious to help put your boat on your roofrack, sort of just grateful to be able to be near you the great competitor. Household chores will be out of the question when you get home. You might just manage a hot bath. Of course someone else will have to let the water in. And bring you a cup of tea, or champagne depending on how much consolation you need, while you're soaking there.

Don't worry about it - you'll be looking fairly awful. Red face, wet hair etc; not generally a pretty sight.

Of course a major plus about races is that they never get cancelled. Once a race is in your diary you know you'll be doing it. No opportunity to wimp out because it's foggy or thundery or there's a cyclone close at hand. Your own common sense is not allowed to prevail. However unkind the conditions, some idiot will be out there offering up a challenge. You don't need to read the weather forecast that day or consult the tide tables, it's all been done for you.

So there you are. You go out there and paddle your guts out. You look revolting when you get home, if you can make it home that is, or spend the rest of the day at McDonalds. You've spent all your money so you can't

even afford to go to McDonalds. You didn't notice any of the world famous landmarks and sights along the course. All this and you came last.

But it was absolutely great. And you'll be back next year.

Yours in paddling (slowly)
Julia Thorn

UPDATE ON OCEANS SEA KAYAK CLASSIC

from Mike Hayes of the Auckland
Canoe Centre

An "UPDATE" on the Fourth Annual "Oceans Sea Kayak Classic" & "Auckland Canoe Centre Coastal Cruise", at Matauri Bay, Cavalli Islands.

On account of the atrocious weather conditions howling through the Cavalli Passage over the weekend of the 4th and 5th of October, the Oceans Sea Kayak Classic is postponed until Saturday March 28th and we will re-run the Auckland Canoe Centre Coastal Cruise on Sunday and Monday March the 29th and 30th.

We would be very pleased if you would print this information in the next Club Newsletter in-order to update all entrants and future participants with factual information. Unfortunately there seems to be some confusion as to whether March 28th is the same date as "Coastbusters" March 13th-I 5th) or falls during the Easter Break, (April 10th, I 1 th, I 2th).

In fact, naturally enough, we have been careful to select a date which does not fall on a long weekend, or to our knowledge,, clash with any other event.

A very big thank you for your help.
Many Thanks
Mike Hayes

1998 SEA KAYAKING WORLD CUP

**MANUS IS. PAPUA NEW
GUINEA**

Dear Paddlers

The Sea Kayaking World Cup invite teams of 4 paddlers to enter in this inaugural event that show-cases the skills and attributes of the sport. Staged over 10 days between October 5th to 14th 1998, the Sea Kayaking World Cup offers paddlers from around the world the opportunity to test their skills in a pristine tropical environment - Manus.

Manus Province is Papua New Guinea's most remote group of islands situated just 2 degrees below the equator. This group of 168 islands, atolls and coral cays is rich in flora and fauna, cultural and war time history and crystal clear water ways.

The Sea Kayaking World Cup will be staged in and around Seeadler Harbour with many of the races encompassing the surf breaks on the outer islands, ship wrecks from WW2, coral reefs with 150ft visibility, lagoons, dense tropical rainforest, limestone caves and Japanese WW2 tunnels.

The Sea Kayaking World Cup races are challenging and demanding. Teams must be competent sea kayakers with a good fitness level and a real sense of adventure and team spirit.

The Sea Kayaking World Cup will be awarded to the team accumulating the most points. Novelty events are interwoven into the 10 day program and include a Traditional Canoes Race and Sports Challenge Day. Both these events involve the local communities and have separate award giving ceremonies.

The following information booklet and brochure can provide you with further event details and includes a Team Nomination Form. Only 50 teams from around the world can enter and we invite your club, association or Organisation to Nominate a Team to represent your country at the

1998 Sea Kayaking World Cup.

Should more than 1 team nominate from each country, the Team Nomination Forms will be assessed by the Official Sea Kayaking World Cup Committee and Teams will be confirmed in January 1998.

For further information, please do not hesitate to contact myself or our friendly staff.
Kind regards

Lee Porter
Team Coordinator
Sea Kayaking World Cup
PO Box 448
Lorengau
Manus Province
Papua New Guinea.
Ph: 675 4709 450
Fax: 675 4709 448
email: Rase@bigpond.com

A 10 page information brochure, colour brochure and brief promotional video accompanied the letter. I will post this on to any paddlers or teams interested. The 12 day program includes a variety of events:

- kayak skills race
- sprint race
- kayak rescue race
- orienteeing race
- traditional canoe rce
- multi-discipline race
- sports challenge day
- marathon race
- farewell regatta.

Entry fees are AUS\$850 per team member & AUS\$1,000 per team supporter. Boats are supplied. Entry fee includes accommodation, meals, transport etc.

Categories:
open male or mixed gender teams
female: all female teams
Teams:
50 teams
4 competitors each team
6 supporters per team.

LETTERSTOTHE EDITOR

- from Grahame Sisson

Please consider for publication the following letter to the Editor for your issue 71 of The Sea Canoeist Newsletter.

I wish to say that I really enjoy your newsletter and really appreciated your factual response on kayak construction evolution over the past 20 years.

I would like to add a few historical notes to the statistics relating to your 13kg Japanese circumnavigation Nordkapp. This kayak weighed 7kg when released from the mould. The final lay-ups were all completed with the hull and deck as a unit. The labour content to complete this boat was horrific but the end result was a kayak that weighed 13kg complete with three rubber hatches, rudder and deck lines. The fact that this kayak survived the Japanese trip and many subsequent years of paddling shows that although you and I are not trained engineers - we got it right.

