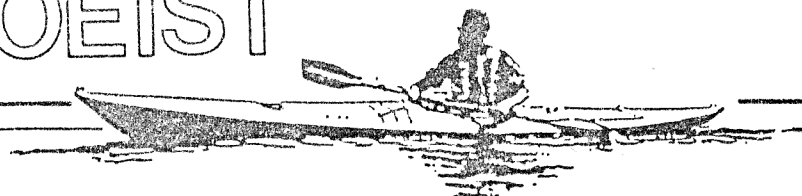


THE SEA CANOEIST

NEWSLETTER

24

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SEA KAYAKING - AN OVERVIEW

The following information has been provided by a North American paddler with added comments by myself and Sandy Ferguson (Christchurch). It is designed to give an overview of sea kayaking and to make some comments on basic aspects of sea kayaking that may be overlooked by those who have been at it awhile.

Sea kayaks are designed for open water touring. They are at home on lakes, gentle to moderate rivers, and the ocean. Sea kayaks are meant to carry fairly large amounts of gear, track in a straight line, and be seaworthy in a variety of conditions.

Contemporary sea kayaks are made from, in order of popularity, fiberglass (and other synthetics, Kevlar, etc.), rotomolded plastic, canvas and rubber (portable kayaks such as Klepper, Feathercraft, Nautiraid and some traditional Baidarka and home-built kayak designs feature these types of hulls with wood or aluminum internal frames), PVC (inflatable), and wood.

Some generalizations:

- Fiberglass kayaks tend to be lighter, faster, and more costlier (~\$1500+).

- Rotomolded kayaks are heavier, slower, yet cheaper and virtually indestructible but can wear out if dragged over sand (~\$900+).

- Portable kayaks are heavier, wider, and very expensive (~\$2000+) but great for travel on planes or if you live in a flat. Not as low maintenance as fiberglass though.

- PVC inflatable kayaks are light, cheap (~\$500+), and easy to transport. Not much storage space and prone to punctures, but easy to fix. Although designed for warm water, they

have been successfully paddled on long trips in Alaska. They are prone to high windage and should not be paddled on exposed coastlines. Currently, not a serious option in NZ.

- Wooden kayaks are usually kits, or home designed/built and are fairly light and durable but require more maintenance (~\$800+ for a kit).

Before you pick a kayak, decide what you'll be doing with it. Camping, fishing, photography, day trips, aerobic workouts, expeditions, racing, surfing, etc. Also consider your size in relation to the boat's size. You should comfortably fit in the boat, not too snug nor too loose.

Sea kayaks come in doubles and singles. Doubles are usually wider, longer, heavier, costlier, and stabler. You should note that although more stable, few paddlers can eskimo roll a double, so they are less safe than a single when paddled by experienced paddlers. Deep water rescues are made easier if the rescue boat is a double, but harder if the swamped boat is the double. For this reason bulkheads and good hatches are essential in a double (doubly essential if you will excuse the pun). The advantages to a double include easy paddling for two people of unequal strength, the companionship (not to be scorned at when the going gets tough as psychological reasons account for more aborted trips and problems caused by incorrect decision making with fear the problem element, than real hazards), and an element of safety due to increased stability (although note comments above) and the fact the kayak can still be paddled if someone becomes ill (include sea-sick in that list) or injured. Singles offer more flexibility and freedom and increased storage capacity (with 2 kayaks) over a double. If you kayak as a couple, try out both to see which you like better.

Most couples are biased one way or the other. Wider beamed singles, around 25", are stable and make great platforms for fishing or photography.

The longer and narrower a sea kayak is, the faster it is. High performance boats tend to be over 17' long with a 22" or narrower beam. The main tradeoff for these faster boats is reduced stability (but ease of rolling - hence safer for the experienced paddler), more effort in turning, and depending on the design, often reduced storage area. (Keep in mind that stability is relative to the paddler, and his or her skills and experience.)

Sea kayaks range from low to high volume. If you plan on extended trips, high volume is important. A high volume single can easily carry several hundred pounds of gear, enough for a fully self supported, month long trip.

Depending on the hull design, some sea kayaks track straight without a rudder. If you purchase a kayak with a rudder, learn how to paddle it without the rudder. Rudders are great for windy conditions, but it's essential to learn how to control your kayak with a paddle in case the rudder malfunctions.

