The Kayak Biz

In 1981, the arrival of the Reagan administration was a certain death-knell for recreation research in the federal agencies, and for that and other reasons I decided it was time to leave my research job with the US Forest Service and try something that I'd been thinking about for a long time - boatbuilding. Having only rudimentary skills and one summer's experience building lobster boats in Maine, I enrolled in the Marine Carpentry program at Seattle Central Community College.

As the program title suggests, the main focus was wood construction, but there was one shop and instructor dedicated to fiberglass and that's where I ended up, with the aim of kayak building.

After learning techniques for spraying gelcoat and applying glass and resin laminations, I was ready to build my own kayak. Fortunately, the school already had a mold for a "touring" kayak, sixteen feet long and 25-inch beam, designed primarily for cruising on lakes. The biggest detriments were the low ends, which were bullet-tipped and barely above water level. Still I thought it would be an improvement from my folding boat, so I built one. I added a rear bulkhead and hatch. It also needed a flip-up rudder, so I made a simple one from a block of nylon and sheet aluminum, all from Boeing Surplus.

Its first trip was to the San Juan Islands in mid-summer. It performed well enough going up and around the north end of Orcas and Sucia Island, and then down the west side of Orcas and past Lopez Island. But at Cattle Pass I discovered the serious deficiency of the low bow. In moderate seas, it dove under some kelp, leaving me with three or four heavy tubes across my lap. Fortunately it wasn't enough to capsize me and I was able to back out of them. This would have to be changed.

Back at the shop, Dave the instructor suggested building up the bow with polyester foam blocks, sanded to shape and then covered with glass cloth. Thus I could give it whatever shape I wanted with the addition of only a few pounds of weight.

The result was terminally ugly, but effective. I now had a clipper bow, crudely faired into the rest of the hull, giving it the appearance of a shark's snout.

The Shark now worked quite well, and it served on the next summer's Alaska expedition from Ketchikan around Prince of Wales Island and north to Glacier Bay.

My confidence in what I could handle was vastly improved by my move to a "real" kayak. I no longer had to worry about heavy deck-washing and even learned rudimentary bracing skills. Rolling the boat still wasn't an option, since the seat I had built wasn't secure enough, there wasn't enough thigh bracing, the foot braces were too flimsy, and my home-made spray skirt was too leaky. I was still using pack cloth and a big covered zipper as I had in the folding boat, so that I could leave the skirt on the boat when I got out, which worked ok for deck-washing but not for immersion.

My summer cruising in the Shark got me thinking about designing my own boat. With a few quarters to go at the school, it was something that they encouraged, as long as I took on the whole process like a "real" boat – drafting plans with offset tables, lofting to full scale, and plug and mould construction to their standards.

I wanted my boat to have plenty of capacity for gear, so it would be seventeen feet long with a beam of 25 inches. The forward and stern decks would be low (though high enough to shed the kelp) to keep the windage down, and with recessed hatches at front and rear. My team partner, who also wanted one of these for himself, had size 13 feet, so I designed for plenty of space in that area, which gave it a bit bloated appearance. The stern would be designed to fit a Sherbourne rudder, which was the standard one in use for many production kayaks at the time. I drew up the plans using height and width profiles from which offset tables were taken. These are used to scale the design to full size, usually on a plywood surface, in a process called lofting, fairing the measured curves using wooden battens.

Then it was time to build the plug - a positive model of the kayak from which the hull and deck moulds would be taken. There was a limitation - the instructor wanted me to build the plug using cedar planking as though it was a real boat. This would limit the shapes that I could give it somewhat, and limit how much I could change it once the plug was built. I carefully built a series of forms at one foot intervals, subtracting for the thickness of the planking, set them up, and applied the planking. After days of planing the cedar, the shape seemed good. Then we had to carefully fill all the cracks before spray painting it. The paint was then wet-sanded and reapplied several times before it had the smooth, fair sheen needed to make the hull and deck moulds.

We started by moulding the deck. We set up a shelf all away around the widest parts of the hull, which is called the parting line, since this is where the hull and deck moulds will meet. Next the top of the plug and parting line shelf were sprayed with PVA, a releasing agent. Then gelcoat was sprayed on, and several heavy laminations of mat and roving.

