

RESEARCH VESSEL KNORR

The ship that helped discover the RMS *Titanic* and hydrothermal vents



Retirement Celebration • December 5, 2014 • Paul's Mall, Iselin Dock, Woods Hole, MA



The **EVOLUTION** of *Knorr*



1967

Keel for the U.S. Navy's newest Auxiliary General-purpose Oceanographic Research vessel (AGOR-15) is laid at Defoe Shipbuilding in Bay City, Michigan.



1968

The hull of the ship is christened the R/V *Knorr*, after Ernest R. Knorr, a nineteenth-century Navy cartographer. The *Knorr* is launched.

Knorr **MILESTONES**

1972-74

Scientists with Geochemical Ocean Sections Study (GEOSECS) on *Knorr* and other vessels complete the first global, three-dimensional survey of the distribution of chemical, isotopic, and radiochemical tracers in the ocean.

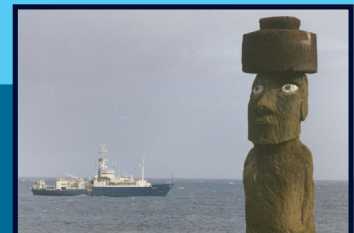


1973

Knorr hosts a reception for members and representatives of the United Nations Seabed Committee during a port call in New York City.

1985

On September 1, scientists working on *Knorr* take the first photographs of the wreck of RMS *Titanic* more than 12,400 feet beneath the surface.



1990

From 1990 to 2002, scientists use *Knorr* to collect samples from more WOCE (World Ocean Circulation Experiment) locations in the Atlantic, Pacific, Southern, and Indian Oceans than any other U.S. research vessel.



1970

Knorr arrives in Woods Hole, MA.



1989-91

At McDermott Shipyard in Amelia, Louisiana, *Knorr* is cut in half to lengthen the vessel by 10 meters (33 feet) and install a new propulsion system.



2003

Knorr receives a new computer-controlled dynamic positioning system that allows the ship to hold its position within 1 meter (3 feet).



2007

Knorr undergoes modifications to accept the new WHOI Long Corer, a 30,000-pound instrument capable of extracting 150-foot sediment cores from the seafloor.

1974

Knorr helps deploy the submersible *Alvin* on Project FAMOUS (French-American Mid-Ocean Undersea Study), a 3-year effort to explore the mid-Atlantic Ridge that helps establish *Alvin's* usefulness as a research submersible.



1977

A team of geologists working aboard *Knorr* and *Lulu*, the support ship for the submersible *Alvin*, see for the first time active hydrothermal vents and unique animals during dives to the Galapagos Rift in the East Pacific.

1980

Knorr rescues a Belgian sailor after his 30-foot sloop struck an unknown object and sank near Bermuda.



1981

Working a zigzag track across the North Atlantic, scientists occupy *Knorr* for seven months as part of the Transient Tracers in the Ocean (TTO) project.

1981

On *Knorr*, Kathleen Hoard becomes the first woman to work in the engine room of a WHOI ship.

1997

Knorr braves frigid weather in the Labrador Sea to help scientists make the first mid-winter studies of one of the few places where cold, dense surface water sinks to the deep ocean.



2005

Knorr surpasses the million-mile mark.

2008

Knorr makes its northernmost journey, to 80°14' N, while tracking atmospheric pollution in the Arctic.



R/V KNORR – 40 Years of Service to U.S. Oceanography

Masters*

Babbitt, Herbert
Bowen, Richard
Casiles, David
Chiljean, Gary
Christensen, Carl
Colburn, Arthur
Emrich, Deidra
Hess, John
Hiller, Emerson
Howland, Paul
Jorgensen, Allen
Metzger, Donald
Palmieri, Michael
Pasanen, Patricia
Pike, John
Seamans, Adam
Sheasley, Kent
Silva, George
Swanson, Carl

Chief Engineers*

Dawicki, Joseph
Fisk, Kevin
Hamblet, Dwight
Hayden, David
Huckabee, Walter
Lathbury, Walter
Loomis, Glenn
Marczak, Piotr
McGrath, Gary
McGrath, John
McGrath, Kevin
McLaughlin, Barrett
McMurray, Robert
Mercado, Paul
Mone, Patrick
Moore, Lawrence
Oakes, Harry
Schmitt, Michael
Soto, Emilio
Thorwick, Michael
Walsh, Stephen

1st Mates*

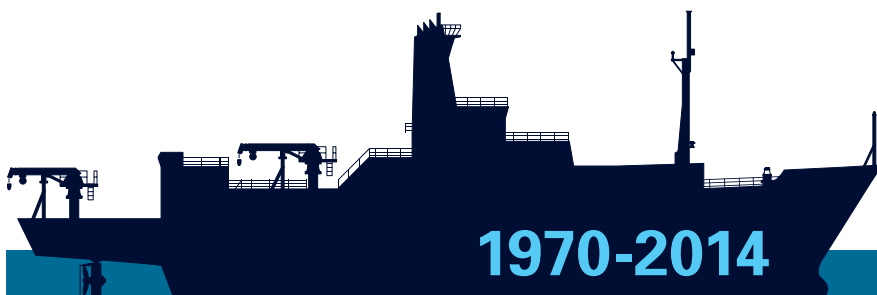
Babbitt, Herbert
Bercovici, David
Bergeron, Derek
Bowen, Richard
Buck, Rene
Carty, Paul
Casiles, David
Chiljean, Gary
Christensen, Carl
Colburn, Arthur
Crane, Margaret
Davison, Hugh
Emrich, Deidra
Flynn, Robert
Gassett, Kenneth
Grabiec, Witold
Hadley, John
Harding, Richard
Hayes, Timothy
Jorgensen, Allen
Mack, Thomas
McInerney, Matthew
Megathlin, David
Metzger, Donald
Moller, Donald
Morse, Joseph
Munns, Robert
Palmieri, Michael
Pasanen, Patricia
Reilly, Patrick
Seamans, Adam
Sheasley, Kent
Silva, George
Snyder, Jonathan
Soukhanov, Alexander
Swanson, Carl
Sweeney, Kelly
Thorpe, Peter
Tully, Edward
Wilson, Steven
Zukovich, Michael