For the record Sisson Industries Ltd had been making industrial products from Kevlar since 1977. In 1978 my business specified and constructed from Kevlar, a 4G(ravity) tested spray tank-set that was so light that the Hughes 500 helicopter lifted 160 gallons of spray mix. This was at the time a world record.

Now, back to kayaks and weights. There is a practical limit to the amount of weight reduction before the hull starts 'popping' and deforming from its design shape. Such deformation causes hydrodynamic drag far greater than the hoped-for reduction in surface drag. An Australian Institute of Sport study costing AUD\$200,000.00 confirmed that deformed lightweight hardshell boats have higher drag and diminished speed potential. These days all Sisson Kayaks are custom built and our customer can, within limits, request whatever weight and construction specification best suits their needs.

Your correspondents Grant and Heather Stone are perhaps trying to be too nice by not coming to the point of their concerns. It is my guess that they, along with several others, may be concerned about the misinformation currently distributed from another Auckland manufacturer who's literature states "Many laminators avoid Kevlar and discourage their customers from ordering boats made from it, *due to the skill required to manufacture with it*"

If I may borrow your word, I will gleefully come straight to the point - Bollocks!

The inference of the words that I have italicised above could lead some paddlers to conclude that there is a general lack of composite's skill in the wider kayak industry. Bollocks!

Purely from an historical perspective it would be interesting to contemplate where the authors of this misinformation were at the time I built my record breaking Hughes 500 tank. I do know that one was still offensively advocating plywood as the utopian kayak production material *nine years later* in 1987. The other was probably running around a school playground with his arms outstretched pretending to be a jet pilot!

Those who trumpet 'newly created' technological abilities should first check that they are not just figuratively 'reinventing the wheel.' Since building your 13kg Japanese circumnavigation Nordkapp, the technology we used has been rejected for kayak construction by myself due to health and safety considerations. The same technology does safely allow the manufacture of some neat bike frames. But that's another story going back to 1988.

Yours sincerely
Grahame Sisson
Sisson Kayaks

LETTER TO THE EDITOR (CONT)

From: Kerry Howe

I wish to protest about your unprofessional editorial handling of Grant Stone's article in the last *Sea Canoeist Newsletter*. As editor, you have every right to disagree with the opinions of others, but you have no right to republish someone's article merely so that you can subject it to contemptuous comment. Grant's opinions were reasoned and moderate. Few people own, or can afford, a super-lightweight sea kayak, and even fewer can or want to paddle 50 miles a day. If the only people you approve of are extremist sea kayaking adventurers who have the most expensive equipment, then KASK is about to have at least one less member. The *Sea Canoeist Newsletter* should be a vehicle for sharing information and reasoned discussion about sea kayaking, not a platform for arrogant disapproval of those who do not think and act like its editor. Paul, you owe Grant Stone an apology, not because you disagree with him, but because of your unnecessary attempt at ridicule.

Kerry Howe

From: Malcolm Geard

Grant Stone's article on buying a sea kayak in the August-September newsletter and Paul Caffyn's response were both thought-provoking. I don't suppose anyone now doubts that a lighter boat will get you further and if that is your overriding criterion for buying a kayak then you will presumably buy kevlar as against fibreglass and certainly not give plastic a second thought. However there is a substantial contingent of paddlers who do buy heavier plastic boats presumably because the lower cost and convenience of polyethelene are compelling factors. I note that in our informal paddling network here in Wellington there seems to be a fairly even mix of plastic and fibreglass with the occasional wooden kayak thrown into the melting pot. I don't think I've seen a kevlar boat here yet but perhaps I wouldn't recognise one anyway. At 23kg my plastic boat seems to suit me pretty well so far and I'm grateful for its

relative lightness if the hours of paddling are gathering on. Nonetheless I also have friends who are a lot stronger than me who can drive a 30kg plastic kayak for days on end quite happily. Clearly the trade-off is that we don't get as far in a day's travelling but we plan our trips accordingly. The point I am making I suppose is that this fraternity of sea-kayakers is quite a broad church really and although we all benefit from those like Paul who help to drive the technological improvements I suspect a significant number of us are never likely to become 'minimalists' and will cheerfully accept the trade-offs mentioned above. Of course I could be talking a load of Bollocks!

Malcolm Geard
5 Wesley Rd
Wellington.1.

What is Good Design - Part 2.

by Glyn Dickson

reprinted from the 'Auckland Canoe Club newsletter September 1997'.

Grant Stone's article in the August 1997 newsletter outlined his personal opinions about Kevlar. As our experience and laminate engineering work with this material doesn't bear out his claims, I feel it necessary to straighten out the facts, so that Club members know exactly what the relative benefits are of fibreglass and kevlar.

The statement "I think for the average Jo Bloggs needs, the weight and strength difference in fibreglass is negligible in a sea kayak" is one such example. We happen to own a kevlar Albatross which weighs 21 kg (I bought it for my wife whose startling 42kg weight means that the other kevlar boats on the market are too high in volume for her). The Auckland Canoe Centre currently has a fibreglass one in stock which weighs 28kg. If the difference is negligible, why does the fibreglass one weigh 33% more?

