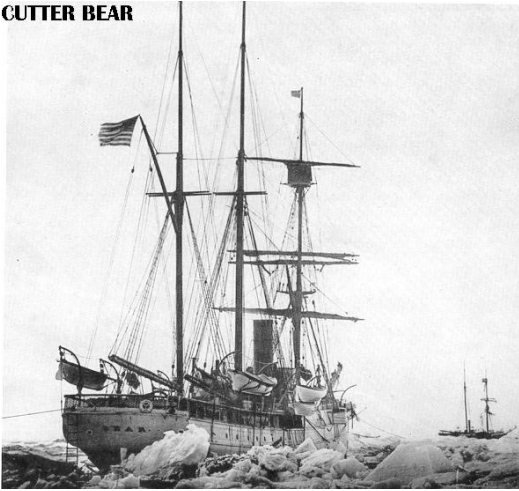


A Brief History of Arctic Icebreakers

For years the Arctic has been a place of mystery and the unknown. Sailors traveling north from Europe found it was so cold that the ocean froze forming a barrier where ships could not get through. In the 1800s many explorers traveled to the Arctic in looking for a route where ships could travel from Atlantic to the Pacific Ocean and back. This route was called the Northwest Passage. Over the years the U.S. Coast Guard has been the main operator of heavy icebreakers in the Arctic.

CUTTER BEAR



1884 - Probably the U. S. Coast Guard most famous cutter was the *Bear*. Although she was not a true icebreaker her hull was reinforced for operations in light ice as a whaler. The *Bear* was driven by three masts and served in Alaskan water for over 40 years. The *Bear* also spent some time in World War II. It ultimately sank while under tow in 1963.

1927 The U.S. *Northland* was also not a true icebreaker. It was designed to replace the *Bear* and operate in Alaskan waters. Her hull was extensively welded what permitted movement in light ice conditions. She was rigged with two masts to give auxiliary power in the event of damage to her single propeller. The masts were eventually removed in 1936. The *Northland* is known as the forerunner of today's icebreakers.



USCG Northland

1944—The Wind Class icebreakers were built as a line of diesel electric-powered icebreakers. Their hull was very strong with a top speed of 16.8 knots and they were capable of moving up to 13 feet of ice. There was the *Staten Island*, *Northwind*, *Eastwind*, *Southwind*, *Westwind* and the U.S. Navy *Burton Island* and the *Edisto*. In addition the *Labrador* was built by the Canadians..

1948—The U.S. *Northland* was decommissioned and sold to the underground Israeli and was renamed *Matzpen*. It became the first warship for new Israel Navy. She saw action against Egyptian forces that had attacked Israel by the sea. The *Matzpen* was decommissioned from the Israel Navy in February, 1962 and sold for scrap.

2014—The *Sikuliaq* (see-KOO-lee-auk) meaning “young sea ice” is not considered an icebreaker but it is ice capable research ship. It is owned by the National Service Foundation. The *Sikuliaq* can operate in extreme ecosystems and will provide opportunities for educators and students to learn firsthand about the arctic environment.

The First Ship, West to East, to Conquer the Northwest Passage



On August 21st the icebreaker U.S. Coast Guard *Northwind* sailed on a classified mission west to east and navigated through McClure Strait and became the first ship to ever make the Northwest Passage. It was accompanied by the U.S. Navy icebreaker, *Burton Island*. After these two ships conquered the McClure Strait, they met with the Canadian icebreaker *Labrador* going east to west. After meeting the *Northwind* and the *Burton Island*, the *Labrador* continued her journey down the west, through the Panama Canal and became the first ship to circumnavigate North America. *Phil Jaffe SK2, A member of the crew—philjaffe872@gmail.com*

FUTURE OF ICEBREAKERS AND EXPLORATIONS IN THE ARCTIC

The waters surrounding the North Pole are governed by the same international laws that apply to all other oceans. As the ice begins to melt the water above the seabed will remain international waters. It is estimated that since 1981 that over 20,000 square miles of ice has been lost. There is no doubt that the most dramatic changes in the Arctic region are related to the climate. Many experts believe that the permanent ice cover may be gone as early as 2020. Under the terms of the 1982 United Nations Convention on the Law of the Sea, all countries have the right to resources such as oil, gas, minerals and anything that exists on the bottom of the ocean beyond 200 nautical miles off their coasts.

The Arctic is estimated to hold more than 10 percent of world's undiscovered oil reserves, nearly one third of undiscovered gas reserves, and remains a strategically critical area for the United States. The single most important vessel of access to the Arctic is the icebreaker, and Russia retains the most extensive fleet of icebreakers anywhere in the world. The presence of U.S. and Russian military forces in the Arctic means that in times of conflict and stress elsewhere, the Arctic regions could become involved. In short, the North Pole region is in a state of massive transformation. A few years ago, two German ships followed a Russian icebreaker to complete the first commercial shipment across the Arctic. Recently, during the warmest Arctic summer on record, 23 ships made the crossing. Japan is now interested in the Arctic because it has impact on the change in weather patterns in the Northwest Passage may make a corridor possible for trade between Asia and Europe. There are also two trends increasing the strategic importance of the waters around the North Pole. First, Russia has been building improved a submarine to carry nuclear missiles. Second, if the United States feels threatened by North Korea it needs to strengthen its anti-ballistic missile systems. The U.S. is already in the process of adding more interceptors because of these recent actions of North Korea.

Melting ice means traffic has increased in Bering Strait, between Russia and Alaska, 118 percent since 2008. Due to climate change, the U.S. Coast Guard is expected to see sea lanes staying open longer, allowing for more frequent and increased vessel traffic. Ice operation is one of the Coast Guard's most important missions. The Coast Guard currently has three polar icebreakers assigned in the Arctic. They are the, *Polar Star*, *Polar Sea*, and the *Healy*. Only two are active. The *Polar Sea* is in non-operational status and is docked in Seattle. In 2012, \$57 million was spent to refit the *Polar Star*. This gave the icebreaker an additional seven to ten more years of service. Now it is estimated to update *Polar Star* and *Polar Sea*, it would cost upward to 100 million dollars. Congress has not, to date, approved a budget to fix them. The *Healy* is really the only active in the Arctic.

Russia is planning to have 40 icebreakers in the next decade. Finland has contracted 380 million dollars to build three new icebreakers. These icebreakers will be capable of carrying out rescue operations and recovering oil spills, while they can also be used for moving cargo and fuel. Japan, China and Sweden have icebreaker research in for the Arctic Ocean. They are collecting information about navigation routes; study the effect of changing climate on wildlife and generally gaining a better understanding of the region's unique weather pattern and geography.

Important is the Arctic Council made up with members from Canada, Norway, Denmark, Greenland, Finland, Iceland, Norway, Russian Federation, Sweden and United States. They are a high level intergovernmental forum to provide a means for promoting cooperation, coordination and interaction among the Arctic States. There is a large amount of activity in the Arctic and only time what will decide what direction it will go. *Phil Jaffe*—philjaffe872@gmail.com