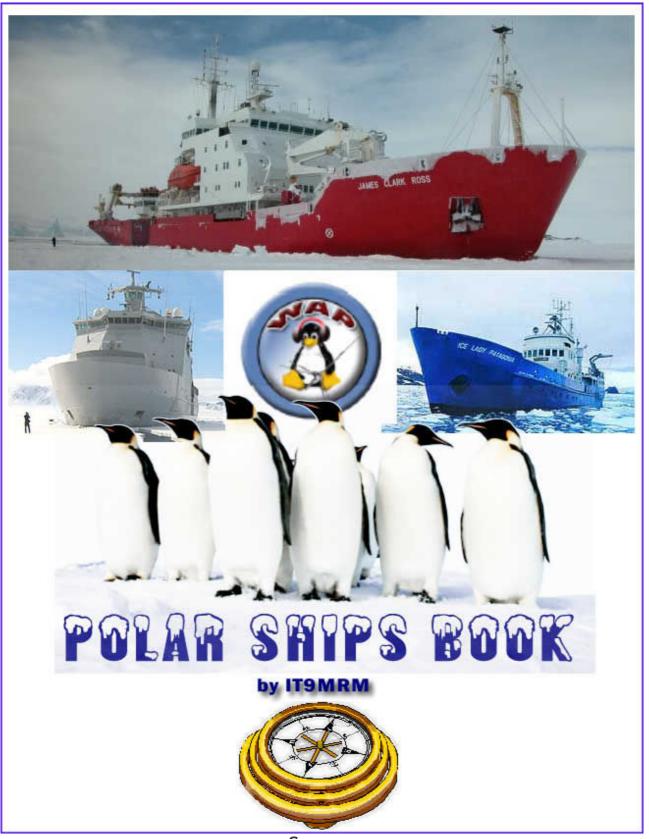
## W.A.P. - W.A.C.A. 2007



Sponsor:

A.R.M.I. - Associazione Radioamatori Marinai Italiani

http://www.assoradiomarinai.tk

## **POLAR SHIPS AWARD**



The Formia's A.R.I. section and "Gaeta Gulf" ARMI section have been instituted, from the February 1, 2006, the WAP P.S.A. – Polar Ship Award for all OM/SWL of every count in order to emphasize the bond with the sea and to underline the history and the seafaring spirit of the belonging lands.

The minimum requirement to obtain the diploma is to have two (2) QSO or listening of a Polarship, Oceanographic ship, Coastguard or a Icebreaker station operating in the Antartic Sub/Peri Antartic sea.

The QSO/listening can b done on every band and mode: CW, SSB, RTTY, PSK31, EME and SAT. To the OM/SWL in possession of the basic diploma wil be issued, on request, stickers for every two (2) additional QSO/listening.

The /MM Stations (Maritime Mobile) list to qualify for the diploma can be found on the WAP directory WACA, section "Ship Vessels" (all.1); the WAP P.S.A. list includes all the stations activated since 1945.

All the updates of the WAP-WACA canbe downloaded from the web site:

#### www.ddxc.net/wap

The WAP-WACA directory is the official list for the diploma.

The WAP P.S.A. diploma is a 20x30 cm color parchment, bearing the name and callsign of the operator. The layout can be seen at the Formia's A.R.I. section web site (<a href="www.ariformia.it">www.ariformia.it</a>).

To obtain the diploma or the update stickers is necessay to apply to the Award Manager Formia's A.R.I. section, including:

- . dated and signed application form (all.2);
- . QSL's photocopies;
- . certified cheque (to cover expenses) for the amount of Euro 10.00 or USD 15.00 for the WAP P.S.A. diploma. Or Euro 5.00 or USD 5.00 for the stickers.

A list of the successful applicants will be published on the internet web sites A.R.I. Formia – <a href="https://www.ariformia.it">www.ariformia.it</a>, Associazione Radioamatori Marinai Italiani – <a href="https://www.assoradiomarinai.tk">www.assoradiomarinai.tk</a> and on the Worldwide Antartic Program site <a href="https://www.ddxc.net/wap">www.ddxc.net/wap</a>. They will be periodically communicated to the A.R.I. H.Q., to permit their publication on "Radio Rivista", the A.R.I. official magazine.