Once the deck mould had set, we flipped the whole thing over and removed the shelf material, leaving the undersurface of the deck mould's shelf. This and the bottom of the plug were sprayed with PVA and gelcoat as before, and laminated. Finally plywood stiffeners were glassed onto both moulds to ensure that they would hold their shapes once removed from the plug.

Separating the moulds was the most exciting but also frustrating part. Here you discover how good a job you've done on making a smooth plug, and in the worst case the plug is destroyed in the process. After no small amount of prying, the moulds came off, leaving the plug mostly intact (nice in case you want to make another set of moulds).

After considerable polishing and waxing of the inside of the moulds, we were ready to make a boat. It was a considerable thrill when the first deck piece was lifted out, light and flexible. I cut out the cockpit and hatch openings, and after laying up the hull, we were ready to assemble it. I used plastic H-shaped extrusion that we bought from Pacific Water Sports to join the hull and deck (also in common use to seam kayaks in the industry at the time). After the two parts were tightly taped together with the extrusion, I had the onerous task of "seaming" - glassing the boat together on the inside. It was very nasty work - stand the boat on end, prepare a long strip of resin-wetted mat, attach one end to a pole, and insert the thing up into one end of the boat while wearing a respirator and full coverage to protect against drips, or the whole strip falling off onto your head. After several tries, the strip was properly anchored in place across hull, extrusion, and deck, and then brushed down with a paint brush on a pole before the fiberglass "kicked off". I found out this was the most difficult step in kayak construction. If done poorly, the seam leaks, or may even come apart! (Later this extrusion went out of fashion in the kayak industry due to rampant problems of this kind, returning to traditional methods of glass tape on both inside and outside.)

Also, I had to make moulds for the seat, coaming, and hatches. This was considerably more work, and demonstrated why "one-off" (single-copy) fiberglass construction makes no sense at all. Finally I assembled everything, glassed in bulkheads, fitted the rudder and sliding footbraces (also obtained from Pacific Water Sports), and it was done.

I named it the Shearwater. Quite a few were built at the school over the next few years. And, Bill Ross, a classmate, arranged to build his own moulds so that he could produce boats on his own at his shop, and made several dozen.

I have to say that the Shearwater was only moderately successful. It was not very fast, and pounded in rough water, so I called it the "Shovewater". If I'd had more experience, I would have sliced the plug laterally along the bottom in several places and bent it to raise the bow and stern to give it several inches of rocker. I would also have given the bottom a shallow vee with hard chines aft instead of the canoe-like flat-bottomed U-shape. But I didn't know what makes a better boat, and really still don't.

Moving to the Shearwater definitely enhanced my skill development. It had enough seat, knee, and foot bracing so that I could learn to roll it. Simultaneously my first book, The Coastal Kayaker, had been published and I made contacts that helped me learn the skills that many of the growing community of sea kayakers already had. I went regularly to pool sessions and practiced bracing and assisted and solo rescue techniques.

I also started teaching sea kayaking at The Swallows Nest, a Seattle outdoor shop. Fortunately, I was the assistant instructor at the pool sessions, since I found out it was one thing to know how to do something like bracing but quite another to be able to teach it. I focused on the classroom orientation and navigation sessions and assisted with the saltwater outings.

Eddyline

In 1983 I went to work for Eddyline Kayaks. I talked my way into a job by volunteering to do anything, cheap. At that time Eddyline was about to move from their decrepit leaking, unheated building in Mukulteo to a two-story converted barracks at Paine Field's industrial park in Everett. Tom Derrer put me to work as a carpenter, building spray booths (to spray gelcoat into moulds) and a vast number of workbenches. But early on he must have got to worrying that as a graduate of a marine carpentry school, I would work to meticulous time-consuming standards that he couldn't afford. "I'm into flimsy," he cautioned me. Not a problem – I came up with a sturdy, cheap workbench design that I could slap together and nail onto the walls at a satisfactory rate.

Once we were moved in, I was sent upstairs to work in new development – building plugs. I found out that there were many faster and more flexible ways to build a plug than by planking it. The main ingredients were quarter-inch masonite, hot glue, and "Bondo" (fiberglass auto body putty). A hull shape could be built with almost anything to give it the basic form. To change part of it, just cut it away and replace it with pieces of masonite secured with hot glue, then cover it with Bondo and start sanding after it sets up. Plugs like this were very heavy, but they were watertight and were often paddled a little to check them before the final finish stages.