What constitutes a kevlar sea kayak, to compare a fibreglass kayak with? Current practice is that any kayak reinforced with a single layer of kevlar is called a kevlar boat. Yet different manufacturers use different

amounts of kevlar in the laminate. Grant's kevlar kayaks use one layer of kevlar, with 165 grams of kevlar per square metre of cloth. The rest of the laminate is fibreglass. Our Sea Bears, and Slingshot hulls, all feature a layer of 300 gram per square metre kevlar, which amounts to 82% more kevlar in the laminate! Also the style of kevlar used in the Albatrosses is weaker than another kevlar cloth of almost exactly the same weight. The other kevlar utilises a different weave, and is more expensive (around 15%). We previously used the 165 gram, but now use this other kevlar extensively for our Excalibur racing kayaks, Slingshot decks, and for extra kevlar reinforcing in our Epoxy Modified Kevlar Slingshots, where we go to multiple kevlar layers. The same kevlar was the basis for an ultra lightweight Sea Bear 11 we recently built which weighed 26kg complete (compared to the standard 43kg fibreglass version).

Grant's argument that if kevlar was so good, powerboats/runabouts would be built from it is clearly flawed. If you stop to consider the dynamics and performance considerations of powerboats compared to kayaks, you would quickly reach the following conclusions:

- (1) Most powerboat owners don't lift their boats above their heads to carry them on roof racks.
- (2) Powerboats have access to cheap horsepower.

Consequently the cost/value trade-off for a powerboat owner is simple. A fibreglass boat can be built sufficiently lightly that excellent performance can be extracted using the high powered outboards available. Also the benefit of a significantly lighter hull is not appreciated because the boat has a purpose built trailer, and in fact for the average boatie, a heavier boat means more stability, softer riding, and less "flighty" handling at speed, particularly in strong winds when the boat is often airborne.

Kayaks are constantly being lifted and carried by their owners, while our paddling horsepower is severely limited. These factors give kevlar a strategic advantage.

Grant alludes to my article in KASK, written because I perceived that manufacturers selling sea kayaks in the South Island had promoted fibreglass rather than kevlar, because they preferred to build boats from it (it's easier to work with, hence requires less skilled labour). Hopefully club members can make their own minds up as to what is best for them, and that buyers in the market will become more discerning over quality of product. Of course all this brings up the technical aspects of fibreglass too. Chop mat, versus woven rovings, versus woven fabrics, versus unidirectional stitched-and knitted fabrics, I could go on

Glyn Dickson.

EDITOR'S RESPONSE

The article by Grant Stone was submitted for inclusion in 'The Sea Canoeist Newsletter' by Grant and not republished from another newsletter. Glyn's response which was printed in the September 1997 'Auckland Canoe Club Newsletter' is reprinted here.

I felt the two letters from Grant and Heather Stone, printed in the last newsletter, were a direct response to Glyn Dickson's earlier article on Aramid (kevlar) fibre. And I responded with my viewpoint particularly on the kevlar/weight issue. I stand by my comments regarding kayak weight, and they were painfully brought back to me while I chased Conrad around New Caledonia.

I appreciate the fact that most paddlers neither want nor need to paddle 50 miles a day, and there are strong paddlers to whom boat weight is not a significant factor in paddling long distances. I only wish I had some cold hard statistical data to show the difference in body energy requirement to push a light and heavy sea kayak through the sea.

Derek Hutchinson, in his 'Guide to Sea Kayaking', published in 1985, and reprinted in 1990 and 1995, notes the following in a section on hull strength and weight:

To be seaworthy in high winds and the accompanying sea conditions, an unladen kayak should weigh

between fifty and sixty pounds.

Such comments exasperate me; particularly when newcomers to the sport read or are told such 'misinformation' about boat weight.

Excluding the weight/energy argument I used for the long distance expedition paddling, the benefits of a lightweight boat include:

- ease of unloading & loading onto a vehicle
- ease of carrying to the sea
- ease of launching and landing off surf beaches

Fibreglass Kayak Repair... and Other Horror Stories

by **Phil Daligan**
reprinted from the **Atlantic Coastal Kayaker, Vol.6, No.7, September 1997.**

I noted in June's edition of ACK a reader expressed an interest in kayak repair. I regularly encounter a variety of damaged boats in my work as a sea kayak guide for the Maine Island Kayak Co. especially as we choose performance glass boats over the more ponderous but relatively maintenance-free plastic craft. In our case, any fine, detailed or major repairs need to be completed before the season starts: the criteria there after is to get the boats back on the water and into service a.s.a.p.

A satisfactory finished repair requires patience, and rather waste the valuable summer paddling season stuck in the garage trying to achieve the perfect shine why not make it watertight, go paddling and fix it in the fall? New England's long winter hours are the time to bring that finish back up to new, given that your repair area is capable of providing 70 degree temperatures, has adequate ventilation, and is suitably fire protected. Humidity and cold will retard your cure time. (Cure time is (1) the time it takes to recover from the kayak club's Xmas party (2) time spent in bed with the flu (3) time that your resin takes to complete it's hardening process.)

I think my long distance repair record to date is that of a brand new kayak that unfortunately acted as a marker post for a snowplough. The owner, who will remain nameless, was heard to utter the immortal words "I think my kayak is under there." Initially, in May I had to glass the beast *in situ* as the only thing holding the bow on was one inch of keel and the decklines. I'll never forget watching the bow sag as I started to undo the decklines hastily to do them up again. I eventually

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Fax: 04 384 4341
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32 Norman Terrace, Wanaka.

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Both boats have kevlar reinforced hulls, mast steps, fishing rod mounts, and equipment with each boat includes batwing sails, pump, sets of paddles, compasses, sprayskirts and cockpit covers, mast and leeboards.

Contact Bruce King for price and more information at
Hoddy Rd, RD 1, Richmond, Nelson
Ph: 03 544 9999 or 544 9010
Fax: 03 544 9011
email: bruceking@netaccess.co.nz

completed the repair in September having found only token hours throughout the busy season to work on it. It actually went back together, was knowingly bought and is being enjoyed by its owner today although when I saw him on the water he commented that it was a bit heavy in the bow. Well, it would be considering the amount of filler and mat that went in there and neatly illustrates the point that any extra glass work on your boat adds weight.