For all the update informations about the WAP P.S.A. see: www.ariformia.it

Oterwise you could contact the Secretary Office of the Formia's A.R.I. section to the following

☑ e-mail: segreteria@ariformia.it

 ✓ A.R.I. Associazione Radioamatori Italiani Sezione di Formia P.O.Box 33
 04023 – Formia (LT) – Italy

The above regualtions are part of the diploma and will be sent to the A.R.I.'s board to be inserted in the official A.R.I.'s diploma list.

This present list, at February 1, 2006, has been extracted from the official WAP-WACA directory but, for the future, being the list constantly in upgrade, like the WAP – P.S.A. rules, check the web site:

www.ddxc.net/wap

Or the ARI Formia Section web site:

www.ariformia.it

Or the web site of the Associazione Radioamatori Marinai Italiani

www.assoradiomarinai.tk



## **POLAR SHIPS LIST**

## ARGENTINA

- Polar Icebreak Almirante Irizar (Q5)
- Hidrografic Ship Puerto Deseado (Q-20)
- Patrol Ship Suboficial Castillo (A6)
- Motor Vessel Ice Lady Patagonia
- Cruise Liner Via Australis
- Cruise Liner Mare Australis
- Motor Vessel Fournier

#### AUSTRIA

- Sail Ship Cheines II

## AUSTRALIA

- Motor Vessel Aurora Australis
- Motor Vessel Austral Leader
- Motor Vessel Nanok S
- Rescue Ship Stalwart
- Research Vessel Lady Franklin
- Motor Vessel Cape Pillar
- Research Vessel Discovery II
- Sail Ship **Solo**

#### **BAHAMAS**

- Cruiser Line Marco Polo
- Cruiser Line Astor
- Cruiser Line Hanseatic
- Cruiser Line Norwegian Crown
- Cruiser Line Norwegian Dream
- Cruiser Line Albatros
- Cruiser Line Bremen
- Cruiser Line Europa
- Cruiser Line National Geographic Endeavor

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#### **BARBADOS**

- Polar Icebreak Polar Star

## CHILE

- Research Vessel Capitan Luis Alcazar
- Patrol Ship Aspirante Isaza (PSG-73)
- Carry Ship Aquiles (AP-41)
- Sail Training Ship Esmeralda (43)
- Tug Ship Galvarino (ATF-66)
- Tug Ship Lautaro (ATF-67)
- Tug Ship Leucoton (ATF-68)
- Hidro. Ship Almirante O. V.Toro (AP-46)
- Research Vessel Dap Mares

## BRAZIL

- Oceanographic Ship Ary Rongel (H-44)

\_\_\_

## CHINA

- Motor Vessel Xue Long
- Motor Vessel Ji Di

#### CROATIA

- Sail Ship Hrvatska Cigra

## DANMARK

- Motor Vessel Thala Dan
- Motor Vessel Kista Dan
- Motor Vessel Magga Dan
- Motor Vessel Nella Dan
- Polar Vessel Polar Bird

## **ECUADOR**

- Hidrographic Ship Orion (BI-91)

## FINLAND

- Research Vessel Aranda
- Motor Vessel Finnpolaris

#### FRANCE

- Polar Schooner Tara
- Patrol Ship La Moqueuse (P-688)
- Motor Vessel Ile de la Reunion
- Motor Vessel L'Astrolabe
- Motor Vessel La Curieuse
- Research Vessel Marion Dufresne
- Patrol Ship Osiris (P-...)
- Sailing Yacht Siwa

## G. BRITAIN (UK)

- Support Ship HMS Diligence (A-132)
- Patrol Ship HMS Endurance (A-171)
- Patrol Ship HMS Leeds Castle (P-258)
- Patrol Ship HMS Dumbarton Castle (P-265
- Research Vessel Bransfield
- Motor Vessel Discovery
- Research Vessel James Clark Ross
- Research Vessel Discovery
- Polar Icebreak John Biscoe
- Research Vessel Ernest Shackleton
- Polar Icebreak HMS Protector (A-146)
- Sailing Yacht Saray W. Vorwek
- Sailing Yacht Breackpoint

