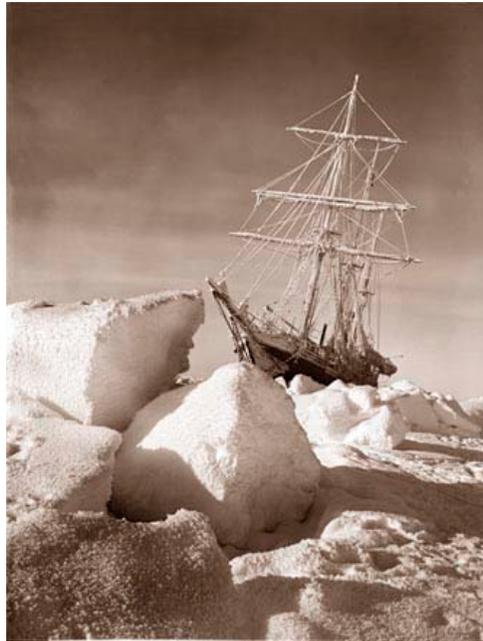


Our Ocean Backyard — *Santa Cruz Sentinel* columns by Gary Griggs, Director, Institute of Marine Sciences, UC Santa Cruz.

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The *Endurance* is Trapped in the Ice



The Endurance, hopelessly frozen into the ice of the Weddell Sea in January 1915, just 100 years ago.

In late September of 1914, with war having just broken out in Europe, Ernest Shackleton met the *Endurance* in Buenos Aires along with its crew of 27 men and 70 sledge dogs. After a one-month stop in South Georgia, an island that would save Shackleton and his crew's life 18 months later, the ship left for Antarctica and the Weddell Sea on 5 December.

Shackleton's announced goals prior to leaving England included "The first crossing of the Antarctic continent, from sea to sea via the Pole...a journey of great scientific importance... The Transcontinental party will set out on their 1800-mile journey...in the hope of accomplishing the march across the Pole and reaching the Ross Sea base in five months" (where the *Aurora*, the 2nd ship, would be waiting).

“Should the landing be made too late in the season, the party will go into winter quarters, lay out depots during the autumn and the following spring, and as early as possible in 1915 set out on the journey. The Transcontinental party will be lead by Sir Ernest Shackleton, and will consist of six men. It will take 100 dogs with sledges, and two motor-sledges with aerial propellers. The equipment will embody everything that the experience of the leader and his expert advisors can suggest.”

It all sounded well planned and clearly not a slipshod expedition. After all, Shackleton had already been on two previous Antarctic journeys, and by now had a pretty clear idea of what conditions to expect, at least when they started their trek.

Spirits were high onboard the *Endurance* as they entered the Weddell Sea. Although it was summer in the southern hemisphere, the conditions quickly deteriorated as they soon ran into serious ice. The pack ice slowed progress from mid-December into January when conditions worsened. During the night of January 19, 1915, at latitude 76° 34' south, about 200 miles from their destination, the ship was frozen into the ice. While the Antarctic continent was in sight, the *Endurance* was trapped in the ice, far short of their planned destination.

Other than Nansen's Arctic vessel, the *Fram*, the *Endurance* was possibly the strongest wooden ship ever built. She was designed for polar ice conditions and was built with massive oak timbers and thick planks, 18-30 inches thick along the ship's sides. One significant difference between the two vessels, however, was in the shape of the hull. The *Fram* had a rounded bottom so that as the ice froze around her, she was squeezed upward and not subject to the extreme forces of the ice.

The *Endurance* had a narrower hull to move easier through loose pack ice, but wasn't designed to rise out of the ice under high pressures. After over a month, slowly drifting northward in the ice, with continuing efforts to either break through the ice with the vessel under full steam power, or having the crew endeavor to cut through the ice to an open lead, Shackleton accepted the reality that the ship was hopelessly stuck and would be until spring.

Sir Ernest kept the crew busy, making regular scientific observations and hunting Weddell and crab eater seals to replenish their meat and oil supply. The dogs were moved off the ship and onto the ice, into individual igloos constructed for shelter as the crew began training teams to pull the sledges.

The ship, crew and most of the dogs survived the long dark winter, but in August, as ice started to break up and wind exerted its forces on the ice, huge pressure ridges formed, pressing on the hull. In late August, cracking and groaning of the timbers was heard, followed by some buckling of beams and deck planks, giving an indication of the dire straits the *Endurance* was in and what lay ahead for Shackleton and the crew.