

## Pontoons Down the River A Little Pontoon History

The first modern pontoons, shaped like elongated donuts, built in the 1920s for the military were 19' long with 27" diameter tubes and could support a weight of 9 tons. Later they were as long as 41'. As the size and weight of mechanized vehicles increased the carrying capacity, and thus size of the pontoons had to increase. By the 1930s pontoon length increased to 27' with a 27" diameter that could support 12 tons. Around 1940 the length had increased to 33' and the diameter increased to 33" to support 18 tons. Towards the end of WWII a new "snout-shaped" pontoon was developed. Generally, after 1953 donut shaped pontoons were no longer produced for the military. By the time of the Korean War the military developed the "snout" tubes that were 22' long with a diameter of 36". By strapping six of the tubes together side-by-side and end to end they could support 24 tons. The production of "snout" tubes continued until the end of the Viet Nam War when companies began designing the pontoons for the river industry in the United States. Most of the blunt nose tubes were replaced with J-tubes by 1968-69.



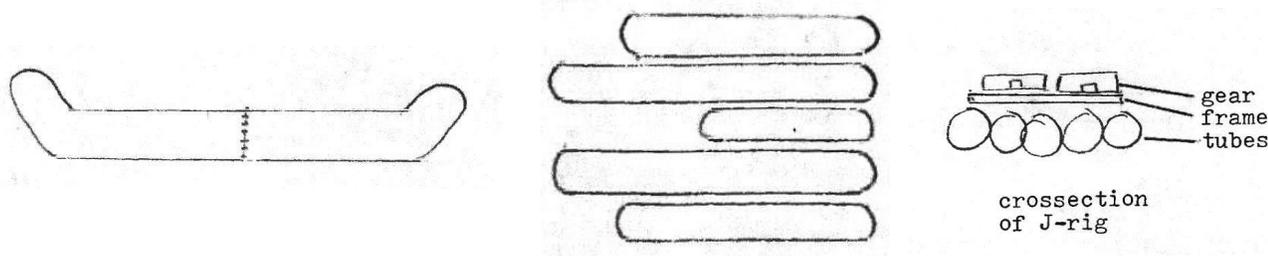
Above: Launching an assembled double ended "snout" floating bridge set in Germany. Below: Song Ban Song Viet Nam – 39<sup>th</sup> Engineer Battalion hauling floats to the river



### The J-Rig:

Jack Currey (Western River Expeditions) thought he had made a real deal when he purchased two railroad boxcars full of surplus bridge pontoons in 1965. Jack thought he was getting the oblong 33 foot bridge pontoons similar to those used in WWII, but instead what he had purchased were 22 foot long, 36" diameter straight tubes. Paul Thevenin was dispatched to unload the rubber in Salt Lake City. He kept digging through the pile looking for the oblong, round 33' pontoons, but there were not any there. Paul began experimenting by gluing the tubes together end to end, and side by side. They eventually settled on strapping five tubes side by side. The original was rowed, but the rowing station was too high for good stability.

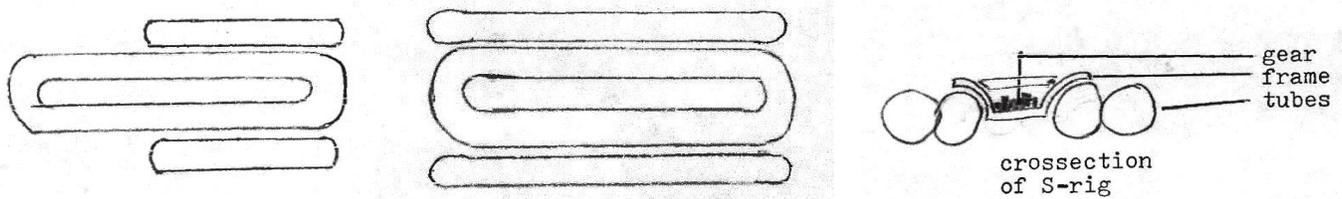
Jake Luck built the frames that spanned the longer tubes. Steel front and back frames were strapped to the tubes so they would flex in the middle. The load was carried on top of the frame and the motor was mounted on the back frame. Thus Paul and Jake made the first "J" Rig, which was named for Jack Currey.