## **GERMANY**

- Polar Icebreak Polarstern
- Motor Vessel Arckona
- Motor Vessel Deutschland
- Sail Ship Noorderlicht
- \_

#### HOLAND

- Motor Vessel Archangelgracht
- Motor Vessel Arctic Sunrise
- Motor Vessel Raimbow Warrior
- Sail Ship Europa
- Motor Ship HMNS Vædderen (F-359)

#### ITALY

- Motor Vessel Italica
- Research Vessel OGS Explorer
- Motor Vessel Barken

#### JAPAN

- Polar Icebreak Fuji
- Polar Icebreak Shirase (AGB-5002)
- Motor Vessel Umitaka Maru
- Motor Vessel Hakuho Maru
- Motor Vessel Kaiyo Maru
- Motor Vessel Hakurei Maru

## LIBERIA

- Motor Vessel Emerald Sea
- Research Vessel Magdalena Oldendorff

## **NEW ZELAND**

- Motor Vessel Braveheart
- Research Vessel Tangaroa
- Fregate Te Kaha (F-77)
- Fregate Canterbury (F-421)
- Research Vessel Tradewind
- Hidrographic Ship Monowai
- Motor Vessel Sea Surveyor
- Motor Vessel The Spirit of Enderby

## NORWAY

- Oceanographic Ship Lance (W-311)
- Research Vessel Rig Mate
- Polar Vessel Nordnorge
- Polar Icebreak Polar Queen
- Polar Icebreak Polar Duke

#### PERU'

- Polar Icebreak Humboldt

#### R. SOUTH AFRICA

- Polar Icebreak Agulhas
- Logistic Ship Outeniqua (A-302)

## RUSSIA

- Motor Vessel Lyubov Orlova
- Research Vessel Grigoriy Mikheev
- Research Vessel Prof. Multanovsky
- Polar Icebreak Akademik Fedorov
- Sailing Yacht Apostol Andrey
- Polar Icebreak Karpinsky
- Research Ship Aleksey Maryshev
- Polar Icebreak Prof. Kurentsov
- Research Vessel Akademik S. Vavilov
- Research Ships Akademik Shokalskiy
- Ocean. Research Professor Molchanov
- Polar Icebreak Krasin
- Polar Icebreak Yamal
- Polar Icebreak Polar Pioner
- Research Vessel Akademik Ioffe
- Polar Icebreak Kapitan Khlebnikov
- Polar Icebreak Akademik Boris Petrov

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#### S. KOREA

- Research Vessel Onnuri

## SPAIN

- Hidrographic Ship Hesperides (A-33)
- Tug Ship Las Palmas (A-52)

#### SWEDEN

- Polar Vessel Oden
- Sailing Yacht Lindisfarne

## UKRAINE

- Research Vessel Gorizont
- Motor Vessel Ernst Krenkel

## ST. KITS & NEVIS

- Polar Icebreak Paardeberg

## URUGUAY

- Rescue Ship Vanguardia (ROU-26)
- Rescue Ship General Antigas (ROU-04)

## USA

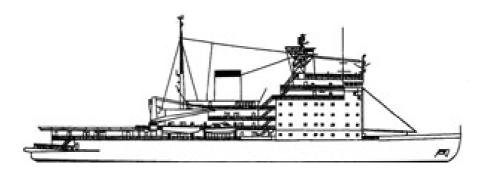
- USS Glacier (WAGB-4)
- USCGS Polar Star (WAGB-10)
- USCG Polar Sea (WAGB-11)
- USCG Michael Healey (WAGB-20)
- USNS Gus W. Darnell (T-AOT 1121)
- USNS Paul Buck (T-AOT 1122)
- USNS Samuel L. Cobb (T-AOT 1123)
- USNS R. G. Matthiesen (T-AOT 1124)
- *USNS* L. H. Gianella (T-AOT 1125)
- USNS Eltanin
- USARP Hero
- USCGS Burton Island (WAGB-20)

