The *Evolutionary* Design Of The "Huckleberry Houseboat"

by Capt'n Natural-Lee Young

I call this an evolutionary design 'cause most folks do the design before they build, but not bein' like most folks, I do my designin' as I go, and as needed. Also, bein' a poor man the materials have been "whatever I can afford, or find". Much of the materials come from local sources, and some from the natural surroundin's.

What I have floatin' on the water at present is the result of many hours of sittin' in my thinkin' chair and visualizin' the next piece to attach. The original "A.V. (Adventure Vessel) Movin' On" is still there (a 16' Old Town Canoe), but everything else has changed many times, and as the name suggests it is an adventure in progress. The "Huckleberry Houseboat", as it sits is the result of a recent (summer of 2014) adventure that took me 700 plus miles for the sake of a short lived reality show on *The History Channel* called "The Rivermen".

The conception of the design was to create a easily managed (1 person) craft/home to navigate the soft waters of the rivers in Florida. The low amount of free-board did not allow the adventures to venture into the open seas, and that was a learned design flaw, havin' put myself in some pretty rough waters pushin' the envelope. Some lessons learned, and others still to be taught.

Though the "Huck" (as I call him) is a primitive subtropical craft, it has been sealed off rather crudely to handle the elements associated with more northern climates, it is basically a real southern made boy.

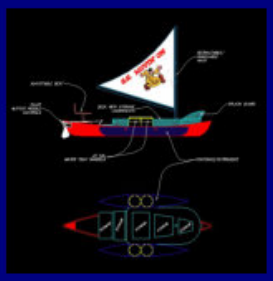
(Note: I refer to the Huck as a him because I've always been contrary, as you will see in the designs.)

The last most important element to be added is a mosquito screen that encloses the livin' area. Not perfect, but it does a fair job. Could spend a little more time and make it better, but it's good enough for me. What I'm providin' will be a series of images that show the progress from beginnin' to the present, and a few ideas for the future, just to make things better.

Click this image to continue!

Note: You can click on the images to see a larger version.

The was the original concept drawin' I made usin' AutoCAD.



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Gettin' Started

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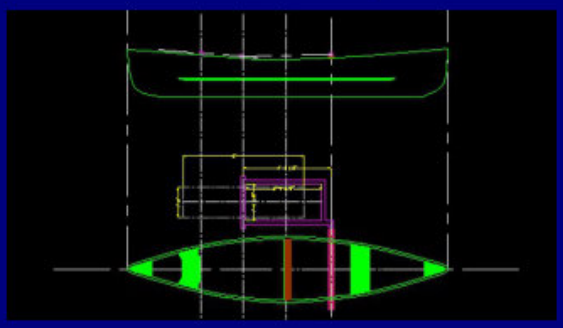
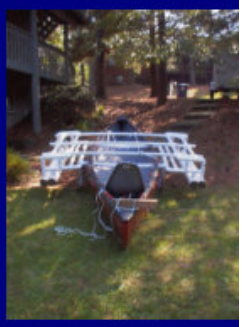
As I said, the Huck was originally designed as an adventure vessel that would take me down the Flint River in Georgia, to the Apalachicola River in Florida, and beyond. There was little plannin' for livin' aboard in the beginnin', but as I got closer to the Gulf of Mexico the need to live aboard was apparent, since there was little in the way of dry land to make camp upon. Necessity is the mother of invention, and I had to be creative.

On the back porch of my apartment in Marietta, GA I began the work on the Huck for the first design.



"Design it with a computer, build it with an axe and check it with a micrometer."

Assembled and ready to launch on the Flint River, near Thomaston, GA in July 2003.



Before I reached the bay in Apalachicola the pontoons took on a new design, and was implemented on the banks of the river.

Once in Florida waters I found a large block of Styrofoam in the bushes, and with knife, saw and some time, I built a couple of new pontoons. They worked really well for their buoyancy, but they were too fragile and broke in half right after this photo was taken.

This was the end to the 350 +/- mile run. I was beached by rough water on the south end of the Apalachicola Bay. Back to the drawin' board!

The journey for these designs lasted for nearly 3 months, and it would be a while before the next design process would begin 'cause I had to return to work to get the seed money for the next adventure.

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A Liveaboard

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This next design is where the "houseboat" part of the name really became the priority of the design. In 2006 I began the process of buildin' a vessel to take me and my critters from Millidgeville, GA to the Atlantic Ocean, and beyond. Bein' basically homeless, but with a nest egg, I moved the construction/camp site to the banks of the Oconee River in the town of Toomsboro, GA. I spent the better part of January and February designin', buildin' and gettin' used to the out of doors life. I nearly got it done, and was called to Florida on some personal business, so I moved the finishin' up to Myakka, FL. Once I was finished with what I hoped would be the design of all designs, I put in on Lake Jesup near Sanford, FL. I had to rethink my plans 'cause I couldn't get anyone to take me all the way back to Georgia. Bein' flexible is somethin' ya gotta do when you're on a real adventure.