My main project was the San Juan, a huge triple kayak partially designed to be sailed. The basic shape, made in plywood and covered with a thin layer of fiberglass cloth, was already done, so I applied and sanded lots of Bondo. After working on both hull and deck sides, we wanted to flip it a last time. Tom lifted one end and I lifted the other. It weighted several hundred pounds. Somehow it spun out of our hands and crashed to the floor, shaking the whole building so badly that everyone ran outside. It was a great testament to Bondo that the plug was no worse for wear.

My last project at the school had been a sectional rigid kayak, which Tom agreed to continue developing at Eddyline. The idea was to cut a hull into three sections, each with their own bulkheads, and bolt them together. By having the decks of the two largest sections removable, the bow and stern sections could nest inside each other and then fit inside the center section, producing a package a third the length of the kayak. This would be handy for both transportation and stowage in a closet at home, and had the advantages of a hard-shell kayak's performance and durability over fabric-covered folding boats.

To try it out at the school, I made another set of hull and deck parts from the "Shark's" mould (with the original low bow). I cut these up and glassed in the mating bulkheads, and made some crude overlapping seam channels at the parting line between hull and deck, with rubber gaskets inside them. Straps held the deck sections on to the hulls, and bolts held the bulkheads together. It seemed as rigid as the single-piece version, and I hoped as seaworthy.

Its first test was daunting to the extent of foolish - a camping trip on the west coast of Vancouver Island, in March. Accompanied by Linda in a rented Eddyline Orca and a couple from boat school in a Klepper, we launched from Tofino bound north for Hot Springs Cove. I put my boat in the water at one of the town's floats and removed the bow and stern decks, which was the only way to load gear into them. When loading was finished, the parting line seam floated a scant inch above the waterline. Nonetheless, we set out, trusting in my gasketed channels to be waterproof, and landed a few miles later for lunch. I discovered that - no surprise - my parting-line seams were all leaking. So with a long way and lots of rough water to go, I duct taped them all, thus rendering all of my gear unavailable until I removed the tape again at our destination. Fortunately I had plenty of tape.

If the parting line seams could be made watertight, Tom thought the concept could work, and put me to work developing a prototype at Eddyline. It turned out that his Sandpiper boat had the right dimensions to allow the three parts to nest inside eachother. I put two temporary masonite bulkheads into the Sandpiper production moulds, and made bow and stern sections for both the hull and deck. Then I removed the masonite and laid up the center sections using the faces of the bow and stern bulkheads to form the center bulkheads. When all the parts were done, they all mated together so well that the separation lines were barely visible. And, the fairly low bow section could be permanently seamed together since it fitted intact inside the stern section. Gear could be loaded into it using a five-inch circular hatch.

Alas, finding the means to create reliable waterproof channel and a foolproof system of latches to hold them together proved beyond us. Too much time went into it before Tom pulled the plug on the project and I was reassigned to making vacuum-bagged paddles, with limited success.

Over the years, I revisit the idea of a rigid hulled folding boat. I think the ideal compromise would be to use fiberglass hulls with a framed and cloth-covered deck. This would allow the deck cloth to be permanently joined to the hull at the parting line so that it wouldn't leak, and after bolting the hulls

together the deck could be assembled much as other folding boats are. But it's a project for someone else.

Washburne Marine Products

About a year later I left Eddyline and went to work on my own making kayak carts, and working on my second book, *The Coastal Kayakers Manual*. I started with a precursor to the Sternwheels end-mount cart. It was not very successful, since it used expensive materials and required a lot of labor. It relied on straps to prevent the boat from twisting, which didn't work very well. I'd also been thinking about a center-mount cart, and made a take-apart prototype which went with me to Baja with the single-seat Folbot. It didn't work terribly well either. Then I actually had a dream about how to make legs for the cart, and after trying it with different materials, that was how the Midwheels cart was made, and sold successfully for twenty years. Soon after that I came up with the design for the Sternwheels end-mount, and it also sold even better for almost as long with only minor modifications over the years.