Chief Scientists*

Alexander, C.
Anderson, R.
Andreae, M.
Armi, L.
Backus, R.
Bacon, M.
Bahr, F.
Baker, P.
Ballard, R.
Barvenik, F.
Bates, T.
Bauer, J.
Beal, L.
Bellingham, J.
Bidle, K.
Blomquist, B.
Bogue, N.
Bower, A.
Boyle, E.
Bradley, K.
Bray, N.
Brewer, P.
Broecker, W.
Bryan, W.
Bryden, H.
Burke, J.
Capone, D.
Carpenter, E.
Chandler, R.
Chereskin, T.
Chisholm, V.
Coburn, J.
Courant, R.
Craig, H.
Curry, R.
Curry, W.
Cutter, G.
Daly, K.
Daubin, S.
Davis, C.
Davis, J.
DeFerrari, H.
Denham, C.
Deuser, W.
Devine, M.
D'Hondt, S.
Dick, H.
Driscoll, A.
Dudley-Hart, P.
Dymond, J.
Eriksen, C.
Ewing, J.
Fairbanks, R.
Farrington, J.
Fofonoff, N.
Forbes, M.
Fornari, D.
Forsyth, D.
Fowler, M.
Fox, P.
Freitag, L.
Frye, D.
Gagosian, R.
Gardner, W.
Gettrust, J.
Gifford, J.
Glydewell, J.
Gobat, J.
Goff, J.
Goldsborough, R.
Gordon, A.
Gregg, M.
Grice, G.
Guest, B.
Haedrich, R.
Hanson, J.
Harvey, G.
Hebert, D.
Heinmiller, R.H.
Heintz, M.
Heirtzler, J.
Herbert, T.
Hess, F.
Hey, R.
Hodgkiss, W.
Hollister, C.
Honjo, S.
Hoskins, H.
Jannasch, H.
Jenkins, W.
Johns, W.
Johnson, J.
Joseph, D.
Joyce, T.

Karl, D.
Katz, E.
Keigwin, L.
Kemp, J.
Kester, D.
Klein, E.
Kleinrock, M.
Kujawinski, E.
Laird, R.
Landry, M.
Langmuir, C.
Ledwell, J.
Lee, C.
Lemmond, P.
Lenain, L.
Luther, G.
Luyendyk, B.
Luyten, J.
Lyle, M.
Lynch, J.
Lynch-Stieglitz, J.
Madin, L.
Madsen, J.
Makris, N.
Malone, T.
Marquet, W.
Marra, J.
Marshall, S.
Martin, W.
Mason, D.
Mathius, G.
Matthias, P.
Mauritzen, C.
McCarthy, J.
McCartney, M.
Mellinger, E.
Metcalf, W.
Michael, P.
Miller, S.
Moffett, J.
Moller, D.
Morrison, J.
Mountain, G.
Munk, W.
Murray, J.
Murray, R.
Norris, R.
Noshkin, V.
Nowak, R.
Nowlin, W.
Olson, D.
O'Malley, P.
Oppo, D.
Park, P.
Paull, C.
Perry, M.
Persson, O.
Pickart, R.
Plueddemann, A.
Purdy, G.
Quinn, P.
Raymer, M.
Reeburgh, W.
Reid, J.
Reid, R.
Reves-Sohn, R.
Richardson, P.
Roemmich, D.
Rooth, C.
Rosenthal, Y.
Rossby, T.
Rowe, G.
Rudnick, D.
Sachs, P.L.
Saito, M.
Sambrotto, R.
Sanders, H.
Sanford, T.
Sarmiento, J.
Savage, J.
Sayles, F.
Scheltema, R.
Schmitt, R.
Schmitz, W.
Schwab, W.
Selater, J.
Shearman, K.
Silva, A.
Simard, M.
Simoneau, A.
Singh, H.
Sloyan, B.
Smethie, W.
Smith, D.
Smith, K.
Spencer, D.
Spiess, F.
Stalcup, M.C.
Stanbrough, J.
Suchy, A.
Svage, J.
Swartz, M.
Swartz, R.
Swift, J.
Takahashi, T.
Talley, L.
Tang, D.
Teal, J.
Tivey, M.
Tollios, C.
Toole, J.
Top, Z.
Trask, R.
Trujillo, M.
Tucholke, B.
Tupper, G.
Uchupi, E.
Vaccaro, R.
Van Dover, C.
Van Mooy, B.
Volkman, G.
Von Herzen, R.
Voorhis, A.
Walden, B.
Walsh, J.
Warren, B.
Watson, S.
Wegman, E.
Weingart, J.
Weisberg, R.
Weller, R.
Whitehead, J.
Whitledge, T.
Wiebe, P.
Williams, A.
Witten, S.
WorriLOW, S.
Worthington, L.V.
Yager, P.
Yoerger, D.

**Apologies to anyone we may have missed.*



1970-2014