I can empathize with the outfitter who decides to go the plastic route to save time and money, not to mention the angst in watching clients, contrary to all tactful pleading, run brand new \$2000 boats up on the rocks. We at M.I.K.C.O. are perhaps our own worst enemy encouraging our more able students to improve their boat skills by ledge surfing and play in the rock gardens which is occasionally punctuated by the sound of "keffuunchh!" One of the beauties of glass boats is that you can resurrect them. Plastic technology advances may yet close the gap between the performance, style, and structural integrity of glass fibre but until then you'd best come to terms with resins.

The damage I see falls into several categories: the "accidental" covering all manner of scrapes, crunches, bangs, dings and bumps. The "manufacturer or design failure" ranging from hatch and cockpit rims parting company with the boat, stress induced spider cracks in the Gel coat especially around bulkheads, broken seats, to skeg box and rudder assembly leaks. Fair wear and tear accounts for the rest, the prime example being worn keels. A special category called the "embarrassing" encompasses anomalies such as boats becoming loose on trailers and being dragged down the freeway thus reducing boat length by 6" or the launching one's boat from the roofrack like a missile at stop lights having omitted to tie the thing down. These have happened but not to me ... yet !

I must come clean and admit to many technical failures along the way so would earnestly recommend that you

read some of the instructional books and manufacturer's pamphlets in the first instance rather than the last resort. "Clean" is the operative word here as I find that, in spite of all the miracle hand cleansers, only a jumping in the boat and going paddling finally removes the hardened epoxy under the nails! Already I hear you say "Gloves" and rightly so especially with epoxy, but there are times when just getting in there with your fingers works, although the lightweight disposable medical gloves do give tactile feedback.

One of the problems with sea kayak repair is the limited room and reduced vision you have to deal with especially working inside small hatches. Sometimes you can rig up a light and mirror system but other times you just feel your way round. A professional boat building friend says "clean hand-dirty hand" meaning always use the same hand for resin application, the dirty hand; and the clean hand, for holding on to the boat or holding the piece of cardboard on which lie your wetted out patches waiting to be positioned. I remember feeling proud of a difficult patch I had completed, when I saw my fingerprints blazoned all over the deck that I had been gripping for support.

It is worthwhile applying a coat of barrier cream to the hands and all the other odd places that resin seems to migrate to. A hat is useful unless you like to cut tangles out of your hair. Coveralls save running out of good T-shirts. A tip I recently read is to coat your hands with talcum powder before grinding or sanding to avoid absorbing dust into the pores.

Howard Jeffs, the designer of the Aleut Sea 2, once told me that the British Admiralty undertook a health survey of its shipbuilders for long term effects of working with polyester resin and found that the resin passes out of the body. The one finding the government agency did publish was that there is a build up of resin behind the eyeballs over time leading to a risk of glaucoma. Realistically, the garage "bodger" (Bodger is an English word meaning the mechanically dyslexic) who slaps a patch on a couple of times

a year can rest easy. Substances like acetone, however, are not to be bathed in as it facilitates absorption into the skin as it evaporates and is bad for the liver. Acetone is a thinner and a solvent brush and roller cleaner not a skin cleaner.

More safety precautions: Epoxy resins require a little more attention especially during the sanding stage. The dust is bad for you and the effects of over exposure to epoxy are accumulative. There is talk of neurotoxicity over long term exposure leading to premature senility, but it's O.K. you wouldn't feel a thing. I always wear a mask, preferably one a tad more technical than those funny Madonna look-alike cones with the elastic band and the anti-snoring nose clip. For eye protection, it's best to wear protective glasses not only when grinding or sanding but when applying MEKP, Styrene etc. whose splashes are bad news. It is a good idea to have an eyewash bottle within reach in your workshop. Above all, read the safety instructions on the packaging.

A cautionary tale: In '91 and '92 I guided sea kayak expeditions down in Chile with Raleigh International. Good people and great aims but being a charitable trust working always at the whip end of a budget, they did have a hard time with gear. To the remark "if it don't broke ... don't fix it," we added "if it don't arrived yet ... don't fix it." Our brand new fleet of NorthShore singles and doubles languished in a Chilean customs house for three months (we were sure they were ripping a mould off). The existing fleet of some West coast horrors, whose name I have thankfully forgotten, not only were falling apart but lacked buoyancy, hatches, a comfortable seat and just about everything else. I don't know if any of you are or once were climbers, but in a different lifetime I hung out with some fairly hard climbers back in the U.K. who, with a sense of the dramatic, would gaze up at a climb and say, "hmmm ... interesting" with a completely deadpan expression. Straight away you just knew it was Death.

Those same feelings swept over me as I viewed this structurally challenged

fleet. My own assigned guide boat, one of two singles, was deeply split behind the cockpit and both sides of the front deck were crazed with cracks. I didn't quite realize how primitive the local three part resin was until, wedged deep inside the boat trying to strengthen the deck, the "hot" mix resin started to go off. I frantically kicked my way back out of the cockpit. Those few lung fulls of noxious fumes still haunt me. A "hot mix" is one in which the proportions of the catalyst have been mixed with a heavy hand causing a strong exothermic reaction. Carelessly throwing a semi-cooked batch into the trash can may affect your fire insurance premiums. I always put my used pots outside the door in the open air to go off out of children's' reach.

