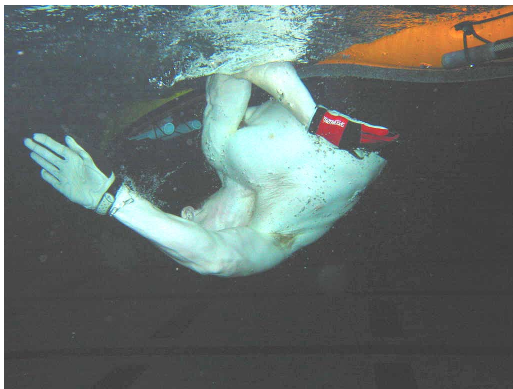


# Supplement to The Chesapeake Paddler

## The Butterfly Roll: Prelude to a Hand Roll



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Boat Fitting Photography by Vince Dalrymple  
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**Capsizing and floundering**

Sitting in a kayak for the first time almost two decades ago, floundering and capsizing repeatedly in the short 1 ½' chop spilling onto Sandy Point, I realized the need to roll. Wet exiting and paddle float re-entry just wouldn't cut it. With dogged determination, and plenty of blind faith, I learned the (extended Pawlatta) layback sweep roll upon purchasing my first boat. Always on the lookout for bigger challenges, I learned of "hands" rolling a few years later, expressed my interest to learn it, but could find almost no one who knew it well enough to teach me. Books, articles, and the odd paddler or two (mostly white water) who had pulled one off became my source of instruction. Time and the simple challenge of it turned hand rolling into the Holy Grail of sea kayaking skills and inspired me to rise to meet this challenge.

In the meantime, I kept learning new paddle rolls, refining those already in my repertoire, and just generally playing with rolling. I adopted the motto "I'd rather be upside down in my kayak than right side up at my desk" as my creed. Eventually, I managed to hand roll a flat but narrow hulled white water boat and then transferred those skills to hand rolling a narrow, low rear decked sea kayak a short time later. I felt I had

exhausted most of the written sources on the subject and was rather put off, first by the lack of importance or respect it was given in the realm of sea kayaking, and second, by the lack of logical steps connecting paddle rolling to hand rolling.

The importance of having a hand roll, especially a combat hand roll, in the world of sea kayaking may be arguable in the utilitarian sense. Let's face it; most of us will not be relied on to bring back a seal for dinner, which during the hunt could conceivably separate the paddler from his paddle. And I have been labeled pessimistic (at the least) to proffer the possibility of finding yourself capsized without your paddle, with your sprayskirt grab loop inadvertently tucked inside the cockpit.

No, the real importance of having a hand roll is the sharpening of your existing skills, making you a better roller and, arguably, a better kayaker all around. This is because hand rolling utilizes body mechanics which will greatly sharpen your boat control – everything from balance and edging to nuances of hip snap and timing, not to mention how to get the maximum effect from the minimum input. These are all skills which directly translate over to paddling. Regularly paddling in clapotis (wave doubling formed when the waves' energy bouncing off vertical structures combines with the energy of the incoming waves) in big sea conditions, I should know.

Although there are many types of hand rolls to choose from, the one that I am going to teach is the layback one-handed sweep hand roll (or layback sweep hand roll for short). The reason for this is it uses many of the same principles as the layback sweep paddle roll. All that's needed, then, is a way of linking the two, other than the traditional method of flotation based rolling aids. The link we will use is often referred to as the Butterfly Roll because the symmetrical spreading motion of the arms (and body) from a close tuck to wide open is much like a butterfly spreading its wings. The Butterfly Roll requires the same torso movements as the layback sweep hand roll while offering the small amount of buoyancy necessary to progress to hand rolling with confidence. In essence, the Butterfly Roll is the transition from relying on the downward force of a paddle blade to using your whole body to roll with, thus getting more rolling effect out of less input. As an added benefit, the buoyancy of this hand rolling learning method comes from a paddle; an item the aspiring hand roller always has with them, and can therefore practice almost anywhere, anytime, without the need for a spotter. If you blow the roll, you still have the paddle at hand to affect whatever roll you're comfortable with in order to recover without the need to wet exit. Now let's look at what goes into (sweep) hand rolling success.

**The Boat**—Without diving too deeply into the topic, having the proper boat will make the advanced rolling learning process much easier. By being able to move the upper torso closer in towards the boat's rolling axis (think of a skater spinning with their arms tucked in, instead of extended out), so it is easier to perform a layback roll in a kayak with a low rear deck than with a high rear deck. This can be tried on land before taking to the water. Also keep in mind that a narrower, more rounded profile (hard or soft chined) boat will roll smoother and easier than a wider, flatter profiled boat. Think of the difference between rolling a log and rolling a sheet of plywood.