Sea kayaks come with a variety of accessories including fishing rod holders, sails, para-wing sailing kites, (most people have found the wind to be too fickle to end up sailing more than they paddle), deck mounted compasses, etc. Life-line, bulkheads and hatches to withstand heavy surf landings must be regarded as essentials, not an accessory.

The best place to learn about sea kayaking is one of the yearly, regional symposiums or forums of the Trade Association for Sea Kayaking (TASK), one of the promotions / try-out /

instruction days run by a manufacturer (Sisson Kayaks for example) or to take a course of instruction from a professional kayak school (Top-sport, Ray Button, Exploits etc).

BUILD YOUR OWN SEA KAYAK - wooden

Plywood with epoxy, stitch & tape is perhaps the easiest build-your-own kayak method. There are 6 that Sandy knows of to the design he used and he built 2 of them. (There could be a lot more at the other end of this country). The "Sea Bear" is an Auckland design, available in kit form, complete or plans.

There are a number of kits in the USA:-

John Lockwood has 3 "Queen Charlotte" stitch and tape kayaks from 16'10" to 19'.
Pygmy Kayak Co., Dept 8, P.O. Box 1529, Port Townsend, WA 98368 (206) 385-6143

Betsie Bay Kayak, P.O. Box 1706, Frankfort, MI 49635

Loon Sea Kayaks, Box 253, Smallpoint Rd, Sebasco Estates, ME 04565

Percy Blanford's plans are available in the USA from :-
Clark Craft Boat Company, 16 Aqua Lane, Tonawanda, NY 14150

Denis Davis Design, 38 Redditch Road, Bromsgrove, Worcs. B60 4JN, England. for plans.

The editor of this newsletter has built a number of sea kayaks but none have more than rough lines plans drawn up for them. These drawings are available at cost.

BASIC INTRODUCTION BOOKS

Sea Kayaking, A Manual for Long-Distance Touring, by John Dowd. - By a New Zealander living in North America. Has kayaked a variety of places in the world including Patagonia.

Sea Canoeing, by Derek Hutchinson. - The English sea kayaking manual. Both should be read as there are different philosophies.

The Coastal Kayaker's Manual, by Randel Washburne. - See "Sea Kayaker", Vol.6, No.3 or this newsletter #19 for a review.

Sea Kayaker Magazine, ed. (was John Dowd) now Christopher Cunningham - Quarterly magazine. Available in NZ through Top-sport in Christchurch, as are most of the above books.

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BULKHEADS AND RELATED PROBLEMS

There is no doubt that well engineered bulkheads and hatches are an essential element of any sea kayak. Every sea kayak must be able to be paddled without outside assistance as once a kayak is brought in to support another kayak, or to tow it you are becoming very limited in your ability to survive anything other than ideal conditions. A perfect example of this was demonstrated at a Sea Kayak Coastbusters Symposium in May of this year. A kayak built in kevlar/glass was being used by an inexperienced paddler under what must be described as ideal conditions. A slight swell was causing a wave of no more than 1m to break over a shallow reef. The kayaker was capsized side-on to the breaking wave and proceeded to swim his craft ashore. Within a short distance from the point of capsize, the aft hatch came off and the aft compartment swamped. The kayak was then turned right-side up with the paddler laying on the back deck, kicking his way ashore. A small surge from the breaking wave entered the cockpit, blew out the forward bulkhead and swamped the forward compartment. The kayak then rolled on its side and the kayaker attempted to tow the kayak ashore from a

handhold on the aft lifelines. The lifelines were attached by small nylon/plastic eyes fixed to the deck with PK screws without support blocks beneath the deck - the fittings failed. The now fully swamped and unmanageable kayak was then beached with further damage to the hull.

One has to question the value of such a craft under any conditions, not to mention difficult sea conditions. One also has to question the value of using high-strength and expensive materials such as kevlar, if the fittings on the hull, bulkheads etc, are so weak as to fail under moderate conditions - the strength of the kayak as a unit is no more than its weakest point, in this case the bulkhead and hatch fittings.