Tips:

- (1) Take care in that the container you use won't leach unwanted additives into the mix, no waxed paper cups for instance. A clean one every time is one less thing to worry about.
- (2) When pouring resin vertically down into the nose or stern to seal leaks or bed in rudders etc., be aware that a strong mix may give off so much heat it blisters the exterior finish. A tip from Robin Goodliffe at Valley Canoe is to stand the boat in a bucket of water or drape wet rags around the hull.

Instructions:

Manufacturers go to a lot of trouble to give you the facts and since you've just spent a tidy sum on their product, you may as well pay attention. Once you've had to scrape off an under-cured Gel or wonder why bubbles keep appearing under your last coat, you wise up. Doubtless you can tell I speak from experience here; indeed only recently I discovered that a Gel coat over Epoxy is not good form. Did you know that in between sanding Epoxy coats one should wash down with soap and water rather than solvents? News to me! It appears that the 'amine blush' will be sanded back into the coat possibly retarding the next coat's curing. I also understand that the rather expensive cleaning solution that I used to buy with one of the epoxy systems is actually ... vin-

egar ... \$1.50 at Shop'n'Save and works a treat on your fish and chips.

You've got a hole in your boat or rather you've just surfed into your friend's hull, neatly incised it and he's looking displeased. We will ignore all the trauma of rescues, flooded compartments, long tows, wrestling with Denzo tape, now consigned to the museum of British Canoe Union history as the infamous "wet" conditions repair tape.

Take a piece of hessian, coat it with the sludge from the bottom of a oil tanker, package it nicely and sell it to British plumbers to wrap around leaking pipes. Discovered by kayakers, it became the tape of choice for the discerning gear freak. It would sometimes stick to a wet hull, either plastic or fibreglass, and would remain on one's hands for a Vulcan's lifetime. It is still available (Great River Outfitters of Waterford, Mich.), still used and I actually do carry it. The trick is to lay it on plastic film or a square cut from a dish soap bottle type plastic so as provide a backing when attempting to affix it to the damaged area. Additionally, four screws to fix the patch to the boat works well. Hey ... you've got a repair job anyway so a few screws aren't going to hurt. Definitely wear gloves!

Technology has moved on and now we have epoxy putty sticks. Epoxy repair sticks are a Putty and hardener rolled up together waiting for you to cut a chunk off, knead it for a few minutes (not too long, especially in hot weather), mixing the two agents together to the consistency of Playdough, and moulding it into or onto the damaged area. It works just fine in wet, salty conditions although it never hurts to make a token effort at drying the area. It usually takes about 10-15 minutes to harden and off you go. It's the idiot's answer to emergency repair.

On the market are ready-made repair kits containing sachets of pre-measured epoxy complete with filler powder. You may want to add a few squares of fibreglass mat to give the patch a little more strength in case the

hole is too large to span with the filler putty. Otherwise the kits are good pieces of emergency equipment.

Let's talk *meaningful* hole. Your epoxy putty stick is too small for the job and being as you are an experienced and well prepared paddler you have brought along a full glass repair kit. This need not be any bigger than one of those small waterproof plastic boxes, a nalgene wide mouthed bottle or a B.D.H. container. Contents could be - resin, mixing cup, stirrer, disposable gloves, brushes, acetone, mat, cloth, a rag, a small file or sandpaper, and a piece of plastic. Be aware that, should you be carrying polyester resin, catalyst is corrosive. I once opened up my glass repair kit at the end of the season and found the contents looking like a technicolor oil spill. I have found only those little Nalgene bottles really confine the stuff but leave a little room in the top of the container for expansion. Better still buy the catalyst in tubes.

We'll assume you did make it off the water and are on dry land. First you need to dry the damaged area. Epoxies are less inhibited by water than polyesters. (Is it raining and have you got a tarp, a tent?) Acetone could be used to evaporate moisture away or the rag in your repair kit, spare clothes, the T.P. from your groover box. File and smooth away the worst of the damage to match the general contours of the hull. Produce your duct tape - absolutely no excuses for not going to bed with this every night and cuddling it. Tape the square of flexible plastic over the hole on the outside of the hull. Pray that the hole is not right under the seat or way up in the bow otherwise you may have to work from the outside. Clean the area on the inside with acetone, sanding to rough up any smooth surfaces. Cut, to overlap each other by a couple of inches, three pieces of fibre glass mat or cloth. Mix your resin in the correct proportions and "wet out" the pieces of cloth. A quick wipe of the damaged area with a loaded brush and then place the patches one on top of each other over, the biggest one last. Pause for a moment to cogitate on your folly, medi-

tate on the scenery or contemplate giving up guiding and getting a "proper" job like your Mum wants you to do. This respite gives the material time to soak up the resin and become more pliable. It could be done when you initially wetted it but I prefer to do it in place then at least no one's going kick sand on it or walk around with it attached to their shoe. "Stipple" the mat with the brush. (Stippling: a vibratory up and down movement aligned with the axial plane of the brush stimulating, with the tips of the bristles, further soaking of the material, removal of air bubbles and conformity to the shape desired. Obfuscatory enough for you '?).

The aim is not to wipe the patch as this just drags the glass all over the place. When to stop? When you're satisfied that the patch has bedded down with no stray clumps of glass ready to pierce your fingertips when you go rooting around in there after it's gone off. When the brush starts to get "tacky" and before you start to pull up as much as you flatten down. It should look a bit like Scottish porridge (oatmeal to you) gelatinous but not so much resin that you can't see the fibreglass strands which will be by now enmeshed. There should be no air bubbles, no whitish/grey mat areas indicating a resin starvation. Avoid great gobs of the stuff trickling out of the repair. It's so unprofessional !