One quick word of caution; as with all layback rolls, there is some potential for becoming ensnared on the rear deck. Check your rear deck over for potential snagging hazards from the rear sides of the cockpit (skeg slider toggles which could catch a PFD strap, etc.) to the rear deck proper (cleats with hooked edges, "Chimp" bilge pump handles and their hardware, etc.). Deal with any potential hazards before proceeding by duct taping over them (temporary for rolling practice). Toggles can be filed down, certain types of cleats changed out, handle extensions fashioned which meet the rear deck to prevent PFD straps from sliding under them, etc. I offer this advice because a friend of mine recently snagged a strap from his PFD on his bilge pump handle during a layback paddle roll and

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could neither free himself from the pin or reach his sprayskirt grab loop to wet exit. He rolled up, was eventually extricated with help and is fine, but the incident served as a warning.



**Seatback and hip foam fitting**

rudder during the learning process. Lastly, as I'm sure you're already painfully aware of, layback rolls can play havoc on your back if you have a high rear deck cockpit coaming and / or no transitional foaming over that coaming. Though it is difficult, time consuming, and expensive (Hey, minicell foam ain't cheap!), padding out the seatback to or over the rear lip of the coaming will have your back asking for more layback rolling rather than screaming for pain pills and an appointment with the chiropractor. If you're unsure about how to go about fitting out your boat, go to [www.kayakfit.com](http://www.kayakfit.com) and start there. You can also run a search on the Internet under "kayak outfitting." A side note for folding boat owners; hip hooks fashioned from foam can be inserted onto the gunwale bars during boat setup. These will keep your butt from wallowing around in or falling out of the cockpit while still allowing the hips to move up out of the seat as necessary to lay back onto the rear deck. Grinding down the seatback to the height of the trailing crossrib also helps.

**Boat Fit**—Of much greater importance than the boat itself is the paddler's fit to the boat. One of the two most important aspects of boat fit is having a tight enough fit from the seat and thigh area to the sides of the cockpit. This will prevent your lower torso from dropping to the side of the boat when the boat is completely up on edge, thus slowing or even stopping your roll altogether. The other critical aspect of proper boat fit is having firm knee and hip bracing to drive the boat around its roll axis and back underneath you. As rear decks get higher, the importance of well fitting thigh hooks and hip braces becomes greater, as these may be all that keep your hips from falling out of the cockpit, thus ending your layback roll attempt. On the other hand, your hip braces should not be so tight as to prevent you from touching your head to the rear deck (with your butt off the seat only as much as is necessary). Instead of (or, in addition to) thigh hooks, good knee bracing will tremendously aid hip snap power. Also very important is having good solid foot support to drive off of, which is why folks with rudders should secure their



**Folding boat foam hip hooks**

**The Paddle**—Although an unfeathered composite paddle will work for the Butterfly Roll, it will lack the flotation of a wooden Greenland style paddle. So, if you have (or have access to) a Greenland paddle, use it. If you only have a composite paddle to work with, don't fret. Use it. It may just require a bit more edging work to keep it on or near the surface to provide the support necessary.

**Skills**—First, you should be quite comfortable and able to think while capsized. I firmly believe this level of comfort is important in allowing you to become aware of your body's position, the physical body mechanics and timing of the elements involved, and the diagnosing and changing of things as necessary in order to succeed. Comfort while capsized also helps thwart the body's annoying goal of self-preservation via the regular intake of oxygen. In other words, you won't be making the age old mistake of blowing rolls due to bringing the head up too early if you convince your innermost self that your body will get its needed air only after you complete the roll.