The rotomoulded polyethylene kayak is a very flexible craft and the nature of the plastic material makes the fitting of bulkheads very difficult. Some manufacturers overseas have attempted to construct bulkheads of closed-cell foam materials, glueing the bulkhead to the outer shell. Unfortunately the glued joint is seldom able to withstand capsizes in anything other than calm conditions. The solution adopted by some manufacturers has been to fit a pod-cockpit - the only effective technique of having water-tight compartments in plastic kayaks. The pod concept has one problem - the interior of the kayak is a single unit with water that may enter through, say, the back hatch, able to flow through to the front compartment. The seaworthiness of the hull, therefore, is dependant upon the water-tightness of two hatches, or put another way, only one hatch has to fail to swamp the entire hull.

The person who developed the pod cockpit, Alan Bye, argues that the pod cockpit is in fact better than the multi-bulkhead/hatch arrangement used in glass boats. He argues that in the event of damage and water entering the hull, the water will

spread through both compartments, keeping the kayak level and able to be paddled ashore. Provided the kayak is kept upright, the airlock created under the decks will keep most of the water out anyway. The loss of a hatch will cause the compartment to flood to a greater extent than if the hull was to be holed, however airlocks would still be created and the weight of water in the hull, being able to be spread through both compartments would keep the boat on a more-or-less even keel and able to be paddled ashore. Hyde argues that a conventional glass boat, with the loss of a hatch, would swamp in one end only, making the boat unmanageable, particularly if the aft hatch were to be lost.

The conventional glass boat supporters will argue that in fact airlocks can also be created in the swamped compartments and that the unbalancing effect argued by Hyde is by no means as bad as he would claim. On the other hand, surging water in the pod craft will create high water/air pressure in the compartment with the remaining hatch, to the degree that the hatch, receiving pressure from the side never designed to handle pressure, will pop the hatch, therefore, the loss of one hatch would invariably mean the loss of both hatches. Hyde then argues that even if this were so, the cockpit area would still hold sufficient air, and the boat still sitting on an even keel fore-and-aft is able to be paddled ashore, or in the very least, the paddler is able to remain upright and thus not prone to hypothermia or exposure. The conventional craft supporters will argue that the same applies to their craft and that the unbalancing effect of one flooded compartment is not nearly as bad as Hyde and Co. claim.

The trend today, in the construction of glass sea kayaks, is to keep the cockpit volume as small as possible. The NZ Nordkapp, for example, is offered in a three compartment

version. A bulkhead is fitted into the seat giving two aft compartments, thus avoiding all the possible disadvantages claimed by Alan Hyde. Furthermore, with the cockpit reduced in volume, pumps are superfluous as in the event of a capsize and exit, the paddler can re-enter and displace most of the water, the rest can be sponged out later. If Hyde's arguments are to be made valid, the pod volume must be at least one third the total volume of the boat and this will require a pump, or the volume reduced by foam inserts.

So you pay your money and take your choice. It seems to me that what gets left out is the ability of the hatch to withstand heavy conditions. Again the trend is towards bigger hatches, particularly the aft hatch, and it is the aft hatch which is the critical hatch in terms of safety. There is no doubt in my mind that the three-compartment concept is streets ahead of all other arrangements. As far as pod cockpits go, it is the only proven solution to the difficulty of fitting a bulkhead to a roto-moulded kayak. If you want the advantages of plastic, you have to take the pod cockpit.

And thus the debate goes on, although it has pretty well resolved itself with a few die-hards lingering on. Something like the debate on beamy kayaks vs narrow kayaks. The trend today is for faster, narrow kayaks where the paddler has been and gone before rough weather strikes, and where safety in extreme conditions is dependant upon a good roll and exposure for only a limited period, rather than a slower, heavier boat that is stable and able to endure rough weather for a longer period. Because it is slower, it will need to be able to endure rough weather. This is similar to the two main mountaineering techniques often described as the Alpine technique and the Himalayan technique - fast and light non-stop climbing planned and carried out under favourable weather conditions vs siege

techniques with fixed camps but needing to endure rough weather because you cannot get off the mountain in fast time. Unfortunately in both these kayaking arguments there is no middle ground - you either support one concept or the other - both have their attractions and their problems, neither is right and neither is wrong - merely a different approach.

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In the last newsletter we circulated part of the Canadian Parks Service code on guided trips. With this newsletter we enclose the contents of the First-aid, repair and survival (Guides) kits.