#### USA

- USCGC Northwind (WAGB-20)
- USCGS Eastwind (WAGB-20)
- USCGS Edisto (WAGB-284
- USCGS Southwind (WAGB-280)
- USS Arneb
- USNS Jhon R. Towle (T-AK 240)
- Motor Vessel American Tern
- Polar Icebreak Laurence M. Gould
- Polar Icebreak Nathaniel B. Palmer
- Supply Ship Green Wave
- Polar Icebreak Abel J
- Research Vessel Melville



# Polar Icebreak A.R.A. Almirante Irizar (Q5)



The "**Almirante Irizar**" is the main Argentine Antarctic support vessel. She is a fully equipped icebreaker with the highest possible +1A1 icebreaking classification. She carries a crew of 135 plus 45 additional passengers and has space for 2 Sea King SH-3D or similar helicopters.

She was built in Finland in 1978 and since then the Almirante Irizar has worked every year in the Antarctic supplying scientific research stations and also being employed as a floating laboratory or carrying out search and rescue missions.



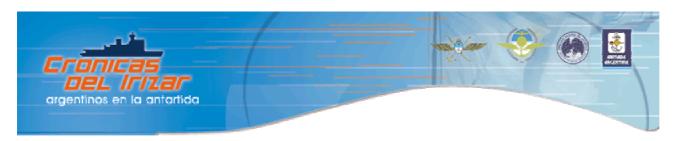
LU2AIB QSL CARD





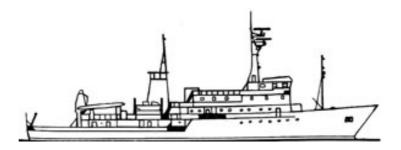






**Hidrografic Ship A.R.A.** 

## Puerto Deseado (Q-20)



The "**Puerto Deseado**" is the main Argentine Oceanographic support vessel. She carries a crew of 61 plus 20 additional scientific passengers.

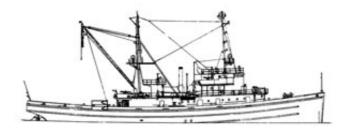
She was built in Astarsa, B.A. in 1979 and since then the Puerto Deseado has worked every year in the Antarctic supplying scientific research stations and also being employed as a floating laboratory or carrying out search and rescue missions.







# Patrol Ship A.R.A. Suboficial Castillo (A6)

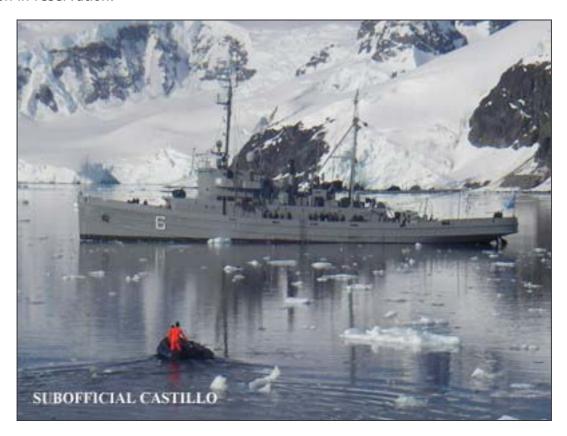


The "**Aviso A.R.A. Suboficial Castillo**" is the main Argentine patrol ship. She carries a crew of 85 members.

Ex. USS Takelma, of the US Navy (ATF 113). Bought in 1993, their pavilion was affirmed June 07 1994 in the Argentina Navy. She was built in Navy United Engineering Co. of Boulevard, California, U.S.A. and enter in service in August of 1944.

Operated in Pacific area during W.W. II, cup and in the post-war one it towed different units to the Marshall Island for the atomic tests in the Bikini atoll.

It intervened in Korea and Vietnam and it followed services to the fleet until October of 1976 when on in reservation.

















LU4ARA & LU8DSC QSL CARD

## **Motor Vessel**

## **Ice Lady Patagonia**



The Ice Lady Patagonia is an ex Norwegian Coast Guard icebreaker built in 1959 to tow vessels around the northern coast of Norway. She is an

A-1 class icebreaker 43 meters long.