A good understanding of the mechanics of a successful paddle sweep roll (with layback end) is also helpful and the aspiring hand roller should be able to perform the layback sweep roll cleanly and consistently. I will even go a step further and include 'slowly' as being able to slowly move through the mid and later stages of the layback sweep roll demonstrates that the paddler has a smooth hip

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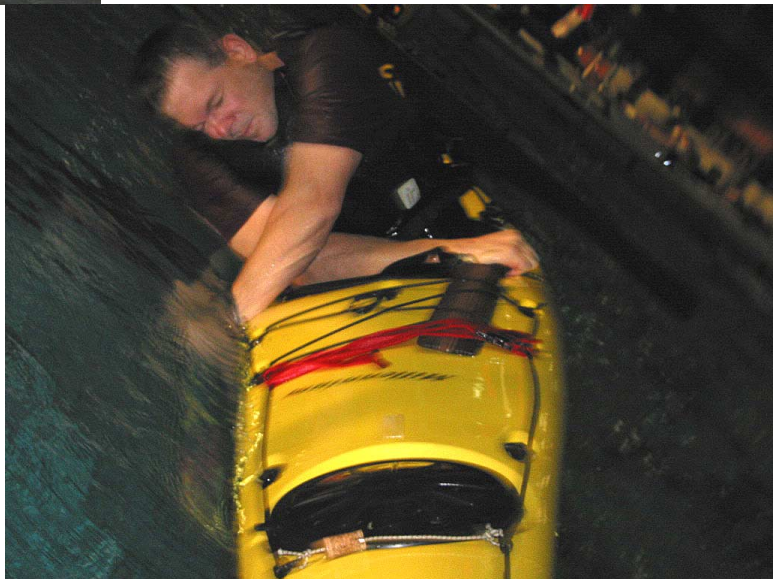
Wind up

you are able to look almost directly back behind you. This should be a nice easy relaxing stretch. Now, as you rock, continue the motion of the crossing arm - up, in front of your face, and over, allowing yourself to lean back comfortably as you do so. End the motion looking up at the sky (past 90 degrees straight up), arms comfortably outstretched, palms up, forming a cross. A fully relaxed open symmetrical cross. Remember how slow, easy, and relaxing this movement feels as we now translate it to the water. Now on to the Butterfly Roll!

**Step 2 – The Butterfly Roll**—Hold your unfeathered paddle at the center, in one hand. Tuck your empty hand across the deck to the coaming or gunwale. Turn the paddle parallel with your boat on the opposite side from the arm holding it (so your arms are crossed). Hold the paddle at or near the water allowing the blades to lie flat to the surface. Now lean forward and capsize to the paddle side. Note; with some flat-

snap with plenty of power, has a good sense of roll timing - when to hip snap and how much, and when and how to shift the head and upper body onto the rear deck. Three factors of the paddle sweep roll must be realized: The maximum power for the catch is derived when the blade is at the surface and the shaft is perpendicular to the boat (substitute hand for blade and arm for shaft when it comes to hand rolling), a good strong hip snap will really help rotate the kayak back underneath you, and, the patience to bring the head up last will significantly improve the success of the roll.

**Step 1 - Land Drill**—Don't worry, this won't hurt. It should loosen you up and relax you, though. From a standing position, bend forward at the waist and just hang for a moment. Now, pivoting at the waist with your feet firmly planted, rotate your torso to the side so your arm swings across in front of you. Think about dipping the shoulder you're turning towards and raising the shoulder of the crossing arm. Rock this motion from side to side a few times until your hands and feet are just about lined up. Notice your palms turn forward and



Over easy



Roll and throw

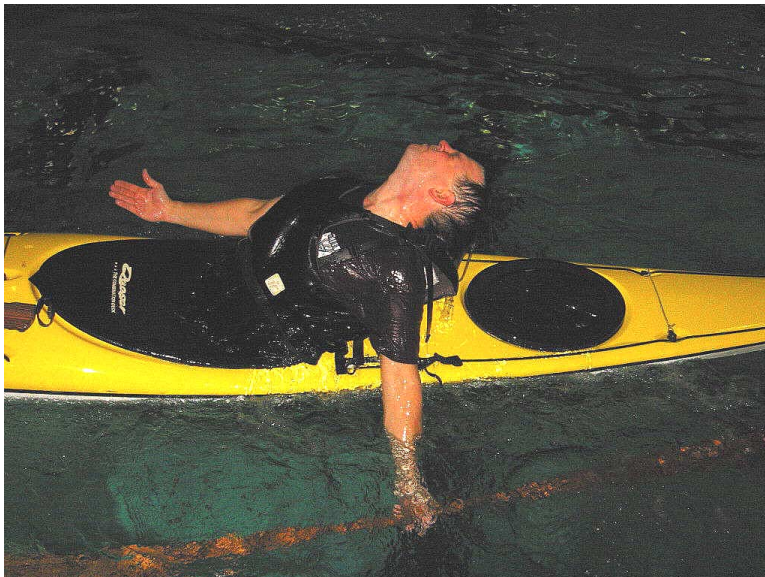
decked boats, you may need to cock the paddle side wrist downward to allow the boat to fully capsize or to draw the boat over to the roll-up side.

