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PolarTREC 2011: Winter Sampling Expedition of
the Bering, Chukchi & Southern Beaufort Seas

Ms. Chantelle Rose/US Coast Guard Cutter Healy
November 3 – December 22, 2011



To follow the expedition:

<http://www.polarrec.com/expeditions/winter-sampling>

To ask a question:

Click [Ask the Team](#), then [New Topic](#)

Hello and Welcome Aboard!!!

This is the "limited edition - official" journal for the 2011 PolarTREC Winter Sampling expedition!! I am very excited that you have decided to follow us on our adventure in the Bering, Beaufort and Chukchi Sea basins.

I am Ms. Chantelle Rose, a Science teacher at Graham High School. I am partnered with Dr. Carin Ashjian, a Biological Oceanographer from Woods Hole Oceanographic Institute. Over the next six weeks, we will be venturing into the cold, dark Arctic in search of copepods!

I will have many students following this expedition...from my high school students, to my daughter's middle school classes to my nephew's pre-school and kindergarten classes!! I will be writing in a way that will be best understood by everyone! Please follow along, ask questions and fuel your fire for learning!!!

Sincerely,

Ms. Chantelle Rose

Graham High School Requirements

1. Visit the computer lab at least once per week. Log onto the PolarTREC website and go to the Winter Sampling expedition.
2. Plot the latitude and longitude of my location for EACH journal posted. Be sure to label with the date – you may be plotting as many as 7 locations – one for each date! Connect the plots with a colored pencil to map my progress.
3. Read ALL the journals for the week.
4. Choose one of my journal entries to write about in THIS journal.
5. Over the course of the expedition, post at LEAST one question to the “ASK the TEAM” section of the website. Please be sure your question is scientifically valid and has not already been answered in my journal.

CGC Healy Ship's Characteristics

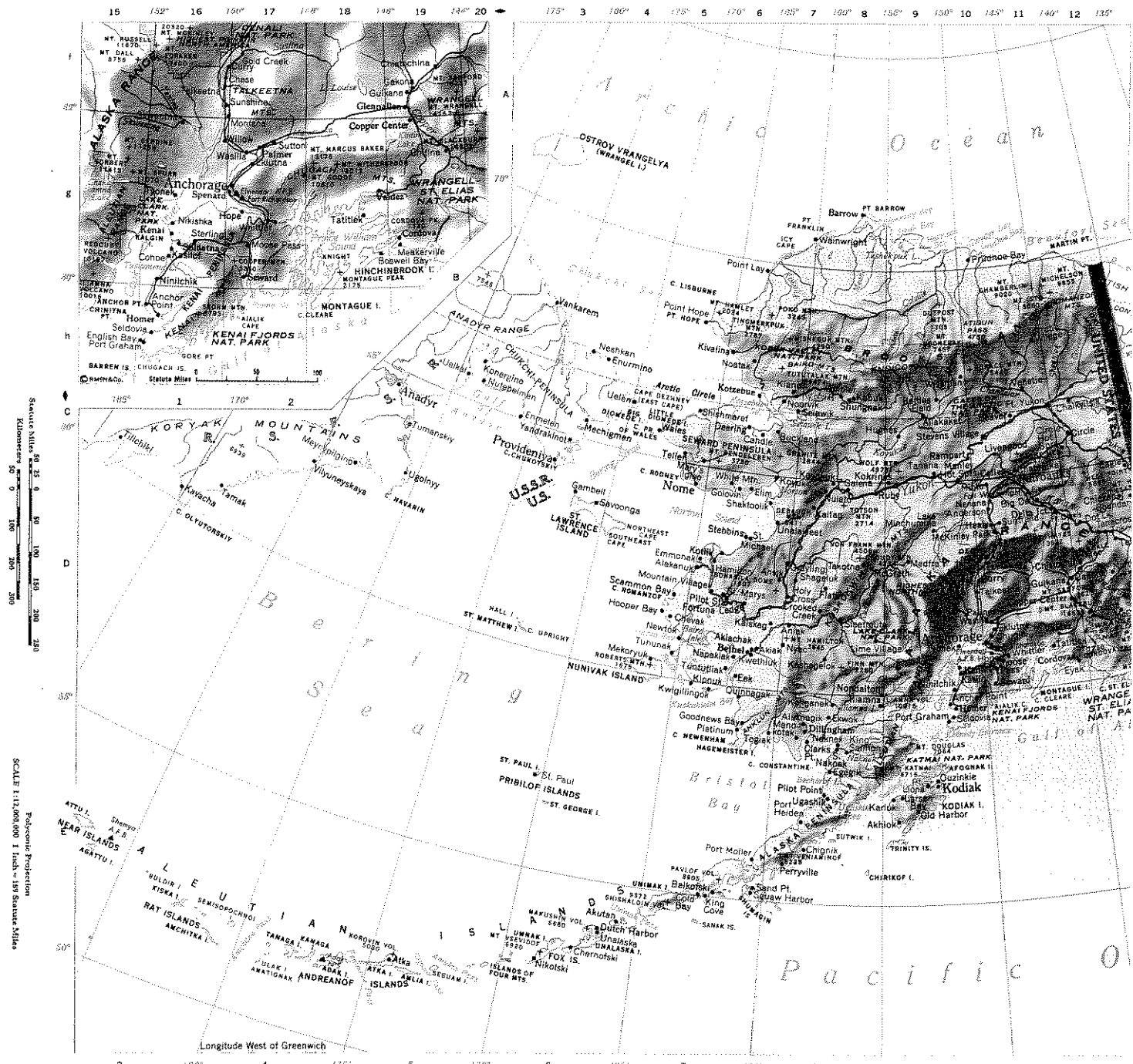
Length, Overall	420'0" (128 meters)
Beam, Maximum	82'0" (25 meters)
Draft, Full Load	29'3" (8.9 meters)
Displacement, Full Load	16,000 LT
Propulsion	Diesel Electric, AC/AC Cycloconvertor
Generating Plant Drive Motors	4 Sultzer 12Z AU40S 2 AC Synchronous, 11.2 MW
Shaft Horsepower	30,000 Max HP
Propellers	2 Fixed Pitch, 4 Bladed
Auxiliary Generator	EMD 16-645F7B, 2400kW
Fuel Capacity	1,220,915 GAL (4,621,000 liters)
Cruising Speed	12 knots @ 105 RPM
Max Speed	17 knots @ 147 RPM
Icebreaking Capability	4.5 ft @ 3 knots (continuous) 8 ft (2.44 m) Backing and Ramming
Science Labs	Main, Bio-Chemical, Electronics, Meteorological, Photography
Accommodations	19 Officer, 12 CPO, 54 Enlisted, 35 Scientists, 15 Surge, 2 Visitors

