PC SEA KAYAKING

- Level I -

PADDLE CANADA
PAGAIE CANADA

www.paddlingcanada.com

Victoria Canoe and Kayak Club

Victoria Canoe and Kayak Club, 355 Gorge Road West, Victoria BC

Contents

SEA KAYAKING LEVEL I

Level-1 Skills Course: day paddling skills in sheltered waters

Aim

Level-1 provides the skill and knowledge necessary for day-long sea kayaking trips in sheltered waters (non-wilderness areas). Successful completion of Level-1 indicates competence to paddle a sea kayak within a sheltered bay in the company of one or more paddlers with Level-1 or greater skill and knowledge.

Prerequisites

Paddle Canada Introduction to Kayaking Skills certification or equivalent skill and knowledge.

Course Length

12 hours minimum.

Class ratio

1 instructor: 6 participants.

Location

Sheltered waters with uninterrupted easy landing options.

Conditions

Light winds (0-11 knots) Current (0-0.5 knots) Sea state calm to light chop.

Assessment

Activities focus on safety and gaining paddling skills for a day trip within a large bay or sheltered shoreline. Issues of mutual safety between paddling partners and judgements of sea conditions throughout the day and out of sight along the shore are included. Paddlers will deal with the concerns for packing a kayak and the gear necessary for a comfortable day trip and solving problems in the field. Paddlers should leave the course encouraged to continue their learning and awareness of their limitations.

Overview

Rescue skills	Paddling skills	Knowledge
• Eskimo rescue • Unassisted re-entry • Assisted re-entry • Towing • Communication/signals	• Forward stroke • Brace low/high • Sweep • Draw • Stern rudder	• Equipment • Journeying and seamanship • Safety • Kayaking resources

Rescue skills

Eskimo rescue

Demonstrate a confident capsize and attract attention by banging on the hull. The rescuer will move in from 5 metres away but should not approach at right angles to where the hands or body are located. The victim must show confidence and control; bow, stern, side or paddle presentation may be used.

Assisted Rescues

In deep water, wet-exit and re-enter the kayak with assistance from another paddler. The capsize must be natural with spray deck in place. Rescue is complete when the excess water is removed from the cockpit, the swimmer is back in the boat, the spray-skirt is attached and the paddler has regained sufficient stability to paddle effectively. The participant will demonstrate as both swimmer and rescuer. Participants should have the opportunity to practice both the T-rescue and the raft, re-enter and pump techniques.

Unassisted re-entry

Wet exit and re-enter a kayak in deep water. Aids such as a paddle float may be used.

Contact tow

Demonstrate a simple contact tow without the use of a towline.

Paddling skills

It is important to master the skills for calm water in this level before moving on to the open water conditions to be found in Level-2.

Lift and carry

Use proper body mechanics to prevent injury while moving a kayak.

Launching & landing

Demonstrate launching and landing in sheltered conditions off a beach or dock.

Forward paddling

Demonstrate efficient forward paddling, with good speed and control over 100 metres. Show good upright posture, torso rotation, extended front arm.

Stopping

Travel at a moderate speed then stop the kayak within 2 strokes (count one side).

Reverse paddling

Demonstrate controlled reverse paddling while looking back for a clear and safe route. Show good torso rotation.

Sweep strokes
From a static start, turn the kayak 360 degrees. Use a combination of forward and reverse sweep strokes. Show efficient placement of the paddle and unwinding of the trunk. While moving forward at good speed, turn the kayak with a forward sweep stroke and edging.

Edge control
The paddler will demonstrate beginnings of good edging control that assists turning.

Draw stroke
From a static start, move the kayak sideways 2 metres, using the draw stroke and the sculling draw stroke.
While moving forward, move the kayak sideways using a draw stroke.

Low & high brace
The paddler will demonstrate an understanding of correct technique to prevent a capsize with a low and a high brace.

Stern rudder
Use the stern rudder stroke to turn the kayak in calm conditions.

Knowledge
The extent of knowledge required for safe paddling at this level is governed by the conditions within a sheltered bay. The following list is not exhaustive and is provided here as a guide to the nature and extent of knowledge necessary for safe and enjoyable paddling in a level-1 environment.

Equipment
Demonstrate basic knowledge of the features and attributes of equipment, including
- Canadian Coast Guard equipment requirements.
- Sea kayak, paddle and spray skirt designs.
- Bailing devices.
- PFD and clothing.
- Rescue Equipment.

Kayaking resources
- Be aware of sources of information such as: Provincial Paddling Associations, books, videos, web sites, local clubs and outfitters.

Journeying & Seamanship
Developing good judgment should be encouraged and prior to going paddling participants should engage in guided exercises that develop judgment and decision-making.
- Demonstrate judgment as appropriate for daylong trips in level-1 conditions.
- Understand the differences between open coastal paddling and paddling in sheltered water.
- Identify several safe locations and routes for level-1 paddling.

Engage in guided risk-assessment exercises appropriate to day-long excursions that:

- Determine the abilities of themselves and the group.
- Anticipate the present and future needs for themselves and the group.
- Anticipate the present paddling conditions in the near vicinity and the anticipated paddling conditions at a proposed destination.
- Determine safe proximity of paddlers for group safety and communication.
- Determine the need for a paddling plan and an Emergency Response Plan.

Typical questions to stimulate discussion

- How accurate is your awareness of your skills and the demands of the trip?
- What is your current physical, emotional and mental state?
- What is your role and responsibility within the group?
- What are the responsibilities of the group toward the individuals?
- What are your personal objectives?
- What are the group objectives?
- Are you comfortable with the trip plan?
- Have the objectives and roles been discussed within the group?

Organize the gear and packing for a day-long outing.