In September 2001 she was recommissioned and fitted out for adventure cruising in Patagonian and Antarctic Peninsula regions. She also has a Antarctic Museum on board. She is shown

at left in Buenos Aires after her fitting out while the view above shows her at Ushuaia in Southern Argentina.





Cruise Liner
Via Australis

Cruise Liner

Mare Australis

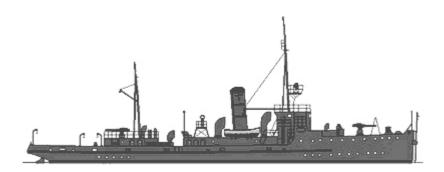




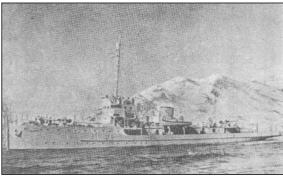


http://www.australis.com/EN/index.php

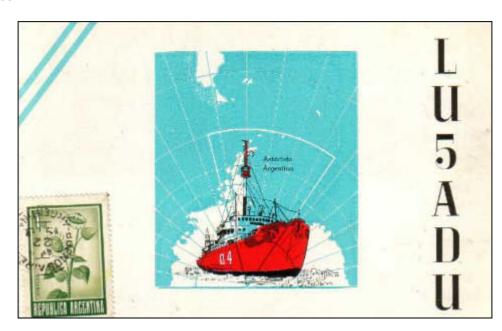
## Restreador A.R.A. Fournier







The "Fournier" was an Argentine Naval ship which disappeared in mysterious circumstances in 1949 in Tierra Del Fuego at the foot of South America. All her crew were lost. She was built in 1939 and was stationed at Puerto Belgrano. In 1942-43 she lead the Argentine Antarctic Expedition leaving Ushuaia and founding the Argentine base on Deception Island. In 1949 with 79 people onboard she disappeared in the area of the entrance to the Grand Canal San Gabriel, some 60 miles to the south of the Chilean city of Punta Arenas. The weather was very bad and it was several days before her fate was discovered and the Argentine nation went into mourning over her loss.





## Motor Vessel



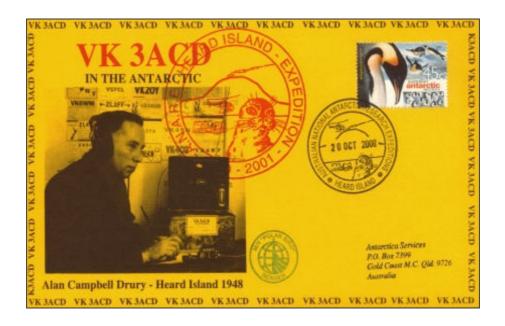


## Motor Vessel Austral Leader

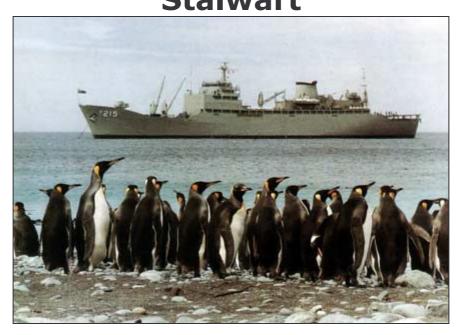




The "Austral Leader" is a 85 metre long steel hulled fishing vessel owned by Austral Fisheries Pty Ltd and is registered at Fremantle in Western Australia. She was built in 1967 at Bordeaux in France and was previously named "Groenland" (1978), "Southern Leader" (1981) and "Harvest Leader" (1991). Between 1997 and 2000 she was the only vessel licensed by the Australian Fisheries Management Authority to fish for Patagonian Toothfish in the waters surrounding Macquarie Island.



## Rescue Ship HMAS Stalwart



A short two-day passage saw STALWART in sultry Subic Bay, 20-21 November; her last foreign port of call during the deployment, with her crew starting to look forward to Christmas leave. Events were unfolding in the cold waters of Antarctica, however, that would affect the flagship's program somewhat.

Off Antarctica, the Antarctic supply ship, NELLA DAN, was beset in thick pack ice, with no early prospect of undertaking its scheduled mission to resupply the Australian National Antarctic Research Expedition (ANARE) base at Macquarie Island. The sub-antarctic island is a virtual

pinprick, situated roughly halfway between Tasmania and the Antarctic continent, some 883 stormy nautical miles south-east of Hobart.