You should now be fully capsized with the paddle back up at the surface (still parallel to your boat, in one hand – loose easy open grip, blades flat to the surface), your head and torso still tucked forward to the fore deck in wind up position. Make a mental note of this position as you will later be reaching to it without the paddle when you begin hand rolling. Unwind using the paddle as the initial support to start your roll. Concentrate on pushing upwards (towards the deck) with your hanging knee (the one on the bottom as the boat comes up on edge during the roll) while driving forward with your top leg. Simultaneously, lead the roll with the offside elbow (the arm without the paddle) close against the boat and throw your offside arm low and across deck to help rotate the boat (via momentum) past the 90-degree mark and to eventually act as counterbalance. Your upper torso should be smoothly sweeping to the rear deck throughout this process. Think of it

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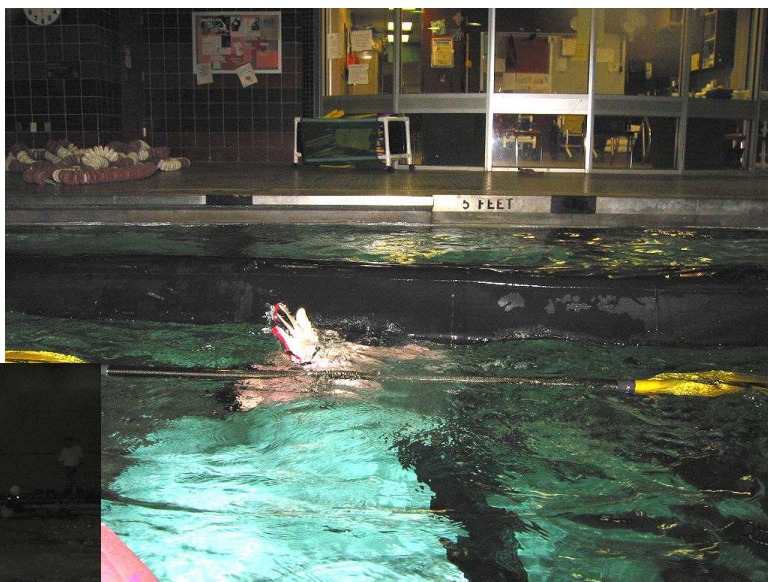
**Finish**

as the same big ol' relaxing stretch you did on shore (standing), except now you are starting from leaning forward and rotating low sideways around onto your back. As your head makes its way to the rear deck, you can "throw" your head across the centerline, adding to the counterbalancing force. Keep driving upward with your hanging knee and hip while driving forward with your top leg until you are back up-right. Keep your upper torso and head pinned to the rear deck until you are done.

If you were forced to abort the roll because the paddle sunk on you, then it could be a couple of problems. The first is that you may still be having problems with your hip flick. To tune your hip flick, use the poolside edge gutter or an assisting wader's hands set at surface level, and line up your boat with your hands on the side next to the support. Cup your on side hand over the support and roll toward the support. Now roll back up concentrating on rolling the boat underneath you (instead of relying on arm strength to muscle your way back up). Remember, the idea is to get more rolling effect out of less input of the downward pressure of a paddle blade. Another possibility, if using a composite paddle, is that, lacking the buoyancy found in a wooden Greenland paddle, the com-

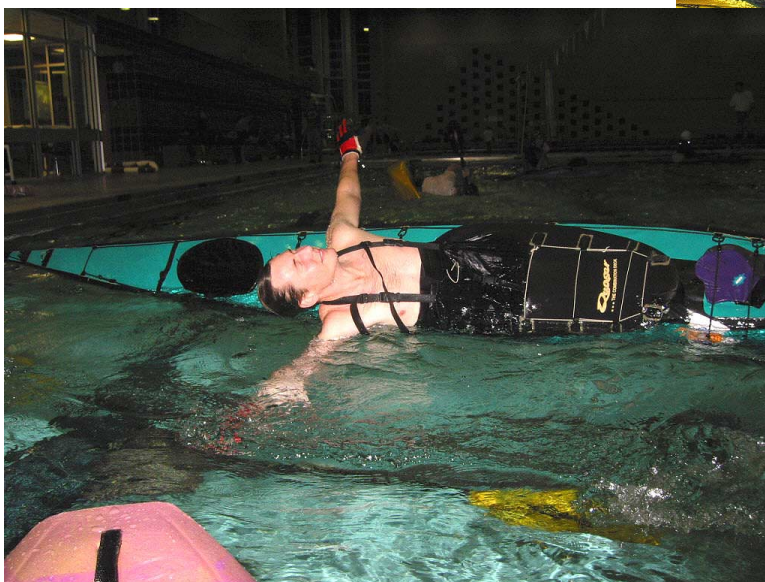
posite paddle is not getting to the surface or is not staying on (or very near) the surface long enough to gain enough initial purchase on the water as the roll is initiated. A trick I use to combat this is; following the capsize, as the paddle hand is nearing the surface, try to 'swim' (draw) the paddle to the surface. This is done by flexing the wrist inwards slightly (towards the boat/body), stretching the hand, arm, and body outwards a bit (allowing the blades to edge up to the surface), then bring the wrist back to neutral, allowing you to 'hook on' to the surface to initiate your roll. Note; this is also a great trick for getting the paddle back to the surface after blowing a roll when the torso is hanging out of position a little ways off of the foredeck.