- Create necessary paddling plans, and lists for food, water, and shelter.
- Describe the means to outfit a sea kayak for proper fit and adjustment.
- Obtain a weather forecast and discern the probable effect on sea conditions.
- Describe local tidal conditions and other water-level concerns.
- Describe the effects on sea conditions caused by changing water levels, currents and wind.
- Give examples of techniques to assist in maintaining contact with others.
- Describe the role of leadership, home boat, and paddling buddies.
- Demonstrate effective hand and sound signals.
- Demonstrate an understanding of hypothermia prevention and treatment.
- Discuss the use of flares, whistles, radios, and other means of signaling.
- Discuss emergency procedures such as what to do if stranded overnight.

Heritage

- Participate in/watch/read at least one, symposium, video, book or magazine article.

Environment

- Discuss the impact of kayakers on the local natural environment. Participants should be able to identify at least 3 potential negative impacts and appropriate mitigation strategies.
- Describe at least 2 common local species frequently seen by kayakers by identifying 2-3 obvious characteristics such as colour, size, behaviour, location, or habitat.

Strokes to Strive For

Proper Grip – Paddler's Box

- Relaxed grip.
- Posture- back, knees, feet
- 1st knuckle of control hand lined up with top edge of blade
- Grip paddle shaft wider than shoulder width so that upper arm and forearm create a 90 degree angle
- Maintain this basic position for all strokes

Forward Stroke

- Paddle-enters water near feet perpendicular without a splash.
- Pull with lower hand and push with upper hand – blade close to boat.
- Torso rotation
- Stop stroke at hip
- Press foot on stroke side for added power

Reverse Stroke

- Almost straight arm
- Look over shoulder
- Blade-angled for support, close to boat
- Watch the paddle - unwinding of torso
- Press down and forward

Forward Sweep (stationary or moving)

- Reach forward, blade enters water near feet.
- Body is rotated, wound up for the sweep, chest and face pointed almost 90º away from the sweep side, towards the intended new direction.
- Blade- face angled slightly for support.
- Sweep out in an arc from bow to stern
- Watch where you wish the bow to go, not the paddle
- Sweeping arm somewhat straighter than in a forward stroke
- Non-sweeping hand stays low near deck
- Edge kayak to increase turning effect (turn right – edge left, turn left – edge right)

Reverse Sweep (stationary or moving)

- Trunk Rotation (body is wound up, torso and face towards the sweep side)
- Arm slightly straighter than a reverse stroke
- Blade- angled for support at beginning of stroke
- Unwind the body
- Sweep out in arc from stern to bow
- Non sweeping hand stays low near deck
- Edging kayak may increase turn

Stopping

- Hold shaft low, close to body, elbows tucked in
- Blade vertical or angled slightly forward
- Rotate torso and immerse blade just behind hip
- Perform short momentary reverse strokes alternating sides (kayak should stop within 4 strokes)

Standard Draw (stationary boat moves sideways)

- Torso Rotation (face and chest in the direction of intended travel)
- Top forearm is chest height or higher (no higher than forehead), bottom hand is near water
- Reach out as far from hip as possible to place paddle blade parallel to boat
- Paddle blade/shaft as vertical as possible, blade fully immersed in water.
- Draw the lower arm in, almost to the boat.
- Return the blade for the next stroke by rotating the blade 90º and 'slicing' away from the boat.

Sculling Draw (stationary boat moves sideways)

- See standard draw
- Blade makes figure eight motion as you pull paddle toward boat
- Leading edge further away from boat.

Stern Rudder (moving boat steered)

- Turn shoulders (rotate torso)
- Blade vertical to water, fully immersed, power face towards boat

Low Brace

- Power face of blade up
- Paddle shaft horizontal, low and close to body
- Both knuckles down, elbows bent and raised
- Non bracing arm is close to body, thumb near belly button
- Swat the fly by hips or just to aft - if boat is stationary, slap should incorporate slight forward motion to give more support
- Hip flick up (head to hip)

Low Brace Turn- moving kayak

- Body and paddle position as for low brace
- Watch paddle blade-trunk rotation
- Plant blade on water surface towards stern, leading edge up
- Lean on blade
- As boat's movement slows, move blade towards hips

High Brace

- Power face down
- Paddle shaft horizontal, as low as possible and close to body
- Both knuckles up, elbows bent and lowered
- Keep elbows close to body (don't reach out)
- Strike the water forward of hips, blade as flat as possible
- Bracing arm pulls paddle down and towards you
- Non bracing arm stays close to body
- Never put arms above head
- Rotate kayak back under you with hip snap-head dink
- Look down the paddle shaft towards the blade

How to Choose a Safe Place to Paddle

A day long sea kayaking trip in sheltered waters (non-wilderness areas).

What to look for:

- Bays, Lakes: sheltered from current and winds
- Frequent easy landings sites in case of emergencies
- Accessible by car with suitable day parking
- Beach is safe to carry kayaks and gear and to launch

How to find these sites:

- Street maps, charts
- Resource/reference books
- Fellow paddlers

Local Sheltered Locations:

Location:	***Access:***
Elk Lake	Hamsterly Park
Thetis Lake	Lower parking lot
Shawnigan Lake	West Shawnigan Lake Park
Cowichan Lake	Gordon Bay Provincial Park
Cordova Bay	Agate Lane
Gorge	Gorge Kinsmen Park/Gorge Park
Cadboro Bay	Gyro Park
Oak Bay	Oak Bay Marina
Roberts Bay	Seagrass Road, Sidney
Pat Bay	
Coles Bay	Regional Park
Island View Beach	
Brentwood Bay	Park beside Mill Bay Ferry dock
Sooke Basin	Whiffin Spit
Esquimalt Lagoon	
Maple Bay	Public ramp beside Maple Bay Rowing Club
Ladysmith Harbour	~~Ivy Green Park~~ (update, this site is now a reserve)
Becher Bay	Cheanuh Marina
Bedwell Harbour, North Pender	Beaumont Provincial Park

For larger bays and lakes paddle parallel to shore. Could you swim to shore in an emergency?