Without such an operation, there could be no changeover of the ANARE personnel, nor could there be an early resupply for the forthcoming winter season. It had been hoped that the icebreaker, ICEBIRD, would be able to free NELLA DAN, but she had been delayed by hurricaneforce winds and was still battling pack ice over 120 kilometres away, with no guarantee that she would even be able to reach the trapped ship.



Navy answered the request for assistance. STALWART was diverted for the task, bypassing her homeport of Sydney, in favour of Jervis Bay, where stores were loaded, a small RAN video team joined the ship to record the Macquarie Island resupply operation, and 85 crew members disembarked to make room for the stranded expeditioners.

STALWART arrived in Hobart on 2 December, cunningly disguised as 'Icebreaker 215', complete with penguin logos. The much-needed ANARE stores were loaded in a non-stop operation, a

small media contingent was welcomed onboard, as were the 41 ANARE personnel going to Macquarie Island.

Having transited the Roaring Forties, with thoughts of the tropical sun but a distant memory, STALWART arrived at Macquarie Island early on 6th December 1985, in typical overcast conditions. Preceded by two ship's boats taking soundings, STALWART entered Buckles Bay, finally anchoring at 0830, three cables east of the Macquarie Island base.

Macquarie's climate is such that it has an average temperature of just four degrees, with rain, snow or hail on 300 or more days each year. The island is one of the world's most isolated wildlife sanctuaries, with colonies of Gentoo, King and Royal penguins, and large numbers of Elephant seals.

From the pen of the ship's Navy News reporter:



"Even before anchoring, STALWART's Sea King had airlifted the majority of embarked ANARE personnel ashore and preparations were in full swing to shift the large cargo load to the main settlement. On the water, STALWART's ship's boat and her Gemini dinghy were tasked with establishing the fuel line between ship and shore so that 200,000 litres of special fuel could be transferred."

STALWART had spent some 60 hours at Macquarie Island. The embarked 817 Squadron Sea King was airborne for more than 29 hours, undertaking more than 130 helicopter lifts, landing 200 tonnes of cargo, and making 115 personnel transfers.

STALWART's Sea King Helicopter

With the outgoing Macquarie Island expeditioners safely transferred to the ship by helicopter, the ship weighed anchor, and steamed north leaving the sub-Antarctic waters to the whales, seals, penguins and migratory seabirds. On her way north, STALWART received a congratulatory signal from COMAUSFLT:

FROM CNS AUSTRALIA TO HMAS STALWART ROUTINE MACQUARIE IS. RESUPPLY R E S T R I C T E D

- 1. I WAS VERY PLEASED WITH THE WAY IN WHICH STALWART MET THE DEMANDING TASK OF RESUPPLYING MACQUARIE ISLAND.
- 2. WELL DONE AND A HAPPY HOMECOMING.

BT







Research Vessel

## **Lady Franklin**

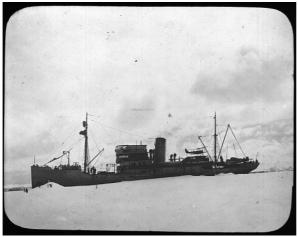


Motor Vessel
Cape Pillar



## **Research Vessel**

## Discovery II

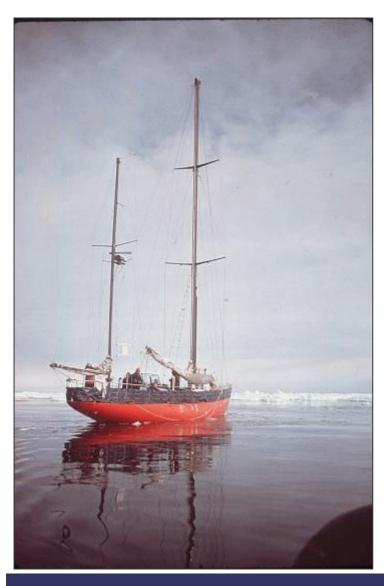




The R.R.S. Discovery II stopped alongside a floe whilst and anchor is taken inboard to prevent it becomming foul of ice (1935)

## Sail Ship

## Solo



Solo, 62 foot steel yacht which left Sydney on December 15 1977, with 8 persons on board. Organised by the Lewis' Oceanic Research Foundation. They anchored at Solo Harbour, Buckle Island in the Balleny Islands group. Solo spent 20 hours at this anchorage, the first vessel to anchor in the Ballenys.