That's really all there is to it apart from clearing up your mess and taking it out with you. You just have to sit back and wait until the hardening process is complete. Enjoy the day, brew a pot of tea, or birdwatch. After all it's not every day we get the chance to just be still out in the wilderness. If you have used polyester and have erred on the generous side with the catalyst, this could be a matter of smoking minutes. The epoxy curing agent, not strictly a catalyst, constitutes a percentage volume and cannot be varied. Both I have accelerated by a judicious use of heat: i.e. having a stove burning well out of harm's way underneath. This is obviously a *dangerous* short cut only to be used outdoors, out in the field where there is a sense of urgency involving bigger kayaking

safety factors.

I will relate a story told to me by Nigel Mathews who accompanied Frank Goodman on their historic first kayak trip around Cape Horn in the mid '70's. The Nordkapp was specifically designed for this expedition and I imagine like all big trips there were always things to be done at the last minute. Nigel's boat had to be crated up for export still "green," i.e. the curing process not quite complete. The story goes that when they opened the crate in Patagonia, Nigel's boat had warped, the keel being out of true. Nonplussed they lit a big fire on the beach, heated the boat up and managed to bend the hull straight or so they thought. Nigel was still paddling the boat in '85 or '86 and the keel was still a little out of true but the other way, as they had bent it a little too far. This tale definitely has the salty air of a kayaking myth and I'm sure if Frank reads this the events will be bigger and better.

What to do with the repair once all is well and you arrive home safe to your loved ones? If water has seeped through you'd better grind the whole thing off and start again which will give the best results in the long run. All now depends on whether you used epoxy or polyester resin.

I realize that I have been throwing out words like gel and resin with careless abandon. Here is an explanation:

Epoxy resin

Strong, expensive, good for damp conditions and used in applications where high performance is required. It can be left as is or cosmetically finished with a surface epoxy coat or paint.

Polyester resin

The finishing resin is the one most useful for repair work and usually contains an additive to rise to the surface sealing off the air to aid the curing process. Important to check with your supplier if this is the case.

Laminating resin

This is air inhibited and is used to provide a tacky surface for the next layer of glass to be laid up. Basically, it won't go off until you exclude the air. Additives can be bought or some people cover the job with Seran Wrap

achieving the same result.

Gelcoat

This is a pigmented specially made resin designed to provide a tough, glossy and weatherproof exterior finish. Usually an additive like a 10% solution of wax dissolved in Styrene rises to the top and seals out the air. This finish is just about standard on kayaks.

Vinylester resin

This doesn't really concern us as it is not normally used for repair. Its performance rates midway between epoxy and polyester.

Gel won't take over epoxy, but all is not lost as there are excellent alternatives such as the one- or two-part epoxy and polyurethane marine paints. Your best bet is a visit to the local chandlers for advice. It may be for a small patch you don't need the most high tech and expensive system.

The polyester people can apply a thick, generous coat of Gel which is probably the best, long lasting protection.

Epoxy. If the repair is good all you may need to do is fill with putty slightly overfilling then sanding down to the existing shape taking care to minimize how much of the surrounding good surface you spoil. Paint of your choice or even another layer of straight epoxy. Epoxy does respond to wet and dry sanding in a limited way but does not hold pigments well.

Gelcoat. Again if the repair is good, follow the same procedures as above and mask off the area. My experience is that a generous quantity of catalyst is preferable to an insufficient one. Mixing should be thorough. If working from the exterior, paint the Gel quite thickly on with a foam brush. Don't overdo the brush strokes as once or twice over is enough. Within a short time, you can remove the masking tape as Gel doesn't tend to creep that much and it should leave a neat edge which you can sand down later. The finish will probably show a variety of streaks, ripples, and ridges, which you will sand off when dry. Wet and dry paper from 120 - 800 grit should bring a shine. The method I use is to cut the paper up into small manageable pieces and alternate be-

tween two or three pieces of the same grit soaking in a bucket of water to which I add a bit of dish soap to promote the "slide," starting with 120 and working down. You can use a backing pad, but I often just use hands on a small repair. A common problem is to go through the gelcoat to the filler below which means the filler should have been more concave or you are a heavy handed sander.

You may have decided to rip out the original field repair and start again. In this case you can now ensure a tight backing plate suitably waxed conforming exactly to the boat shape; fitted and screwed from the outside. You can deal with the screw holes later with a gel coat filler. Melamine or waxed paper is impervious to gel but proprietary waxing agents can be bought to coat any other materials available to you. It's a good idea to mask off the area underneath the backing plate in case any gel oozes out. Now organize the boat position so you can reach in without dislocating your shoulder make a good job of sanding the area gradually tapering away from the hole. Apply a good coat of catalyzed Gel to the inside of the plate making sure that anywhere exposed to the outside will be covered. Technically, the recommended thickness is 15-20 mils. When that has cured, you can lay up three layers of mat overlapping each one so the final one covers the area you sanded like a flat inverted pyramid.

If you are concerned about strength, alternate the layer of chopped strand mat with one of four- or six-ounce fabric or even roven woving. Stipple or roller the patch as you did in the initial repair but this time in the comfort of your workshop rather than a wind swept rock in the middle of Penobscot Bay. In due course, if the Force is with you, remove the backing plate and there will be smooth, tough layer 'Just waiting for you to wet sand and polish. It will have probably mirrored every imperfection on the backing plate however.