Back to Basics Paddling Technique

by Kevin Mansell reprinted from Wave Length, August/September 1998

Kevin Mansell, a top British instructor, offers his thoughts on good paddling technique to novices and experienced paddlers in this and future issues of Wave-Length.

FORWARD PADDLING

The acquisition of efficient forward paddling with minimum effort is essential for sea kayaking. Sea kayakers need to acquire a good working model and then learn to modify it in the light of changing conditions. Forward paddling is one of the easiest strokes on which to receive feedback- ***if you are moving forward, then you have got something right!*** But what happens when conditions deteriorate, a storm approaches, tidal currents increase, or you are towing an injured paddler? Have you the reserves necessary to reach a position of safety?

The Basics:

The paddle should be gripped loosely with hands slightly more than shoulder width apart and equal distance in from each end of the shaft. It is important to have a relaxed grip. Many beginners hold the paddle too tightly - the white knuckle approach! Keeping a relaxed grip on the paddle will help to reduce the possibility of injuries such as tendonitis.

The blade should enter the water as far forward as is comfortable - for most people that is somewhere near the feet. When the blade enters the water, the bottom arm should be straight. The blade should then travel through the water as close as possible to the kayak (without banging your fingers against the side of the deck.) The accepted style in certain areas is for the paddle to travel wide from the kayak, but in reality this means you are being propelled forward by a series of sweep strokes - not the most efficient method.

There is a mystical technique referred to as "upper body rotation". The aim is to be able to utilize the large muscle groups in the back as well as the arms in order to reduce fatigue. It is a technique which is difficult to explain but relatively easy to experience. Move your hands outward along the shaft until your arms are at maximum stretch. Lock them in that position and paddle forward with straight arms, aiming for the blade to enter the water close to the feet. That feeling is "upper body rotation". Now move your hands back into their normal position and try to reproduce that feeling. The blade should now be entering the water cleanly, close to your feet and travelling rearward close to the sides of the kayak.

The next item to consider is where the blade should ***exit*** the water in relation to the body. Many sea paddlers adopt a long stroke with the blade moving well past the trunk. If you watch the blade as it moves past the body you will see you are starting to lift water with the blade which is wasting energy. Aim for the blade to leave the water somewhere near your hips.

There is no one method of forward paddling which will work in all situations, so be aware of the coach who is too prescriptive when it comes to paddling technique. The ability to modify paddling is a skill which evolves with practice and experience.

BODY POSITION

Sitting correctly in the kayak is essential for good technique to develop. Many beginners and some experienced paddlers like to lean back against the cockpit rim, a relaxed style reminiscent of a person sitting in an armchair. But an upright posture is fundamental to good forward paddling. Knees should be braced under the deck and the balls of the feet should be in contact with the footrest.

One problem in paddling a kayak with a rudder is that it is virtually impossible to lock the footrest into position, so that a firm contact can be produced. Without this firm contact with the feet it is not possible to produce maximum power *(and control). {Seaward's footrest rudder control can solve this problem}*

Many paddlers also use a back rest to provide support for the lower back, but beware of large plastic ones which are provided by some manufacturers, as they inhibit movement, particularly when rolling.

Many paddlers ignore what is below the spray deck when it comes to technique but it is a very important area to consider. Try paddling forward at almost maximum speed and notice what your feet are doing. You should be pushing with one foot on the same side as your blade is travelling through the water, giving extra strength to your stroke. Often while in relatively calm water, the feet are not used, but when the extra power is required, it is important to know how to bring them into play.

These considerations ensure you will be using many of the main muscle groups in the body, not just the arms. Of course there will be times when this basic technique will need to be modified. There are also other factors which come into play, like cadence.

CADENCE

Cyclists spend a lot of time considering the speed at which the pedals should be turning. In terms of paddling we would call this ***stroke rate***. What follows is based purely on personal observations but I have found it to hold true in the majority of situations.

I have found that most people paddle forward at a rate of between 135 and 145 full paddle strokes every 5 minutes (for counting purposes, one full stroke consists of both left and right sides). There are many variables to take into account such as paddle length, body size, wind strength, sea conditions, speed through the water, etc., but I have found that a large number of paddlers' stroke rates fit into that frame. I have undertaken the exercise with paddlers in several different countries, some very experienced and others relative novices, using differing equipment in different weather conditions, but the results are usually the same. At least it's a starting point when somebody says "How fast should my stroke rate be?"

DIFFERENT GEARS

It is useful to compare forward paddling to driving a car with a manual gear shift. Drivers use the gears to gain optimum performance from the car in terms of acceleration and cruising over a long distance. When the need arises, say to overtake another car, it is possible to drop down a gear to produce greater acceleration. Most modern cars use fifth gear when cruising at high speed.

But many paddlers lack the equivalent of a range of gears. Most cruising takes place in the equivalent of third gear, which is generally inefficient. Essential considerations such as body and blade positions are often forgotten. Most of the time this may not matter, except for the fact that it results in a greater expenditure of energy than may actually be necessary.

There are times though, when it is necessary to be able to vary the scope of forward paddling. One example is when having to cope with moving water - to make progress it may be necessary to paddle hard against the flow, using short bursts of power. Head winds produce a similar effect and can last for a much longer period of time. A third example is when a tow is necessary. The added weight of the paddler and kayak can dramatically increase the power required.