I found I didn't have the temperament for the repetitive tasks of making these carts. I tried it for about two years, but was burning out, and was very relieved to turn it over to Tom Wilkinson around 1990, after which sales grew dramatically over the years as sea kayaking went main-stream.

Publishing

The idea of writing a book about paddling on the rain forest Northwest coast came to me on the flight south from Alaska after a trip from Glacier Bay to Yakobi Island. Most of it was to be about getting to remote BC and Alaska with folding boats, and camping ashore in wet forests. The art of sea kayaking was not particularly prominent because I really didn’t have much to say about anything other than paddling ahead and turning with the rudder, and staying away from breaking waves. More inspiration arrived with the fluke discovery of Derek Hutchinson’s *Sea Canoeing*. I was amazed that there were other people doing such things at least in England, though their craft and skills were far different than mine, with skinny boats taken after Greenland Eskimo kayaks, built from plywood in garages, and uses in rock garden coast by seal launching and other feats. But then, none of them were carrying camping gear for weeks at a time in these little things like I did.

I wrote up an outline and a couple of sample chapters and sent it to two Seattle publishers in 1980. Both found it interesting, considered it a while, and then rejected it on the basis that it seemed improbable that there would be enough interest in something like kayaking on the ocean to sell a book. About a year later John Dowd published his *Sea Kayaking*, and the frenzy began, laying the groundwork for me. But if I hadn’t met Linda Daniel again, I would never have pursued this, and my life would have been quite different.

In 1982 I had left the Forest Service and moved from Missoula to Port Townsend, where I reconnected with Linda. She looked at my abbreviated manuscript, and after taking a few short trips with me in the San Juan Islands, convinced me that I was on to something and to try again. This time I submitted to Pacific Search Press, and they took it. But there were some caveats. It had to expand my

scope to include the emerging market of Puget Sound area paddling, with some specific trip guidelines there as well as in Alaska.

I now discovered the world of true kayakers that had been paddling hard-shell kayaks on saltwater for years, and desperately tried to catch up on their long standing knowledge through people like Lee and Judy Moyer, Tom Derrer, and the guru himself, John Dowd, who were co-opted reluctantly into reviewing chapters. My writing left something to be desired, so Linda was hired to do a thorough editing, which helped it immensely. I still didn't have a title, so Pacific Search came up with one – *The Coastal Kayaker*. I liked it.

The book was snapped up hungrily since it was only the third for the North American market, after Dowd's and John Ince's recently released guide to paddling the BC Coast. But at my first book signing I found there were plenty of people on hand to take me to task over things I'd said, and for the most part they were right. Within a year or so I would have been happy to take the whole thing back. But it continued to sell well, and it opened a lot of new doors to learning things and even a chance to teach about it through local outfits like The Swallows Nest and Pacific Water Sports.

As I started to learn about real kayaking, I also started writing articles for *Sea Kayaker* magazine. These started small, with an anecdote about "rescuing" a stranded BC power boater with my VHF radio, and moved on to full size spreads on subjects like emergency distress signals, wetsuits, footwear, and bracing. I sent one of my first major pieces to the editor, Bea Dowd, and she sent me back the proof for the printed article. She called to ask how I liked it, and I said "Fine, but you edited me pretty heavily." Stunned, she said that she hadn't changed a word. After the call, I checked and saw she was right. I guess I didn't like my own writing so well.

Linda came to my rescue with a card she had on hand for just such an occasion. On the cover was a cartoon raccoon standing in front of a dart board with an outraged expression and a dart sticking in his butt. Inside, it said "Sorry!" I added, "You were right … it's word for word what I wrote." Thus humbled, I resumed easy working relations with Bea for the duration.

With the kayaking market catching fire, Pacific Search asked me to write a guidebook to Puget Sound and the San Juan and Gulf Islands. It was a huge amount of work, but of course fun too, paddling all of the routes to be included. In 1986 it was published and did very well. But within a year Pacific Search Press was sold to Globe Pequot Press in Boston who took the rights to The Coastal Kayaker, but sold the rights to the guidebook to an individual whose name I've since forgotten. The Mountaineers Books bought the rights from him, and I did an extensive revision for them, which later became three further editions with Carey Gersten.