**Step 3 - Loose Paddle Backhand Variant**—If you were hitting the Butterfly Roll with minimal downward pressure, evidenced by minimal paddle sink, then it's time to take your Butterfly to the next level. In this variation of the Butterfly Roll, you will not grasp the paddle in your hand during the roll back up, but will instead set your fingers, hand, or wrist over the shaft as you roll with the intent being to leverage off the paddle as little as possible. Set up, wind up, and capsize as described earlier. But after capsizing and stabilizing with your paddle back at the surface next to the boat, release your grip on the paddle. With the fingers of your roll side hand together and straight, you're going to reach hard to the surface be-



**Hook it**

tween your boat and the paddle, rotating your hand palm down as you would slapping the water. In the process, you will "hook" your fingers, side of your hand, wrist, or fore arm over the shaft as you explode your hip snap and unwind, all the while concentrating on using your body as much as possible and your paddle as little as possible. Keeping your fingers stiff and straight with palm downwards, do not grab hold of the paddle (though letting the shaft come to rest under your palm is okay). Concentrate on keeping the paddle from sinking via your hip flick, free arm throw timing, and drive forward (with the top leg) near the end of the roll. This Loose Paddle



**Catch and throw**

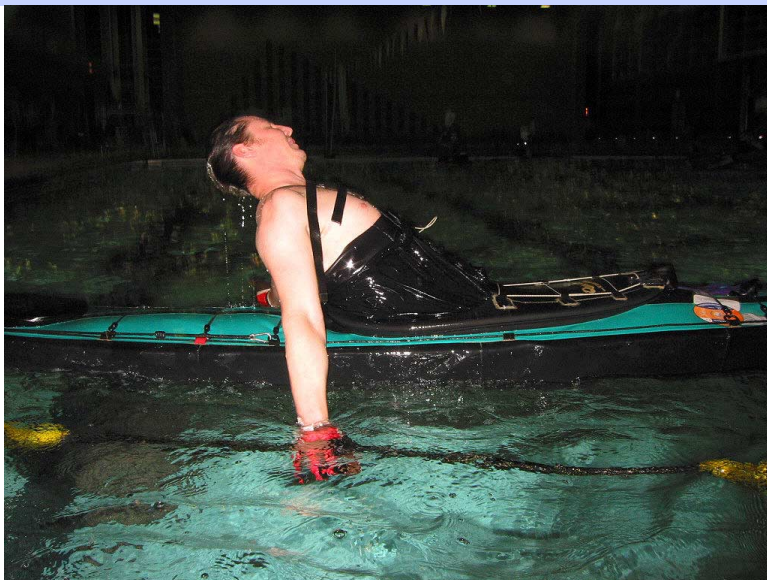
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Backhand variant of the Butterfly Roll will provide just the right amount of support to the hip snap necessary to accomplish the sweep hand roll – and little more. If you are blowing the roll due to paddle sink or the paddle consistently sliding out on you, then you're still relying too much on your paddle rather than your hip snap, timing, etc. and you need to keep working on those skills. If you are able to complete this tougher variant of the Butterfly Roll, then give yourself a pat on the back because you now possess all the skills necessary to hand roll.

**In Conclusion**—In the next article, **Who Needs a Paddle Anyway**, we'll go through one last intermediary step and then dive right into hand rolling. So foam out your boat, check CPA's home page for pool reservations and practice your Butterfly Roll. In a month's time, the next article will be here and you'll be ready start hand rolling.



Final

Happy Rolling!



Rolling Toyz