POWER BUILDING EXERCISE

Here is one exercise which can be used to develop power. Line a group up abreast of each other and paddle forward gently. At a given signal, paddle as hard as possible for 30 strokes. As people reach the target they shout out "30". Regroup and repeat the exercise with 25 strokes, then 20 and 15. Finish the sequence with one last repetition of 30. This cycle could be repeated as required.

If a longer training session is required and it is necessary to keep the group close together, the group should paddle forward in a single file line. At a given signal the rear person has to paddle furiously to the front of the line, at which point the one who is last follows suit. An alternative is for a strong paddler to fix a tow line to a weaker paddler. They both paddle forward and the aim is for the person towing to get the tow line taut, whereas the weaker paddler has to try and keep the tow rope slack. Experience has shown that the towed paddler will almost invariably triumph.

BLIND PADDLING EXERCISE

Ideally it should be possible to perform all paddle strokes on feel alone. If the kayak is fitted properly, the paddler should be receiving information through senses other than the visual. For example cyclists interpret information they are receiving, to stay upright. If they can see that they are going to fall off it is generally too late to do anything about it! As paddlers we should be aiming to have this feel of what the kayak is doing and be able to respond instinctively. One way to develop this is to paddle with your eyes shut. This routine is not the preserve of the more experienced paddler. I have used this exercise with novices their first session on the water and it has proven very beneficial.

Take care that lookouts are posted, to prevent one blindfolded paddler impaling another or disappearing over the horizon. To maintain directional control it is possible to use indicators such as the feel of the sun on the face, wind blowing, (the backs of the ears are very sensitive to the wind), swell pattern and noise. The added advantage of blind paddling is that it helps on night paddles or on foggy days. Try to maintain the course with the feel of the wind on the face and it won't be necessary to check the compass so frequently, something which will help to prevent seasickness developing.

Kevin Mansell is Chairman of the Jersey Canoe Club to England. He has been kayaking for 29 years and is a Level 5 British Canoe Union Coach. His extensive paddling experience includes the British Isles, France, Denmark, Greenland, Canada, USA, and Malaysia, but he considers his main claim to fame, his collection of 500 paddling books.

Information for Recreational Kayakers

Information Services

Victoria Canoe and Kayak Club, 355 Gorge Road West 250-590-8193
Marine Weather (Victoria): 250-363-6880
VHF: Mayday / emergency - Channel 16, Weather – Channels 1 thru 9
Telephone: 911, Cellular: *16 (Coast Guard Marine Emergencies)
CB: Ch 9
Rescue Coordination Center (RCC):
1-800-567-5111
local: 250-363-2333 , Cellular: #727

Web Sites

- West Coast Paddler www.westcoastpaddler.com/
- Tides and Currents tbone.biol.sc.edu/tide/sites_othernorth.html
- Marine Weather www.weatheroffice.gc.ca/marine/region_e.html?mapID=03
- Canadian Coast Guard www.pacific.ccg-gcc.gc.ca/
- Magic Seaweed Surf Report magicseaweed.com/Vancouver-Island-South-Surf-Report/323/
- Big Wave Dave http://www.bigwavedave.ca/
- Dave O's Website (see launch sites link) http://www3.telus.net/dostapov/kayaking/
- Paddle Canada www.paddlingcanada.com/
- Sea Kayaker Magazine www.seakayakermagazine.com
- Wave-Length Paddling Magazine (free at local stores) www.wavelengthmagazine.com
- New South Wales Sea Kayak Association www.nswseakayaker.asn.au/
- Animated Knots www.animatedknots.com/
- Knots for paddlers www.netknots.com
- Be Whale Wise (poster) http://www.salishsea.ca/m3/index.html
- Hypothermia article www.topkayaker.net/Articles/Safety/Hypothermia.html
- Rescues videos (somewhat dated techniques) www.oceankayakingsafety.com

Books

- *Marine Weather Hazards Manual- Guide to Local Forecasts and Conditions,* Environment Canada
- *Northwest Marine Weather,* Renner, Jeff
- *Sailing Directions, British Columbia Coast ,* Canadian Department of Fisheries and Oceans
- *Small Craft Guide, British Columbia ,* Canadian Department of Fisheries and Oceans
- *The Complete Book of Sea Kayaking,* Hutchinson, Derek
- *The Essential Sea Kayaker,* Seidman, David
- *The Coastal Kayaker's Manual,* Washburne, Randel
- *Fundamentals of Kayak Navigation,* Burch,David
- *Sea Kayaker's Savvy Paddler-More than 500 Tips for Better Paddling,* Alderson, Doug
- *Sea Kayker Magazine's Handbook of Safety and Rescue,* Alderson, Doug; Pardy, Michael.

- *The Complete Sea Kayaker's Handbook*, Johnson, Shelly

Gear and Clothing

THE KAYAK

- Plenty of secure buoyancy fore and aft
- Sound hull and deck (including hatches)
- Secure perimeter deck lines and fore and aft toggles
- Spray skirt
- Paddle

CLOTHING

- Paddling jacket or dry top
- Polypropylene underwear – wicks moisture away from skin (avoid cotton)
- Light weight and medium weight fleece tops (for layering if temperature changes)
- Neoprene booties
- Teva style sandals
- Aqua socks, sailing boots
- Fleece or wool toque
- Rain hat and rain pants
- Neoprene or fuzzy rubber skull cap (if immersion is a possibility)
- Neoprene gloves or pogies
- Wet suit (or Dry Suit)
- Dry bags for gear storage

SAFETY GEAR (Including Canadian Coast Guard Minimum Requirements)

- Properly fitting PFD
- Min 15m buoyant heaving line
- Bailer or manual pump (& sponge - optional)
- Sound signaling device (whistle) or sound signaling appliance (air horn)
- Spare paddle
- Paddle float
- First Aid Kit
- Weather radio

