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The New Media Department of The Post and Courier

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GOOD MORNING LOWCOUNTRY

SHIPBUILDING: The shipwrights of the tall ship Spirit of South Carolina, being built in Ansonborough Field, will reach an important milestone ... make that watermark ... Wednesday when they begin planking the hull with longleaf yellow pine and Angelique.

The 140-foot wooden pilot schooner, whose design is based on an actual pilot schooner that sailed Charleston Harbor in the 1880s, has been under construction for several years.

Shipbuilder Mark Bayne and his six shipwrights are using traditional wooden shipbuilding methods. That's not to say there are no electric saws in the shipyard. But the wooden ship will be made of, well, *wood* ... and bronze and brass.

"We're building it the same way they would have," Bayne said. "There's no epoxy, there's no fiberglass and no plywood. There's a lot of lag bolts."

Bronze lag bolts will attach the 200 or so planks to the ribs.

(GMLc knows very little about shipbuilding, but we learn by talking to Bayne.)

Spirit is a carvel-built ship. That means the ribs have been set up in the right position on the keel and the planks are bent around them and fastened edge to edge so they lie flush with one another. (In clinker-built, or lapstrake, craft, each plank overlaps the one below it.)

THE DEVIL: Today, Bayne and crew will attach the traditional first hull plank on a ship ... the plank next to the keel. It's called the garboard and provides the origin for the phrase "the devil to pay."

The "devil" is the seam between the garboard and the keel, and the hardest to get to if it leaks.

The seam was stuffed with oakum (old rope) and then payed (poured) with pitch. If sailors had "the devil to pay, and no pitch hot," they couldn't caulk the seam. Basically, they were sunk. "The devil to pay" still means being in trouble.

That seam also holds the clue to the phrase "between the devil and the deep blue sea."

Lots of sayings derive from the nautical terms used in wooden-ship days ... at loggerheads, as the crow flies, square meal, first-rate, footloose, over the barrel, slush fund, the bitter end ...

But we digress.

Planking will begin at 10 a.m. Wednesday at The Spirit of South Carolina shipyard, 303 Concord St. It's open to the public. At noon, fourth-graders from Buist Academy will visit the shipyard and sign planks.

As a fundraiser for the ship, the S.C. Maritime Heritage Foundation is selling sponsorship of

board-feet of planking. Go to www.scmaritime.org. Click on Support the Spirit and then Buy-A-Plank.

THE DEEP BLUE SEA: Visions '05 is a 34-day expedition to the underwater volcanoes of the northeast Pacific Ocean.

Fifty-five scientists from the United States and Canada are aboard a University of Washington research vessel.

They are using underwater robots and high-definition video cameras to explore, sample, monitor and map one of the most extreme environments on Earth.

Where are they? At the bottom of the ocean ... 1.5 miles deep ... at the openings of deep sea vents, hydrothermal vents into the Earth's crust that are pouring black smoke and ash into the ocean.

Among the critters who live in this remote and extreme environment are microbes, bacteria, tubeworms, scaleworms, snails, limpets and vent clams. They live on the hydrogen sulfide in the flow. Preying on them are octopi, spider crabs, squat lobsters, brittle stars and rattail fish.

Most of the critters are in water where the temperature ranges from 36 degrees to 86 degrees Fahrenheit. But some species of microbes are found in the walls of chimneys where fluid in the vent can reach temperatures up to 700 degrees. Scientists are studying how these organisms make it in super-hot environments.

They will broadcast their findings in high definition and real-time video from the sea floor Wednesday. The broadcasts are being shown live in several countries and in many marine science institutions, including the College of Charleston.

The first one is Wednesday at 5 p.m., Physician's Auditorium. The second one is Thursday, 5 p.m., in Education Center Room 118. Both are open to the public at Our Favorite Price.

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