## Cheines II

The QSL Card:



QSL Card from VKØWF



## Cruiser Vessel MARCO POLO





The "Marco Polo" is a traditional Ocean Liner but with a ice strengthened hull which has been converted into a specialist Eco-tourism cruise Liner. She is operated by Orient Lines and now has a cruise mate in "Crown Oddessy"



## **Cruiser Vessel**

## **Astor**







The "Astor" is operated by Transocean Tours of Germany and operates world-wide catering mainly for the German outbound tourist market. The "Astor" which was built in 1987, is 20,159 tons and can carry 650 passengers in her very spacious cabins.

## **Motor Vessel**

## **Hanseatic**



The "Hanseatic" is a ice strengthened cruise vessel operated by Bunnys Adventure & Cruise Shipping Co. Ltd and is registered at Nassau in the Bahamas. It carries 184 passengers in 94 twin cabins and specialises in tourism to the Polar regions. It is the only expedition vessel with a "5 Star" rating. It carries 14 zodiacs. It first entered service in 1993.



## Motor Vessel Bremen



The "Bremen" is a specially built ice-strengthened eco-cruise ship which makes regular tours from South America to the Falklands and other South Atlantic islands as well as to the Antarctic Peninsula. She was launched in 1990 as the "Frontier Spirit" but renamed in the mid 1990's when she was purchased by a German company. She has a helicopter pad on her top deck and carries several zodiacs for landing tourists at remote locations.

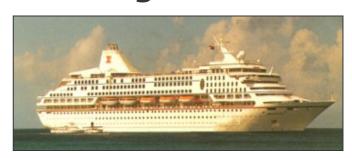


## **Cruise Liner**

## Norwegian Crown Norwegian Dream



## **Cruise Liner**



The "Norwegian Cown" is operated by the Norwegian Cruise Line. It is a large modern cruise vessel which during the 1999-2000 Austal summer operated a series of eight cruises from Ushuaia in Southern Argentina to the Falkland Islands and the Antarctic Peninsula. The view above shows the vessel arriving at Ushuaia in December 1999.

ship operated by Norwegian Cruise Lines. shewas built in 1992 and refurbished in 1998. She has a maximum passenger capacity of 2,156 passengers.

The "Norwegian Dream" is a 50,764 gt cruise

## **Motor Vessel**

## Europa



The "Europa" was the pride of the German Cruise Line fleets when making her maiden call to Lyttelton in 1985 when she called in the course of a cruise to New Zealand, Australia and the South Pacific. The above view shows the "Europa" departing Lyttelton on the 3rd February 1998

## **Motor Vessel**

## **Albatros**



The "Albatros" is operated by German Phoenix Reisen Cruises and caters mostly for the German market with round the world cruising. She was originally built in 1957 for the Cunard Line as the "Sylvania" and in 1968 became Sitmar's "Fairwind". In 1988 she commenced 5 years sailing as "Dawn Princess". Despite her age she has always been well maintained and is known for her roomy cabins. Her running mate is the "Maxim Gorki".

2001 saw her in Australasian waters. In mid January she left Sydney for a 22 day cruise via New Zealand to Papeete. On the 7th February, 2001 she arrived in Lyttelton from Port Chalmers for a single day stay before leaving for Wellington.

**Cruiser Liner** 

## **National Geographic Endavour**







## Polar Icebreak Polar Star



The ship was built by Wärtsilä in Finland in 1969 and joined the Swedish Baltic fleet of icebreakers under the name of "Njord". She went through a major rebuilding and modernisation in Sweden in 1988. Karlsen Shipping Norway A/S bought Njord from the Swedish Government in April 2000 and renamed her MV Polar Star after one of the veterans who has served in the arctic fleet of Karlsen. The ship is in excellent condition.