SIGNALING

- Whistle
- *Flashlight*
- *Cell phone*
- *Chemical lights*
- Marine VHF radio
- Flares (min. of 3 Twin Star)
- Strobe light
- Signaling mirror

NAVIGATION

- Watch
- *Compass (deck mounted & hand held)*
- *Charts & chart cover*
- Tide & Current Tables (know how to read them)

EXTRA SURVIVAL GEAR

- Extra food & water (energy bars etc.)
- Thermos with hot drink or means to heat up a drink
- Dry bag containing extra clothes (fleece)
- Emergency shelter and rations
- Fire starter and waterproof matches

FLOAT PLAN- ***Leave it with a responsible person.***

The most important thing to bring is a partner. - **ALWAYS PADDLE WITH A PARTNER!**

THE FLOAT PLAN: When Every Minute Counts

by Lee Hindrichs

A float plan gives you a safety net. No one is going to come looking for you if no one knows you're lost. A float plan first sets a time for a search to begin, then it makes the search for you more effective by giving the searchers a starting point and anticipated route.

When my friends and I go paddling, before we launch we prepare a float plan. Never heard of it? Count yourself in the majority. In six years of paddling, guiding and instructing, I had never heard the term "float plan". Yet it's becoming the buzz-word for responsible paddlers. When talking to different members of search and rescue services, the strong and consistent message I got was that they want the paddling public to:

1) carry a VHF radio, flares and a light source,
2) paddle with others, and
3) file a float plan.

What is a float plan?

A float plan gives you a safety net. No one is going to come looking for you if no one knows you're lost. There is a myriad of things that can go awry on a trip. Capsizing, getting stranded due to inclement weather, a kayak drifting away because it wasn't secured above the high-tide line, becoming separated from your group, getting lost, equipment failure or accidents are some of the more common incidents that keep paddlers from returning on time.

A float plan sets a time for a search to begin, then it makes the search for you more effective by giving the searchers a starting point and anticipated route. Finding the starting point is one of the most time-costly factors in a search. Rescue personnel will initiate a search by looking for clues as to where the missing paddler could be. When you consider that the area of water covered by rescue personnel can be enormous, finding a missing paddler can be a regular detective thriller. (In British Columbia, Canada, the Rescue Coordination Center's domain includes over 27,000 kilometers of sometimes-treacherous coastline and 560,000 square kilometers of ocean.) A lot of valuable time might be spent looking for clues, running down phone numbers, interviewing people and calling airports and ferry terminals. That sort of high drama could leave you in a wet, cold and dangerous predicament for longer than you'd like.

A float plan identifies your intended route, narrowing the search area dramatically, saving valuable time, which could save your life. Pilots always file a flight plan. You may already let someone know when you go backpacking in the wilderness-where you're going, when you expect to return. Why wouldn't you do the same thing when you're taking on the ocean, a lake or a river?

Filing a float plan involves filling out a form such as the example included. It can be a quick exercise by just checking the appropriate box. Make two copies of the form and leave one with a responsible friend. Establish your expected return time with him, and the time at which he

should become concerned by your absence. The float plan should include the phone number of the agency in charge of search and rescue operations. It may be the Coast Guard, Park Service or sheriff's department. Find out before you go. Instruct your trusted friend to contact rescue authorities and report you as overdue if he hasn't heard from you at the appointed hour. Then he should provide the rescue agency with all of the information in your float plan. This simplifies the job of the rescue crew by providing the information needed to establish the starting point for the search.

Before launching, place the second copy of the form in your on-deck chart case. This will provide positive identification in the event that the boat becomes separated from you and is adrift or washes up onshore. If found, the float plan can provide valuable clues as to your location. For the same reason, it is also a good idea to identify gear with your name.

If you encounter difficulties during a paddle and become overdue, your friend will call the rescue authorities, beginning the search. Rescue personnel will refer to charts, taking into account the time elapsed, the area, and drift factors of wind, tide, current direction and speed. A search area will be determined and rescuers will be dispatched. Appropriate radio broadcasts will be made on VHF channel 16 to alert mariners that assistance is needed. Although the quickest response may be from the closest vessel, which will often be a pleasure or commercial vessel, the command of the search operation still remains in the hands of the emergency rescue headquarters, no matter who performs the actual rescue.

Would-be rescuers will have enough details to identify you because your float plan will have identified you with descriptive words such as, "Jane Doe wearing an orange PFD and an orange hat, paddling a light blue single kayak by herself, and carrying a strobe light and flares." (Excellent color choices by the way, these have the longest range for visibility.)

Information such as your vehicle license plate number and launch site will allow search and rescue personnel to check out the launch site and see if your car is still there. If it is, that indicates that you are still out there somewhere, and they will leave a note on your windshield to inform you that a search is underway. Should you return to your vehicle and discover such a message, call the indicated number immediately. This allows emergency personnel to call off the search, freeing up limited resources that may be needed elsewhere. On windy days in the coastal waters of BC, we've listened to streams of distress calls on our VHF radio from every type of boat-kayak to commercial vessel.

If you're carrying a VHF radio and find that you need to alter your float plan, you should patch through to the radio operator and phone your contact about your change in plans. If you can't reach your contact, call your rescue response headquarters and inform them. If you carry a VHF radio you may ask, "Why bother with a float plan?" A VHF radio is a vital piece of equipment that can save your life. The down side is that they have limited range, and mountains have a habit of getting in the way of transmissions. They also depend on batteries, which do die. It is prudent for every paddler to carry a VHF radio and flares. The cost for VHF radios has come down to an affordable range: They can now be found for as little as U.S. $150. You can also rent one from some outfitters or, if you are a member of a kayak club, clubs often have VHF radios available for loan.

When you return from your trip at the appointed time, remember to inform your trusted friend. If he doesn't know that you're back, he's going to initiate a search.