Those with a creative or tinkering mentality will enjoy boat repair and save some cash in so doing. Glass

work is a "hands on" process which involves a workshop, men and expertise and is therefore expensive.

Tools are minimal for the amateur. Disposable brushes are cheap; otherwise use an old ammo can filled with acetone to store brushes. Resin residues will eventually harden the brush, however. The foam ones are good for hand applied Gel. A piece of flat aluminium stock or an old tent pole are good for stirring and mixing. Treat it like a brush, clean it, and store it in the acetone bucket. Contamination from old mixing sticks can be a problem. Special metal rollers are a good tool for laying up mat/cloth, foam rollers for the biggest jobs. You do need to make yourself a pair of floor standing boat cradles at the right height to work on, padded or slung on wide tape. You also need a couple of hooks in the ceiling to suspend the boat upside down when working inside the hull, cockpit, or hatches. It's much more comfortable standing. A small but intelligent boy or girl comes in useful as there are always jobs you need doing way up in the bow or stern.

There we have it - one man's self taught approach to kayak repair. There is much to learn but with practise comes a small ability. Give it a go as it's all part of owning a sea kayak.

Phil Daligan is Head Guide at Maine Island Kayak Company and is a Maine registered guide. B.C.U. Qualifications include Examiner Grade 1, Senior Instructor Sea, Senior Instructor Inland, and Advanced Sea Proficiency. Paddle destinations of note include Scotland, Norway, Shetland Isles, Patagonia and Belize. Once a keen climber and mountaineer, he has climbed in the U. K., the Alps and Russian Pamirs now endeavours to earn a living guiding along the Maine Coast and farther afield.

BOOKREVIEW

Title: 'SEA KAYAKER'S Deep Trouble'

Authors: Matt Broze & George Gronseth

Editor: Christopher Cunningham

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Reviewed by: Paul Caffyn

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The concept for this book was sound, reprinting articles from 'Sea Kayaker' magazine written by both George Gronseth and Matt Broze on the school of hard knocks: sea kayaking fatalities and near misses, with lessons learned. However I would be interested to see how much input the editor and authors had to the book layout - for the modern era of desktop publishing, this book has a prehistoric layout.

By comparison with 'The Whole Paddler's Catalog' - reviewed in the last newsletter - which was a delight to read and admire in terms of layout, although a little lean on overall content, 'SEA KAYAKER'S Deep Trouble' is tops in terms of content but a torture to read in terms of layout. Interspersed with the reprinted 'Sea Kayaker' magazine articles are a series of 37 sidebar topics on equipment, techniques and equipment. They do not follow relevant chapters, as an entire section, but commence in one of the accident stories and then roll on as 'continued on page ..' for up to eight pages. I found this very disruptive to read both the accident stories and the side bar topics. The side bar topics are shaded dark grey with white out highlights around the headings that are offset - primitive, unprofessional layout by my standards.

The book begins with a brief chapter on kayaking safety by Matt Broze, 11 pages including the annoying side bars. The rest of the book then contains 22 absorbing accounts of misses and near misses.

Now having paddled in two areas of Alaska where fatalities occurred, I reread with particular interest the two chapters titled 'Double Fatality in Blackstone Bay' and 'Ice Fall in Blackstone Bay'. This bay lies in a sheltered fiord of Prince William Sound, and only a few hours paddling out of the nearest town of Whittier. George's lessons learned with the former were sound, particularly in his advice to wear either wetsuits or drysuits when paddling in cold glacial fed waters. But I find fault with his lessons learned related to the kayaker who was killed by an falling ice. Two paddlers, Eugene and Susan paddled over to the base of a cliff with waterfalls to fill a waterbottle. Eugene was knocked unconscious by a lump of falling ice. Susan, a nurse, then did everything by the book to rescue Eugene, reducing his shoulder dislocation, splinting his broken arm with a bilge pump and slowly towing his boat to where her friends were camped. A staggering show of guts for a lady on her own with an unconscious friend. But in the brief 'Lessons Learned', Greg notes only 'there is more to kayak safety than just avoiding rough seas'. Last year, Conrad Edwards and I kept over half a mile away from the base of these cliffs and the photogenic waterfalls, as on top of the cliffs is a long section of the snout of a hanging glacier. Fallen ice litters the scraps of gravel beaches under the cliffs, trails of crushed ice marked substantial serac collapse down the cliff, and the sea was littered with lumps of floating ice. George should have included in his 'Lessons learned', a simple statement to the effect: 'keep well clear of cliffs with hanging glaciers and any threat of falling ice'. For paddlers with a mountaineering background, the risk here is blatantly obvious but I can appreciate that paddlers lacking such a background would fail to appreciate the risk.

The chapter, 'Sea Caves, Arches and Narrow Passages' should not be read late at night. Nightmare country. This account of lost boats and injuries is riveting reading. One of the side bar stories relates how in 1984, Jim Vermillion was caught by a rising swell in a arch on the Aleutian Island chain. He was swept up to the jagged projecting arch roof in a rapid elevator ride. Fortunately he was able to duck his head into the large cockpit of his boat before contact with the roof. His paddle shaft was snapped with the impact; his shoulder blade was shattered, a couple of cracked ribs and a compressed thoracic vertebra. I enjoy paddling into caves and through archways, like most paddlers, but generally only on flat seas. The risk of being caught by a rogue sea, as Jim was, is too great when a swell is running. The 'Lessons Learned' at the end of this chapter fails to included a warning to treat caves, tunnels and archways with a great deal of caution when a swell is running.