It was back to square one with the 16' Old Town Canoe.

Headin' for a 9' wide total width to make transport easier.

Workin' from the inside out.

A foremast of PVC, telescopic to 15' above the deck

6' x 8' deck base, divided.

Substructure of the deck.

Convertible deck was the plan.

Enough deck space for fishin' and sittin' was what I wanted.

The stern design included storage and more.

The pontoon framed with cheap materials with plans to cover.

Included was a foot controlled rudder that never got used.

Opened up and with a tarp I had me a house. Sorta!

For power I came up with the idea of convertin' a weed eater into a motor. It actually worked, but the weight of the Huck was too much and the clutch couldn't handle it.

The replacement power was a 5hp 1951 Buccaneer, and the trailer for haulin' a converted 12' flat bed.

From the drawin' board to the shove off took a little over 3 months, and I thought I had it all figured out, but as my designs generally go, this was merely a test. The real design that worked was yet to come.

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Alterations Start

Between April and June, 2007, the Huck took on new looks and usin' available materials found on the St. Johns River and Ocklawaha River, as well a some of the spring runs. The lack of funds did not allow me to completely seal the original pontoons, and so they had to go, replacin' them with sheets of styrofoam sandwiched between metal, found washed up on the west shore of Lake George. From that point is was first one thing then another.

The assembly and launch into Lake Jesup, FL.

The strippin' down began less than a month into the life.

The pontoons in midst of change.

Many of the changes made to the Huck over the next few months are not recorded in photos 'cause a hard drive contain' them fried in 2010, and all was lost.

As seen on the St. Johns River under full steam...about 2 mph.

The only winterization done was to put up clear plastic around the hooch where I bedded down. Luckily it wasn't too cold a winter in the Ocala National Forest.

For seven months I lived upon the Huck on the Ocklawaha River while buildin' a dugout canoe (3P's Canoe) from a fallen cypress. It was a rustic life to say the least, but as time went on the ideas for a better vessel ran through my Whylie Coyote engineerin' mind. Once done with the canoe I pulled off the river to pursue a career in primitive art work to finance the next phase of regeneration. It would be nearly 3 years before I would be back on the water in a new and improved Huckleberry Houseboat.

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A New Beginnin'

The previous design of the Huck was a bit hasty, and lacked sound construction, yet in a rustic way it fit the need. After a coupe of years it was time to return to the river and so the design and construction began simultaneously on a budget of nil. Harvestin' local materials, and usin' available resources I managed to construct what I thought would be a long time live aboard. I had rebuilt the stern portion earlier while dry docked, and didn't get any pictures, but believe me when I say it was a good design.

Started on the sub structure (again) with the new cross beams of solid cedar hand hewn logs.

A 3" cedar sapling replaced the PVC mast.

Cedar, pine and bamboo were to be the major components of the bow.

The upright corners were cedar, but the rest of the upper half was lashed bamboo. No metal!

Hand stripped bamboo was boiled and used for the lashings.

The sole was leveled usin' bamboo and assembled with bamboo pins and lashin' only.

The roof was a large heavy duty poly tarp, but I wanted thatched palms. (Next time?)

Cedar blocks were used at junctions. Some man made ropes had to be used due to time restrictions.

The pontoons (actually out riggers) were redesigned usin' the originals as a base.

Hand stripped bamboo was used to cover the sides usin' bamboo nails to hold to the styrofoam.

The out riggers were positioned below the canoe's hull to carry most of the losd. Basically they were platforms to carry my waterproof containers.

After the Huck was launched the out riggers had to be replaced, 'cause they couldn't support the load!

The out riggers were put together rather quick at the launch site. I moved further up the Ocklawaha River to an old landin' where I set up camp and began the shapin' and reinforcement of the styrofoam usin' bamboo found along the river. I had the tools and the time to make them better, and I did. This design would last another year before the styrofoam became water logged and had to be replaced again!

For the next year or so after this reworked version we made our way from the Ocklawaha River to the St. Johns River. The little 4hp Johnson worked hard to push the Huck, but we put a lot of water under us still. More revisions were planned.