By the late eighties I was starting to feel that I had a good foundation of knowledge about sea kayaking through teaching, magazine writing, and several more summers of extended cruising in BC and Alaska in my hardshell Shearwater and later the Seaworthy Designs Enetai. It seemed a good time for a how-to book aimed at the North American rigid boat market, since the only other book of that type was Dowd's, which focused primarily on expeditions in folding boats. Globe Pequot was interested, and it became *The Coastal Kayakers Manual*. Writing it was fairly straight forward, since I knew what I wanted to include and was confident about my material than I had been for the original *Coastal Kayaker*. It got positive reviews, and sold well for ten years with only limited revisions before being overtaken by the myriad new manuals for the now vast market.

The very last revision was disappointing. In 1997 I was working full time as a contract database programmer. Globe Pequot asked me to do another cosmetic revision (new cover and a enough new material to call it a new edition), which would supposedly jump the sales curve up. I declined. So the editors announced they would make changes themselves without me. I had mentioned that the book could use something in the navigation chapter about the GPS, so that was one of things they added, without giving me the opportunity to review it. The result was mortifying due to its uselessness, the utter lack of understanding about GPS's relationship to other navigation tools, and worst, that I apparently wrote it.

"It is small, battery-operated, and fits in the palm of your hand, and because of this many boaters find it useful when they tire of nautical charts and compass. A GPS is especially useful for jaunts along a wilderness coastline and during open crossings."

(I now own a GPS and often carry it, occasionally using it to assess current set, but never leaving it on for long due to its propensity to eat batteries. And, I never, ever, use it in place of charts and compass.)

I'm comfortable that *The Coastal Kayaker's Manual* is nearing the end of its long life, and pleased that this sort of situation is unlikely to occur again.

There is one more publication that seems to bring me more name recognition then the kayaking books – *Washburne's Tables*. In 1984 Linda and I had jointly bought a Kaypro CP/M computer. For a programming language, it had GW BASIC, which was not very different from the FORTRAN I'd used on mainframes working for the Forest Service. I cast around for a project with which to learn BASIC. The Canadian Hydrographic Service had just published a current atlas for the San Juan and Gulf Islands, which was quite helpful to sailors and other slow boaters along with kayakers. Unfortunately it was extremely difficult to determine which page described a given day and hour, since you first had to obtain the Point Atkinson tide table and then make a series of calculations that would lead you to the proper page in the atlas for whatever time period you wanted. This seemed like a perfect project for a BASIC program.

So I obtained the tide data and set to work doing the calculations for each hour of each day of the year, including adjusting for daylight saving. Problems arose, such as the tide cycle lengths not always matching the intervals prescribed in the current atlas, but eventually it was done. On the Kaypro, it ran so slowly that, doing one month at a time, I could read several pages of a book as each day's results plodded onto the screen. More than twenty years later, essentially the same program, converted to Visual Basic 6 and running on a Windows XP machine, finishes the entire year in less than five seconds.

I took the idea to Bob Hale, a distributor of marine books, among other things, and a past editor of *Nor'westing* magazine, and he took it on. But what name to give it? Using the author's name is apparently a tradition with nautical almanacs, so *Washburne's Tables* it was. Bob and his assistant Oscar Lind, ever since one of my best friends, worked hard with me the first year to test and verify my results against the manual calculation method. It almost made us crazy. At one point Bob admitted that he found himself dazed and wondering, "so how does the tide know it's daylight saving time?" In later years they were delighted to turn the checking over to me, which has always been problem free except for the transitions to and from daylight saving, which I usually have to tweak a little.

By its second year the tables developed a loyal following and sales remained remarkably constant from then forward, in spite of two competitors. Now people recognize my name in odd places, like the hardware store clerk who uses the tables for salmon fishing in the Strait of Juan de Fuca. Some sailors I've known for years only recently made the connection that I made the tables they'd been buying all that time.

At least no one expects me to do bookstore readings or signings, and I can remain as anonymous as I want to be.

I did one more edition of the guide book, with the understanding that I would not do promotional events, for the additional trickle of retirement income. But I don't kayak enough anymore, and won't do it again.