These lists should be used as a guide upon which you can gauge your own thinking, rather than use the lists as some sort of definitive list of 'must-have' contents. The first-aid list in particular must be treated with caution. Don't take something you don't know how to use - this is an argument for further learning, not for cutting down on the kit contents! Likewise, you will not need snake-bite kits but you ought to have something for wasps which is more than just anti-histamine cream. The make-up of your party and their medical history (can you be sure that one of the party has not got hepatitis B? or AIDS? Obviously if taking a commercial trip where the private lives of your party members will be total unknown to you poses a different problem to that when you are a party of good friends), the remoteness of the trip, the time away from assistance, and your own medical skills must all be considered when making up a first-aid kit. It is for these reasons that first-aid kits need to be made up by yourself rather than purchased ready-made, or made up according to any published list.

Editor
GRAHAM EGARR

APPENDIX B

GUIDES KITS

SEA KAYAKING

The following items should be carried by a guide on a coastal paddling trip.

PER GUIDE:

- 3 x lighters or water proof match containers stored in three separate locations
- 1 x head lamp with spare battery and bulb
- 1 x first aid kit (Appendix C)
- 1 x set of complete charts and publications of tripping area (tide and current tables, etc)
- 1 x appropriate compass for activity
- 6 x pyro-technique marine distress flares appropriate for area of operations
- 1 x additional emergency dry set of clothing (i.e. polypropylene jacket, pants, hat, socks, mitts etc)
- 1 x time keeping device
- 1 x emergency food rations (i.e. trail mix for end of day "energy-pick-me-uppers")

PER TRIP:

- 1 x repair kit (Appendix D)
- 1 x camp stove with sufficient fuel to burn for one hour at maximum setting
- 1 x spare waterproof flashlight or light source equal to or greater than a 6 volt battery
- 1 x spare set of collapsible sunglasses

COASTAL CANOEING

To be developed by coastal canoeing advisory committee.

APPENDIX D

REPAIR KIT

The following repair kit should be carried on every coastal paddling trip.

- 1 x role of duct tape
- Appropriate repair materials for boats being used (i.e. fibreglass resins and cloth for fibreglass boats)
- sandpaper, glass paper
- 1 x multi head screw driver
- assorted stainless steel nuts and bolts (appropriate sizes for boats being used)
- 100 feet of 150 test nylon fishing line
- 2 x vice grips (one set must be needle nosed)
- stove repair material and parts
- 1 x adjustable wrench
- 1 x heavy duty scissors
- 1 set of stainless steel spare cables
- 6 x metal swages (wire crimpers)
- spray skirt repair material (sea kayaks)
- 1 x knife
- epoxy resins
- 1 x heavy duty needle and thread - sewing awl
- 1 x compact hacksaw with spare blade
- rip-stop nylon repair tape
- 1 x bottle of seam sealer
- 1 x tube of silicone sealant (i.e. shoe goo)

APPENDIX C

FIRST AID KIT

The following is the required supplies for a complete first aid kit for guides on a coastal paddling trip. Since the minimum number of guides of the smallest trip is two, their will always be at least two first aid kits on every trip.

The entire kit must be stored in a water proof container. The information is based on the minimum recommended supplies as outlined in the Wilderness First Aid Manual - Capilano College.

CONTENTS:

- 1 x accident report forms
- 1 x surgical gloves
- 1 x attendant scissors
- 1 x razor
- 1 x suture kit
- 6 x safety pins
- 1 x haemostat (1 per trip)
- 1 x tweezers
- 1 x thermometer (minimum oral)
- 6 x cotton tip applicators
- 10 x sterile Telfa pads
- 10 x sterile gauze pads (5 - 4"x4", 5 - 2"x2 ")
- 1 x water proof air permeable dressing (4"x4")
- 1 x burn dressing (paraffin impregnated)
- 1 x large pressure dressing
- 1 x absorbent pads (unscented sanitary napkins) or drainage dressings (12"x6")
- 12 x wound closure dressings (various sizes)
- 1 x box of bandaids strips or role
- 2 x role of adhesive tape (1 narrow role, 1 wide role)
- 1 x box of mole skin
- 3 x cloth triangular bandages
- 2 x CREPE bandages (3" width)
- 2 x metal splints
- 1 x eye patch (1 per trip)
- 1 x lip protection
- 1 x anti-biotic ointment/solution
- 1 x Tincture of Benzine
- 1 x small jar of clove oil
- 1 x tin of anti-fungal foot powder (1 per trip)
- 6 X anti-septic towelettes

MEDICATIONS

- ASA
- Anti-histamines
- ANA-kit
- motion sickness medication