Float plans should be a part of your paddling protocol. By giving the information needed to focus a search as well as alerting help, it makes you that much more prepared for the "what ifs" that could befall you while you're out exploring. Not only can a float plan make a search for you more effective, it also dramatically cuts the costs incurred by rescue services (read taxpayers). Even if your float plan never needs to be put into effect, it acts as a terrific checklist to ensure that you've remembered to pack important gear in the chaos of getting ready to go.

A float plan should be filed for every trip; even two-hour paddles in local waters have ended in disaster. Being prepared for eventualities is what separates experienced outdoors people from novices. You never know what might happen-Mother Nature is far from predictable. Safe paddling!

> *Lee Hindrichs lives with her husband and daughter onboard their sailboat in Sidney, BC, Canada. She is a former sea kayaking guide. An R.N. with experience in field medicine, she is currently working in alternative medicine and freelance writing.*

It is an important assignment to have a friend initiate a search. When deciding on the time that your friend will pick up the phone and initiate a search operation, take into consideration the following factors:

- Break your proposed route down into reasonable miles per day, including ample time to set up and break camp.
- As a rule of thumb use two nautical miles per hour as a comfortable cruising speed. If, like me, you want to explore every nook and cranny, adjust your speed accordingly.
- Consider the currents. Will they be with you or against you? If strong currents will be against you, you might have to wait out a tidal change.
- Adjust your anticipated mileage covered for that day.
- Look especially carefully at tide and current tables when narrow passages are involved. The speed of the current can increase drastically, making a passage dangerous or impossible in either direction; some spots can be negotiated only during slack tide.
- If planning a multi-day trip when adverse weather is a possibility, expect extra beach time waiting for safe paddling conditions.
- It might be prudent to factor in additional time. I'd suggest no more than a day.

Ugly weather also increases your chances of needing help. If you plan a trip where being stormbound is a likelihood, you should have a means of reaching your contact person to let him or her know that your plans are changing. Carry spare batteries for your radio. Consider the experience level of the people in your group. How far and how fast can the weakest paddle? Children are unlikely to put in a six-hour paddling day. Consider how long it will take you to load up and get to a phone once you return from your trip. If you return at night, will there be phones near your landing site?

The Float Plan

If we do not report in by _____ am/pm on _____(date),
Call: _____(Emergency/Search Agency)

Please report us as overdue/missing and provide them with the following information.

Name(s)			
Age/Gender			
Phone #			
Kayak Colours (deck/hull)			
PFD Colours			
Skill Level			
Medical Info.			
Flares/Strobe			
Chem/Flashlight			
VHF Radio			
Cell Phone #			
Tent(s) Colour			
First Aid Kit			
Matches			
Water (days)			
Food (days)			

Launch site: _____ Date/Time: _____
Vehicle:

- make/model/colour/plate # _____

Proposed Route, campsites, alternatives _____

_____

_____(use reverse side if required)

Hypothermia Sets in Fast - case study

Wave~Length July/August 1994: Scenario by Don Lockwood

I checked the weather forecast the day before and on the morning of our trip. Each forecast was progressively worse: twenty knot winds from the southeast shifting to the southwest. Our route would be from Deep Bay on Vancouver Island, to Denman Island, around the south end and across to Hornby Island. There were 5 in our party: Mike, Julie & Alan, Paul, and myself. Mike is an experienced paddler. I presumed Alan to be quite experienced although I had never paddled with him. Both Julie and Paul had much less experience.

The initial crossing to Denman was uneventful, but passing between Denman and Chrome Island the seas worsened significantly. The islands had been sheltering us up to this point. The seas were quite mixed and breaking with rebounding waves from the nearby shore. Mike was strongly advising we turn around but I wanted to proceed. Soon, however, I agreed with Mike and we turned toward a sheltered beach. Both Paul and Julie turned around and we started heading the quarter mile back to calmer waters. But when I looked back to check on Alan and Mike, I saw that Alan had capsized and Mike was assisting him. Things looked to be under control so I decided to see Julie and Paul safely back to calm water and then return to help.
Paddling out to assist, I saw what appeared to be a successful rescue with Alan back in his kayak. I rafted up with both paddlers. Alan's kayak was swamped and he seemed unsteady. Since he had a wetsuit on, I decided to have him re-exit his boat and try to drain it over the bow of my boat before getting him back in. We did this successfully. On regaining his boat, Alan seemed coherent and wasn't complaining about being cold. Although he still seemed unsteady, he said he was fine so I let him go. He immediately went over again.

By this time we were being blown close to a rocky lee shore where a landing would have been destructive. I knew he had to be towed back to the shelter of the beach with someone supporting him but our problem was that none of us had a tow rope. I sent Mike back to retrieve the towrope on Paul's kayak. With Mike heading for shore, I had to keep us off the rocks. Initially I had Alan -who was still in the water- swim along, pushing his boat hoping we could get clear the rocks. But he quickly began to complain of feeling cold so I helped him back into his boat.

Alan was very unsteady. I knew if I let him go he'd be over again. Mike returned with the tow rope, which we set up and I managed to tow them both back in to shore with Mike struggling to steady Alan all the way. By the time we arrived onshore, Paul and Julie had a fire going. We piled clothes on Alan and soon he was back to normal. We all felt immensely relieved.

Lessons Learned

- *Every kayaker should have a tow rope and know how to use it safely.*
- *Everyone paddling in cold weather or cold water should wear a wetsuit (or drysuit).*
- *Strong southeast winds (especially in winter) are not meant for kayaking.*
- *Paddlers may overestimate their experience, don't make assumptions about their abilities.*
- *Emergency supplies (food, matches, fire starters) are a vital piece of safety equipment.*
- *After capsizing once, a person has a high probability of dumping again.*

List several more lessons to be learned from this incident.