Anonymity

When I first published *The Coastal Kayaker*, I hadn't thought very much about what would be expected of me, beyond cashing royalty checks and maybe writing another book. Becoming a celebrity in a small pond (later to grow into something like Lake Superior) was not part of it, nor that as a published author much more would be expected of me than putting words on a page. I was supposed to be some sort of kayaker paragon, and to perform publicly either to promote the book and/or to attract business somewhere.

In my public mass-media mode – writing and public speaking – I seemed to present myself well and provide what my public wanted. Appearances in front of hundreds of people at places like REI or the Port Townsend sea kayak symposium went off ok, most of the time.

At the first symposium in Port Townsend I was on a panel of notables including John Dowd, George Dyson, and Matt Broze discussing the merits of various types of kayaks. With the theme of kayak as freight-carrier for long trips in mind, I said "Last summer I was loaded for three months." To my consternation, it brought the house down. For an eternity I sat there with the deer-in-the-headlights look before Matt explained to me what I had said. Slide shows went better, since I could address the pictures rather the people, and were best when I narrated trips like visits to then unknown phenomena like Nakwakto Rapids or the undocumented tidal rapids of big BC lagoon systems.

One year I was invited to appear at a kayak symposium on Lake Michigan. They paid my way to Detroit and a modest honorarium that covered my time at a minimum-wage level. Brits Derek Hutchinson and Frank Goodman were the main attractions, and I discovered that due to the powerful influence of the primary kayak entrepreneur and guru, British style sea kayaks and style were the only ones allowed. He and his sycophants quickly discovered that I paddled something non-British and rolled infrequently, and they ignored me for the rest of the weekend. I gave one seminar on kayak navigation at which both attendees listened politely and left quickly. Otherwise I spent the weekend watching Derek teach elaborate recovery scenarios in which everybody's kayak has sunk.

On an interpersonal level, I frequently sensed that I was not what people expected me to be -- not larger-than-life, not superlative in any detectable way, and definitely not entertaining. I guided some weekend trips for local outfitters and around the campfire was expected to regale the clients, revealing other extraordinary dimensions of my non-kayaking life, of which there were

none. When I talked about kayaking it felt like I was just quoting from my brain-dump, *The Coastal Kayaker's Manual*, and that I had little else to add. Less universally-acceptable exploits like cabin-building had to be kept quiet, and most people didn't care about them anyhow.

When it came to paddling, I failed to impress. Instead of powerhouse strokes interspersed with elegant Eskimo rolls, my comfortable pace proved to be actually slower than most peoples, and my very rare rolls were embarrassingly unreliable. Unless you're a natural, rolls depend on regular practice. I'm not, and I didn't.

In the kayak industry, I was a dismal failure as a figurehead. After a few years of writing for *Sea Kayaker* magazine, John and Bea Dowd approached Linda and me about taking over as editors for the magazine. I was valued as a known persona and Linda for her experience in the publishing industry. Somehow, I knew that I would have to do a lot more than review and edit articles and write editorial columns. I would have to be a leader and spokesman for sea kayaking in myriad venues, taking well-considered stands on controversial issues that I would have to stick by. I knew I couldn't do any of that, and that it was the right decision to decline.

For similar reasons, I was asked to serve as Vice President for TASK, the now-defunct Trade Association of Sea Kayakers. I already knew that TASK was oriented to the kayak manufacturing and outfitter industries and that it had little to do with my involvement as an author or cottage-industry kayak cart maker. That was acceptable, and I was happy to support them financially every year with a business membership. But as Vice President, I discovered I had absolutely nothing to contribute. As board meeting discussions droned on about outfitter insurance or political relationships to other paddling organizations, I just couldn't keep the thread and tuned out. I felt badly about that, but couldn't change it. With great relief to everyone, my tenure ended. This was one of several occasions in which I failed to meet expectations of local organizations to take leadership and public advocacy roles.

I now seek anonymity, avoid sea kayaking events or, if I go at all, keep a low profile. I no longer speak comfortably in groups larger than four, so I usually keep quiet. Gradually I learned to volunteer only in ways I know I can contribute. After retiring from several years as a web and database developer, I built a web sign-up application for Volunteers for Outdoor Washington. They were happy and so was I. Likewise, working weekly as a laborer on a volunteer trail crew feels like my perfect niche – just show up and work hard.