In the same chapter, there is an unrelated sibebar topic on leaky hatches and flotation. It includes a statement from an American boat builder that 'float bags are safer than hatches {which leak} and bulkheads {which trap the leakage inside waterproof compartments}'. It continues with stories of leaking hatches and bulkheads and a justification for using float bags loaded from the cockpit with no bulkheads. For North American boats with caulked, foam bulkheads and large hatches, this statement perhaps is pertinent - but with fibreglass bulkheads, glassed on both sides and VCP hatches, 100% waterproof compartments are achievable.

To conclude, if you do not subscribe to 'Sea Kayaker' magazine or have access to the back issues, then this book is well worth purchasing. We can all learn from the mistakes of others. But in terms of layout and readability, this book belongs to dark ages of desktop publishing.
Paul Caffyn

TRIPREPORT KAYAKINGKANAKY

by Paul Caffyn

The following is a brief synopsis of a trip Conrad Edwards and I undertook recently around New Caledonia.

I am only days back from a circumnavigation of Grand Terre, or the main island of New Caledonia. Two of us flew our Nordkapps from New Zealand to Sydney, and onto Noumea. Conrad's boat was wrapped in plastic and foam like a big condom, and with his short hair, NZ passport and military bearing - French Customs must have thought it was a mission to avenge the sinking of the Rainbow Warrior - they put his boat through their baggage X Ray machine. What a sight!

Twas a 23 day, 550 mile trip in an anticlockwise direction, commencing from Noumea. As expected, we jumped onto an escalator of strong southeast trade winds on the lush east coast and then had to head butt into them for the arid west coast section. With 3.30am starts, we managed to crank out 20 miles in the dark and dawn, before the old trades came away on the nose.

The east coast scenery is just like on the front of the travel brochures - tall, waving coconut palms, golden coral sand beaches, crystal clear, azure blue seas, and coral barrier and fringing reefs. The photograph for the brochure was taken on a calm day some 17 years ago when the trade winds took a breather. There was some muttering about the influence on El Nino having its effect already in the Pacific with the strong winds.

Highlights on the east coast were tower karst rising out of the sea near the town of Hienghene, sheer razor sharp, flutings of ancient limestone towering above the sea and called appropriately for a French Protectorate, the towers of Notre Dame. And just to the north, waterfalls cascading and falling for over 300m to sea level; here we paddled up river to the first cascade, moored the boats and clambered up the spray shrouded rocks to

the base of the highest waterfall. Magic!

Big following seas on the East Coast and broad expanses of boat scratching fringing reefs led to challenging paddling; working in with the tides and careful observation for the narrow guts in the reef. The surfing rides were awesome with the following seas, but a torment for my surgery weakened abdominal muscles.

Our meetings with the kanaks were superb, despite warnings from a French lass who when sailing a hobicat had been shot in several areas (not her body!). We were invited to stay a night at the village of Oundjo, where fishing provides the staple economy. We had arrived on a Sunday morning at 10am, after another 3.30am start, in time to listen to beautiful harmonized hymn singing from the church. We joined one of the village elders for local grown lunch - all bar the kayak bread (long skinny loaves of French bread with a funny name) was produced in the village - and in the afternoon watched the men playing French bowls and the ladies playing cards.

Near Balade, where Captain Cook was the first white maritime explorer to land, we met two local kanaks who took pity on our thirst and shinned up a tall coconut palm to drop a heap of green coconuts. To date we had been only tackling the already dropped brown ones for the milk and meat. With ease they trimmed the tops off the green coconuts for long refreshing drinks of milk. And on their advice, we waited several hours for the ambulance to arrive - it had been converted into a mobile shop - and stock up on tobacco and loaves of kayak bread.

The sea life was prolific - turtles, sea snakes, sharks, stingrays and colourful reef fish. The yellow banded sea snakes, termed Tricot Rayes, gave me the heebie jeebies, they were so prolific. And they are amphibious. So warnings to zip up the tent flaps were strictly observed. They have been known to slither into tents and into occupied sleeping bags! Although the toxin is as venomous as any snake toxin in the world, very few New

Caledonians have been bitten.

The only bad guy, who is a master of disguises, is the deadly stonefish, and solid soled sandals or plastic sandals are recommended for walking not only on the reefs but the sandy zones of the intertidal zone. Only after trying to identify the stonefish in a Noumea aquarium did I realize the brevity of my walking around barefoot in shallow water. All that could be seen poking through the coral sand were two carefully camouflaged eyes and a mouth!

Low points of the trip were nickel mines and kanak burn-offs. The New Zealand Resource Management Act (RMA) is applied in many New Caledonian coastal areas, backed by steep ranges, as the 'Ruined Mountains Act'. Opencast mining of lateritic nickel deposits has stripped mountain tops of vegetation and a thin veneer of laterite. A network of ziz-zag dozer access tracks and exploratory costeans has further bugged up what was obviously once a pristine scenery. High rainfall on the east coast has led to large scale erosion, slips and enormous landslides some of which almost reach the sea. Rainwater runoff has deposited a veneer or carpet of red ooze over broad areas of the fringing reef, which through a depletion of sunlight and oxygen, has killed the coral. We saw no evidence whatsoever of reforestation.

Kanak burn-offs on the top end of the east coast seem to be a fact of life, and it was difficult get an answer of why vast areas of mountain sides were a smouldering, blackened ruin, from sea level to the highest ridges. It is a bit like asking an All Black supporter why they must watch the games - just gotta do it. The only positive benefit of the burn-offs were stunning red sunsets on the west coast.

All in all, a challenging trip with a great companion, with no major dramas. I am awaiting the return of my photographs now to make sure it wasn't a dream.

Paul Caffyn

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