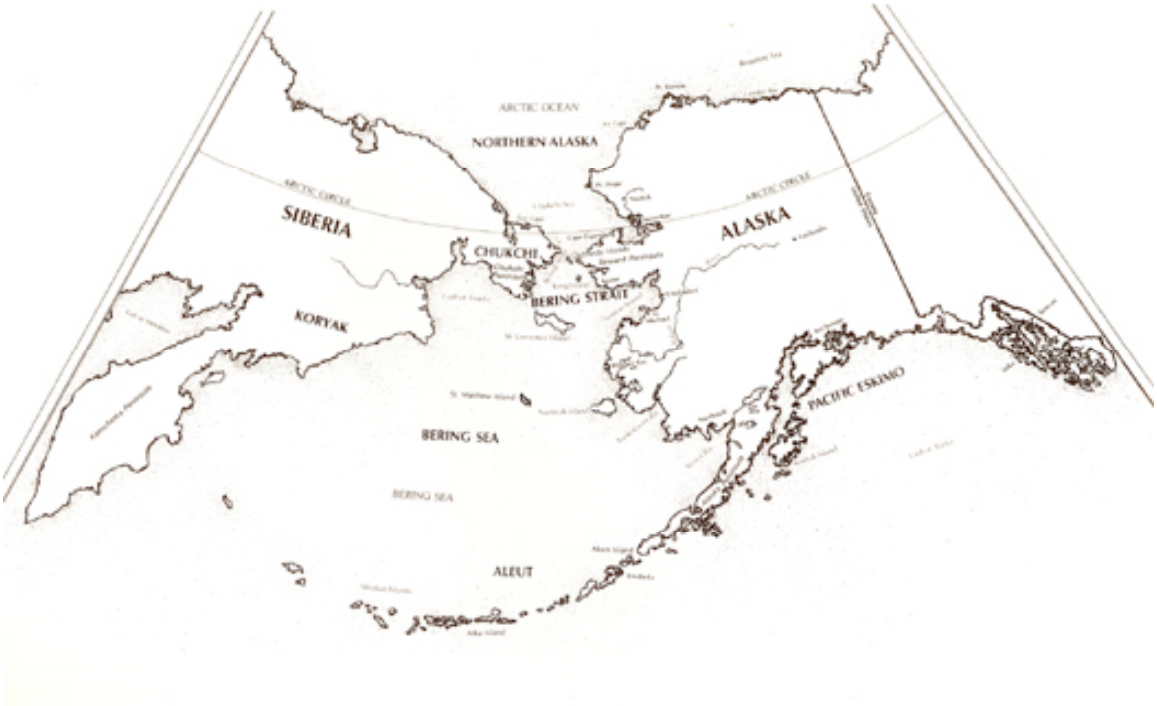
History of the Kayak

A History of the Sea Kayak from the Arctic to Modern Vancouver Island Sea Kayaking

By Ralph Keller

The sea kayak in the arctic, Canada, and British Columbia has a history which spans at least 5,000 years. "It is a fitting tribute to the arctic peoples, builders of the first sea kayak that it survives today as the worlds most popular self propelled watercraft."

The birthplace of the kayak was almost certainly the inhospitable coast of Siberia. We know that the peoples who eventually settled the Americas crossed over sometime time during the last Ice age when a land or ice bridge known as Berengia connected the two continents.



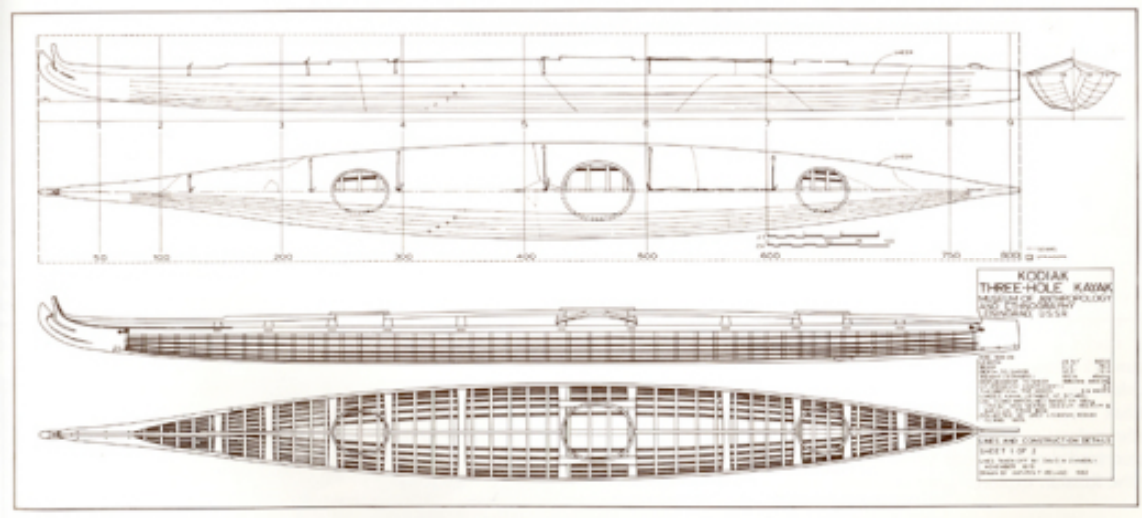
Siberia & the Aleutian Islands, the birth place of the sea kayak

The kayak or “qajaq”or its more primitive ancestor the “umiak” probably first appeared in the North American arctic about 10-15 thousand years ago, arriving with America’s first people. The oldest known archaeological evidence of a kayak goes back 2,000 years B.P. and there is inferential evidence dating it back another 2,000 years. However, given the reality of surviving the harsh environment, most likely arctic peoples had some way of getting onto the water to hunt or fish as long as they have been there. An 8,000-year

Eastern Arctic kayak hunters

existence is possible but we will probably never know for sure.