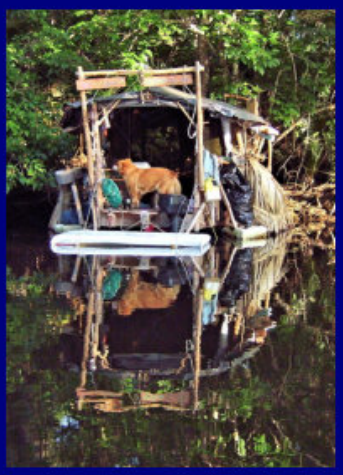
There's more on the next page>>>>>>>>>>>>>>>>>>>>>>

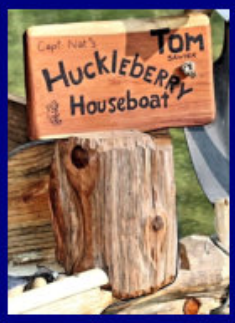
A Slow Fast Forward

So many detail, but not enough space. A little at a time improvements and changes were made to better make the Huck a more comfortable houseboat. The sight of the Huck on the river drew attention, and eventually we would make it into the news. After a year aboard I was ready to redo what had already been done several times, but this time it would be for good, 'cause livin' on the Huck was to be my life from then on out. I was lucky enough to find a home port where I could do it right for a change.

For the first time the Huck' hooch was completely enclosed to keep the bugs, as well as the elements, at bay. Makes a big difference when tryin' to sleep.

In all its rustic glory the Huck was fittin' in on Blue Creek in Astor, FL. The comfort level had reached an 8 out of 10 by this point.





History met necessity in the design of Huck.

June of 2012 was when another transformation began.

Lessons learned over the previous year warranted a redo with better materials, and more plannin'.

Once the Huck was dry docked at my new home port near Debary, FL the arduous work of tearing him apart and rebuildin' began, and for several months hence there would be many hours spent sittin' in a chair, smokin' my pipe and thinkin' about the next move. Some work was done on the computer to get ideas worked out visually, but basically it was another "try it again" kinda thing. Though somewhat better off, there were still many limitations to overcome.

**There's more on the next page>>>

Bigger and Better

Size does matter. I had been squeezed in on the Huck since day one, and I wanted to be able to spread out. I wanted to be able to walk all the way around the hooch on the edge easily. Bendin' over all the time was gettin' old, and I wanted to stand up and not bump my head, get knocked out and end up a gator's super. With the new design I hoped to be able to take guests out with me to enjoy the wonders of this beautiful river, the St. Johns. There are still parts that are wild and free, thankfully!

Stripped the Huck down once again before startin' in on the new design. I needed more room.

Greater height was needed 'cause I was tired of bendin' over all the time, especially on the stern deck.

Bamboo was chosen to top off the Huck. Joinin' bamboo can be tricky.

On bad days I'd sit and think and draw.

Manilla rope was used in the beginnin', but proved not to last in the humid Florida climate.

A new bulkhead was laid to stiffen the hull of the canoe which was a bit too flexible to hold up the weight that was growin' fast.

Replacin' the bamboo sole took three sections of cedar/cherry to level off the bottom.

The bow was totally redesigned and stripped to the core for a rebuild to increase the deck space.

Finally! New pontoons/outriggers were purchased. They came at 20' and were cut down to 16' to match the length of the canoe.

The aft end was hatched for storage access. Deckin' was 3/8" pressure treated pine fence boards.

The method of construction was simple. I'd build one side to suit, and the build the other to match. A square and a level were rarely used, but the tape measure got a workout!

The material for the roof has a story of it's own. It's a nylon material discarded at a local dump many years ago, but now is the material of preference for many of my projects.

Palm fronds added for aesthetics would be abandoned later because they hold moisture, and give home to bugs. The slant of the roof was on purpose to allow easier access to the over hanged banks of the river when trin' to make landin's.

Hand hewn oak cleats were made and are still in service. Tread slats were used for traction when barefoot.

It took a little over 6 months to get Huck back in the water and river ready, but that was only a start. I had worked from the outside to the inside makin' alterations as thoughts came to mind. I had actually moved off the Huck when this redesign began and went to livin' on a sail boat I had purchased and refitted months prior to the start on the Huck. What would come next for Huck, was surely be different.

There's more on the next page>>>>>>>>>>>>>>>>>>>>>>

Showboat Time

Before puttin' the Huck back in service as a live aboard I had to try and make some money to support the dream. So, I turned the Huck into a display for the art I, and my friend Judy, were producin'. The plan was to pull up to landin's along the river and sell art from the Huck. It was a great idea, but it only lasted for the summer of 2013 'cause there wasn't much profit in the endeavour.

In the fall of 2013 I was contacted by a production company out of New York and asked If I'd be interested in a reality TV show that they were puttin' together. To make a long story short I said sure, and I was off on another adventure with the Huckleberry, but changes had to be made. The premise for my part in the series was for me to take the Huck on a 700 mile (one way) journey from my home port to the Ten Thousand Islands in South West Florida. The Huck wasn't designed to handle the big waters, so it was time for more modifications.

The Huck Became A Shanty

There was a lot of thinkin' and workin' to get the Huck ship shape for such a journey. The free board on the Huck had to be increased. The livin' quarters had to be fabricated to make the Huck truly liveable for a long period of time, and there had to be an electric power source to run all the modern day stuff one carries now a days. My work was cut out for me, and as I was given a deadline to get it done the pressure was on.