{Above: 2 snout tubes joined to form a J Tube; 5 tubes joined to form a J-Rig}

Currey didn't know what to do with all the excess tubes so he put them up for sale. In 1969 Dick McCallum (Grand Canyon Youth Expeditions) experimented by spreading the big tubes apart and spanning them with a frame that had two oar stations and a sweep oar at the stern for steering. One boat carried eight people and gear for a 22 day Grand Canyon trip.

Dick's creation inspired Allan Wilson (ARTA) to build a one oar station craft. Wilson rowed his design through the Grand Canyon and soon ARTA had a fleet of Snout Rigs. Western River Expeditions took the idea of the J-Rig and miniaturized it into a rowing platform that was 28' long and 12' wide on four 36" diameter tubes side by side. The mini-J in the Grand Canyon was called the Jr. J, Baby J, or Hawkmobile (Hawk was a GC WRE boatman) by a few folks.



**{Above: S-Rig; Modified S-Rig and Cross Section}**

**The S-Rig:**

The S-Rig is referred to by some as the Sanderson Rig and by others as the Smith Rig but they are really two different designs. Some claim it was named after the Sanderson's, and was designed by Larry and Jerry Sanderson, partners in Sanderson River Expeditions with the help of Bill Diamond. The Sanderson's also used a rig of two donut pontoons side by side with a snout tube between them. Sanderson's also ran 2-33' donut pontoons, joined side-by-side with a 35 hp motor in 1966.

The S-Rig was also the primary boat of Ron Smith's Grand Canyon Expeditions in the Grand Canyon. A Ceiba Adventures article indicates: "Ron Smith, founder of Grand Canyon Expeditions was perhaps the most prolific player in the evolution of Grand Canyon motorboats. He ripped out the floors of the doughnuts making them self-bailing, dropped in two-piece aluminum frames to allow for flexing and, brought the motor and boatman into the doughnut. Tim Mertens remembers that Grand Canyon Expeditions rigged their motors inside the donut off the rear drop-in frame. The device was known as the Jackass which was mounted to the rear drop-in frame. The motor was then mounted to the Jackass. The reason for the Jackass was its ability to raise and then lower the motor in shallow or rocky sections of the river. This concept worked exceptionally well as you could keep your right hand on the Jackass handle and your left hand would then operate and steer the motor. There were other companies using similar set ups.

The resulting "S-Rig," S for Smith, became a model for what has become the most widely used motorboat design in Grand Canyon today." Ron Smith confirmed the accuracy of the article to me in January 2014. Smith designed and built the first frames, out of wood and fiberglass, used for the S-Rigs in about 1962 in Heber. He then wanted to make the frames out of aluminum. In the early 60's he found Stan Rock in Salt Lake City, who worked on aircraft and who could cut and weld aluminum. Using Ron's frame design Stan built the first aluminum pontoon frames. Ron sent Dean Waterman to a tech school to learn how to weld aluminum. After that Dean welded frames for Ron (Grand Canyon Expeditions) and eventually for other outfitters, when, at Ron's encouragement, he started his own welding business.

The S-Rig is a combination of a donut pontoon and two snout tubes strapped to the side. The frame sat about a foot above the water and much of the gear is loaded below the top level of the boat giving the boat operator a much better view than on the J-Rig. There were various sizes and ways outfitters rigged the side tubes on the S-rigs. Some outfitters used 27' donuts with 27' side tubes others used 33' donuts with 27' side tubes.

Tour West had a unique set up using the 27' donut and side tubes but unlike most companies using S-rigs Tour West raised the side tubes off the water instead of the tubes touching the water. This way they created more square footage for cargo and guests and they felt this set up used less resistance thus creating a faster S-rig. The 33' S-rig was the most popular set up because of usable space and comfort to the guests.

### **The-G Rig**

Named after Georgie White, the G-Rig was made of three donut pontoons strapped side by side with a snout tube strapped in the middle of each donut. The early frames were wood, but later they were aluminum. Georgie mounted the motor in the back of the center donut. In 1959 Dick McCallum, working for Georgie, may have designed the first motor mounted inside the pontoon. Early G-Rigs had floors, but because Georgie got tired of bailing out all of the water she later cut out the floors and hung plywood floors in the donuts. The G-Rig was hard to maneuver, but carried a heavy load and was almost unflippable.