It is thought the Siberians first took to the water in a skin-covered, wood framed boat known as an umiak. The umiak was an open boat whereas the kayak or qajaq had a covered deck which likely evolved when hunters ventured further out onto the exposed sea. The covered deck of the kayak made it more sea-worthy and better able to shed waves. Furthermore, several native groups developed the ability to roll kayaks back up after capsizing. The umiak and the kayak existed side by side, both finding useful niches for transporting and hunting. Interestingly, despite being the birthplace of the kayak, very little archaeological evidence of the covered kayak can be found on the Siberian Coast.



The ancient kayak: differing only in materials from its modern descendent

The Aleutians and Greenlanders took the kayak to an apex in design and seaworthiness—not to mention skill in handling and rolling. Since these two groups lived in predominantly ice free regions, it is not surprising they took the design to its highest form. The peoples of the Eastern Arctic and Baffin Island in Canada only had open water a few months of the year. With necessity being the mother of invention, less effort went into kayak design and more into sleds and dwellings. During pre-contact times, as many as 40 different designs were used throughout the arctic in Canada, Alaska, Siberia and Greenland, each developed for a specific hunting, transportation and environmental conditions. Kayaks were used on the sea to hunt marine mammals such as seals, walrus, and whales; and on rivers and lakes from which to hunt caribou.

An Aleut and his kayak

In the 1740's, under the leadership of Vitus Bering, Russian explorers were the first to come into contact with the Aleutians and their sea kayaks. They returned primarily for trade, in particular for furs which were popular throughout Europe and Asia. Above all, the Sea Otter was most prized for its fur. When the Russians saw the skill and agility of Aleutians hunters in their kayaks

they were exploited, even kidnapped, and taken aboard ships to be used for hunting of Sea Otters. The Russians took these skilled sea kayaking hunters throughout coastal North America, from the arctic as far south as Catalina Island, off California where Jesuits priests, made journal references to "natives in skin covered boats". It was during this time under the direction of Russian traders, the Sea Otter was hunted to extinction south of Alaska—sad commentary to the skill and savvy of the Aleutian kayak hunters.

A quick look at the structurally complex frame of the kayak suggests a highly developed streamlined design similar to a modern aircraft. The Wright brothers would have been well served to have an Aleutian kayak builder on hand when they constructed their first aircraft. Considering the age of the kayak, it was easily the most advanced, hydrodynamic watercraft in the world. Even the early boats of the Egyptians, ancestors of the people who constructed the pyramids, lacked the engineering prowess of the ancient kayak. It is a fitting tribute to the builders of the first sea kayaks that it survives today as the worlds most popular self propelled watercraft.

In the early 1900's the traditional sea kayak slipped in disuse and history as Russian, European, and American settlers introduced modern ships and boats. Today, very few traditional skin kayaks are still in use and the knowledge of their construction is quickly fading. Except for a small group of dedicated British kayakers, plying the cold and turbulent waters of northern England and Scotland, sea kayaking would have disappeared entirely.

It wasn't until the mid 1960's when 17-year-old George Dyson, son of physicist Freeman Dyson, arrived on the North West coast of Canada that interest in the kayak was rekindled. After traveling to Alaska and rediscovering the marvelous sea kayak in museums, he returned to British Columbia, Canada where he began constructing modern day replicas of the ancient kayak using aluminum and nylon. His contemporaries, Mike Neckar, Brian Henry, and Steve Schleicher… took the idea one step further and founded the British Columbia composite (fibreglass) kayak industry in Canada which led the world in creativity and design until recently when two of the largest companies, victims of their own success were bought out by American corporations

The modern sea kayaker

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For a view of the history of the Greenlandic Kayak in Great Britain, see "Ken Taylor's Kayak: The Origins of Modern Greenland-Style Kayaks," by Duncan R. Winning in the December 2008 Sea Kayaker Magazine. http://www.seakayakermag.com/2009/Feb09/Ken-Taylor.htm

Glossary of Terms

Wet Exit - exiting the kayak when upside down.

Edging – putting the kayak on one side, while maintaining good balance. Keep center of gravity over center of balance.

Pivots – turning the kayak 360 degrees.

Low Brace Turn – usually performed while the kayak has forward momentum. Turning the kayak using a low brace stroke to both turn and stabilize the kayak.

Bow Rescue – an upside down paddler reaches up to grab the bow of a rescuers kayak. Using the bow, the paddler snaps their hips to right the kayak.

T-Rescue – also referred to as a boat over boat rescue. A rescue kayak pulls a capsized kayak over the deck of their boat to empty the water.

Rafting – where two or more kayaks line up alongside each other and hold the kayak next to them for stability.

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Forward Ferry – the kayak moves across the current from one side of the flow to the other, facing bow upstream and looses very little ground.

Back Ferry – the kayak moves across the current from one side of the flow to the other, facing bow downstream and looses very little ground.

Jet Ferry – also referred to as a surf ferry. Facing the bow upstream, the kayaker performs a ferry utilizing speed and a wave to jet across the river.

Eddy Turn – the kayak crosses over the eddy line, into or out of the eddy, and the kayak turns as a result of the opposing water forces of the main current and eddy.

Eddy Line – the line where the main current meets the eddy current.

S-Turn – leaving an eddy on one shore, entering the current and paddling diagonally across the current to enter an eddy on the other shore.

Front Surf – facing the bow upstream and placing the kayak on the face of a wave. The kayak does not move upstream because of the current and the kayak does not move downstream because gravity pulls the kayak down the face of the wave.

Side Surf - entering a hole, hydraulic, or wave sideways and balancing the kayak on edge using a low or high brace.