I called the addition of the 2x6 at an angle to the rim a splash guard. It was a design I came up with that I hoped would deflect any waves that may wanna swamp me.

Leroy there has stood the test of time.

The platform to the left was built usin' the old pontoons and some pressure treated pine. Nicknamed the Tagin' Along.

Beefin' up the stern came next on the agenda with lots of additions and some style.

I kept addin' first one thing and then another until I got what I wanted.

The purpose of the beam stickin' out the stern will be apparent when ya see what it was for.

The motor cover and glove compatment on the left, and a compostin' toilet on the right. What more would I need?

A mixed bag of materials was used to jazz it up a little. The priority was that it had to be weather/water tolerant.

This was my idea of a trailer hitch. Made from a cypress log with a natural bend helped make the connection solid and secure. The contraption on the Tagin' Along ended up bein' ditched for a simpler approach.

With the Tagin' Along attached I could carry a lot more stuff, and it could be used for many other things too, as I would find out later on.

The over all structure was complete and now I was ready to begin the construction of the interior of the Huck so I could live aboard with a fair amount of comfort. Nothin' fancy, but functional. I had only 1 month to get it ready at this point.

**There's more on the next page>>>

The Huck Hooch

In keepin' with the theme of minimal need, the interior of the hooch was designed as I went and it worked OK, but there would be many changes made in the aftermath of this journey. The main thing was to have all I need to get by and be safe. The weight was increasin' with every addition, and the free board was shrinkin'. I thought I had it finished when I added the final touch of mosquito nettin' to keep the bugs at bay.

The art had to be done, and by an artist (Judy Hopton) to add style.

Lightin' was done usin' LED strips and powered by 2 Gel batteries.

A 100w solar charger would be used to charge the 2 12V batteries hidden behind the power panel.

The berth was suitable for one, and a cover for the bed came down to cover it when not in use.

The propane stove provided a good way to get the coffee ready in the mornin' quick.

This was the cat's berth and storage spot. Yeah, I had 2 cats that went along. (Thomas and Rebecca)

7 Gals of fresh water was on tap, and the barrels were filled with food for me.

The power centre with inverters for the laptop, etc.

A lot of what I designed and used durin' this journey was over and beyond what was really needed, or actually worked. I had plenty of time to think about what had to be changed to improve the hooch. There would be some improvements for sure!

This was the Huckleberry Houseboat in all its glory the day before the shove off on the Ten Thousand Island Adventure. It went well over all, but by the time I trailered it back up from Goodland, FL there would be many changes to get it back into shape. It went through some rough times, but held together well.

The Huck Today and Beyond

I have been asked many times, "How long did it take you to make it?". Of course the answer was always, "It ain't done yet!". It took a couple of months work to perform the changes on the Huck to improve him based on the 700 mile trip we went on. Then I took him on a little shorter adventure of 350 miles over to Silver Springs via the St' Johns River, Ocklawaha River and Silver River. The Huck took a beatin' and never came close to sinkin'! Oh yeah, I forgot to mention earlier that the Huck sank twice within the first 4 days of that 10,000 mile trek. That's another story.

Over the past 10 months I've only performed a few minor repairs and upgrades to keep it floatin'. Unfortunately I will have to pull him out of the water soon to begin some pretty major repairs. The thin fibreglass pontoons have some pin holes that can only be fixed on dry dock. A couple of other major structural pieces need to be replaced due to deterioration. This climate is rough on natural materials. That is if ya don't put a lot of chemicals on it to seal it. There's already a lot with all the pressure treated materials. Slowly I will try and replace that sort of material with probably seasoned cypress and oak.

There have been many motors used over the years, but nothin' comes close to the durability, dependability and fuel efficiency of my little 8hp 4 stroke Yamaha. Best little motor I've ever had, and he's a quiet one. It has the power to push against winds of up to about 50mph and currents of maybe 10fps. The hull is a bit delicate so rocky areas wouldn't be good for him. Handlin' the Huck is as easy as pie. The max speed is only about 5.5mph, and he sits well enough in the water to make steerin' fairly reactive and it can turn around the radius of its length nearly. In the rivers of Florida it's nice to have things as compact as possible.

With the exception of loadin' up some supplies the Huckleberry Houseboat is rustically liveable. Of course ya have to remember that the Huck is a fair climate craft. Its heat and AC depends upon Mother Nature for its controls, and sometimes her thermostat gets stuck. The way I went about the design of Huck may not be the right way, but when ya have to do what ya gotta do under adverse circumstances there's always a learnin' curve. Especially when ya have never done what ya gotta do.

This is the last page. Happy and Safe Waters!