### **Hatch Tail Dragger Rig:**

In 1954 Bus Hatch experimented with a 25' pontoon with a 25 hp motor in the Grand Canyon. (Two months later a man named Bolte ran a similar pontoon from the Roaring Fork to Lake Meade.) In a short time Bus, Don and Ted Hatch designed the tail dragger or Hatch Rig. It is basically an S-Rig the difference being the back frame and wood motor mount hung out over the water on 2"x8s" on the stern. The tail dragger didn't have side tubes until about 1969 after Bert ("Rollo") Chew had some trouble in Lava Falls. The guides called the side tubes "training wheels," because they rowed Lava Falls and the side tubes completely blocked the oars. After a problem in Horn Creek, which split the floor of Jerry Hughes' rig end to end, they roped up the rags, and that was the first Hatch floor-less rig. Hatch noticed that his labor costs dropped when there were no floors to patch, and slowly they were removed. The interior floors were made of 3/4 inch plywood suspended by chain from the wooden frame cross-rails.

### **Other Modified Pontoons:**

#### **Cat Boat:**

Dick McCallum may have built the first Cat Boat in 1969 when he came up with the Youth Boat idea in Grand Canyon. The Youth Boat used two pontoons and another, a motor rig that used four pontoons. A total of four of these rigs with full frames were built over the years and only one is left now in its original configuration.

#### **Baby J-Rig (2½ Snout):**

Moab's contribution to pontoon design is the 2½ snout. It is a Tag-A-Long design by John Williams, although Greg Williams (no relation) make take issue with that claim. Back when the passenger capacity was based on the number of tube chambers the passenger capacity went from 8 to 10. The middle tube is a 22 snout cut in half. It is actually a fun boat. The extra flotation gives a much more responsive ride making little rapids feel bigger in low summer lows.

### **Huck Finn:**

Bryce Whitmore built a boat called the "Huck Finn" that had 10 small parallel tubes tied to two large outside tubes. Whitmore used military surplus inflatables originally designed as floating docks for seaplanes. He cut the 24' tubes in half and glued them back together, creating a sort of giant air mattress with oars. They had a plywood deck, like a dance floor, with a motor mounted in the middle of the stern. The boats were crude, but they didn't need bailing.

### **Cut Down Donuts:**

In 1963 or 64 Glade Ross saw the remains of a trashed 33' donut pontoon at Ron Smith's boathouse and offered to buy it. Smith sold it to Ross for about \$10. Glade, in his father-in laws garage, cut out the middle air chambers so that the baffles of the ends were left intact, with about 4" of extra fabric. He then punched holes in extra fabric and stitched the two ends together. There was no floor and "the only way you could put a floor in it was to hang a piece of plywood on chains." It had a sturdy wooden rowing frame and could carry large, heavy loads. Jack Currey of Western River Expeditions saw the boat and liked it. By then 28' boats were no longer available, so he bought Korean War 33' boats to cut and splice. About the same time the Hatches were using similar self-bailers on the Salmon River in Idaho and Dave Mackay with Colorado Rivers and Trails was also using the cut down boats. Jake Luck called his 28' cut down to a 22' a Shorty.

In the late 1960s Glade, along with the Hatches built another boat with "no floor": A plywood floor hung above the water with chains. It was called "Miss Piggy" because its extremely high tubes and short 18' length gave it the resemblance of the TV character. That boat was vulcanized together using the Hatches vulcanizing machine in Vernal. It was used by the National Park Service in Dinosaur National Monument until 1994, when it was apparently sent to the landfill.

### **Triple Rig:**

In 1954 Georgie White conceived the idea of lashing three military ten-man rafts together. The boats could be run singly and then lashed together side by side using one oar on the front boat and another on the rear one for big rapids. The rig was nearly uncapsizable, except her untested lashing, entering a rapid beam-on caused the first raft to capsize back on the middle boat creating a neoprene sandwich. Dee Holliday has been running triple rigs with oars since the late 60's. Ron Smith (Grand Canyon Expeditions) and Dee Holliday (Holiday River Expeditions) worked with each other on rigging triple rig boats with oars and that could run in high water and not tip over. There was a lot of thought and trial and error in finding the right material and mechanics to hold the boats together safely. As it ended up Dee used the D-rings on the boats and connected them together with poly pro webbing and airline belts. Dee put river bags or anything that was comfortable for people to sit against between the boats. The first boats Holiday used in this project were the Green River boats in 1968 & 1969. Then in 1975 Holiday changed to Leylands and in 1982 Holiday changed again and started using Campways Havasu model.

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