Nautical Terms:

Aboard: On a ship	Starboard: Right side if facing forward
Aft: Towards the stern	Superstructure: Upper portions of ship
Ballast: Weights in the bottom of the ship	Swell: Open ocean waves
Beam: Width of ship	USCG: United States Coast Guard
Bearing: Compass direction	Wake: Turbulent water behind ship
Bow: Front of ship	Waterline: Level where water ends on hull
Bridge: Command center of ship	Watch: A work shift on duty
Bulkhead: Inner wall of ship	Windward: Upwind from ship
Buoy: Floating marker	Winch: Device to reel cable in
Cabin: Room in the ship	
Cable: Strong wire rope	
Cruise: A trip at sea	
Course: Direction ship is travelling	
Cutter: USCG vessel over 65 feet long	
Debark: Leave the ship	
Deck: Flat surface on ship, like a floor	
Fore: Towards the bow	
Galley: Ship's kitchen	
Gangway: Doorway into ship	
Gangplank: Walkway onto ship	
Hangar: Large room for aircraft	
GPS: Global Positioning System	
Head: Bathroom on ship	
Hatch: Opening in a deck	
Hull: Shell and framework of ship	
Helm: Device to steer ship, (e.g. wheel)	
Knot: Nautical mile per hour (1.15 mph)	
Keel: Bottom centerline of ship	
Port: Left side when facing forward	
Leeward: Downwind from ship	
Radar: Radio Detection and Ranging	
Porthole: Small round window in ship	
Scuppers: Drains in decks	
Roll: Side-to-side movement of ship	
Sounding: Taking depth measurements	
Sonar: Electronic system to measure depth by timing sound pulse echoes	
Stern: Back end of ship	

I will always define new and unfamiliar vocabulary words in my journal entries, but this will give you a "head start" at some nautical terms you will be reading!!

Use this map to track the USCG HEALY! Plot the latitude and longitude of the ship and label the DATE it was at that location! You can get this information from my PolarTREC journal!



Chits and Town	Latitude	Longitude
Ambik 438 CT	61° 15' N	154° 30' W
Ambik 439 CT	61° 15' N	154° 30' W
Ambik 440 CT	61° 15' N	154° 30' W
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Date: _____ Speed: _____ Course: _____

Location (Name and Lat/Long) _____

Weather: _____

Daily Journal Theme: _____

What did you learn from today's journal? _____

What question(s) do you have from today's journal? _____

New vocabulary (define): _____

Question of the Day Answer Here: _____

Date: _____ Speed: _____ Course: _____

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