The Polar Star is the first icebreaker to be fully converted to expedition cruising, and will as such rank high among the small fleet of arctic expedition cruise ships. All the cabins are facing out and have a window. The ship has a comfortable dining hall, a large panorama lounge, a lecture room, a library and a saloon bar. She is specially equipped for expedition cruising in polar waters and has a fleet of zodiacs, (inflatable rubber boats), available for the excursions.















## **Oceanographic Ship**

## Ary Rongel



The "Ary Rongel" is the vessel used by the Brazil Antarctic Programme as their main support vessel. It is shown above in thick ice near the Brazilian Antarctic Base of Commandant Ferraz on King George Island.





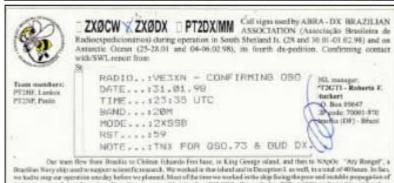




## **QSL Cards**







Dur from flow from Black in Christon Educated Feet base, in King George related, and then to NAgele. "Any Banager", a Braidflow Newy skip used to support scientific research. We worked or that identification Its braightness as well, in a read of 40 hours, in their works and on appreciate smoothy before we placend. Most of the fine-two worked in the skip fining the poor and incided propagation of Antanan in ages of arrange from other. Intern though, we could read a 100 yet. We worked in the skip fining the poor and incided a propagation of Antanan in ages of a territy of the propagation, we used Most of State (100 yet). We worked in 100 and CV we fine insultance and Most of Manhail Alfa, Otherspite, and Spectrum CWM-50C keps. We want to finish the Control Secretary of Brainflow Novel, Internets-de-Engander Coffee Inflamental Coffee Inflamental Prince (the Societary of State Prince (the S



## Aspirante Isaza (PSG-73)













The "Esmeralda" was launched in 1952 for the Spanish Navy as a Sail Training vessel but while fitting out she was sold to the Chilean Navy and commissioned in 1954. She is a four masted Barquentine, one of the largest sailing vessels afloat, and carries a crew of 271 sailors and 80 cadets. She has participated in many maritime events around the world and is regarded as a national symbol for Chile.









Tug Ship

## **Lautaro** (ATF-67)





Tug Ship

## Leucoton





## Almirante Oscar Viel Toro (AP-46)





The "Almirante Oscar Viel Toro" is the main Chilean Antarctic supply vessel. It has a strengthened hull enabling it to push through thin pack ice as shown in the photo above. It has a pennant number "AP-46" and is often identified this way as its full name of "Almirante Oscar Viel Rompehielos" is rather long. "Rompehielos" means Icebreaker.



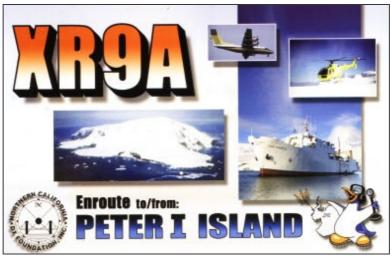




#### **Research Vessel**

## **Dap Mares**





Well, maybe not everybody know that last 22 September 2006, the ship "Dap Mares" did sink in waters

of the strait of Magellan, in the field "Tres Puentos", little more than 500 meters of the coast. The boat that had three years of operative job, has gone to just peak in the moment in which it was carrying out the change of guard. It did not have loaded edge, except its operating equipment.

The five persons who found themselves in the machine room were freed; three of they from the hull of the boat, with the ferry "Fueguino", a motorboat type zodiac and the nozzle special shuttle type Austral Broom. The sailors Jorge Hernández, Tawny Carlos, Luis Bahamonde, machinist Mario Montoya and pilot Pedro Paredes were all involved in this bad adventure. They have been brought in a close center of attendance in order to stating lesions. They are all fine anyway.

The **Dap Mares**, of 76,5 meters of length and 11,8 of width, was

Asmar. The ship did remain bended but a much rapid that neither the sailors had uses of the incident have been examined ecovered, since he is much neighbour to

from several days in cruise, after being remained in the wharf of Asmar. The ship did remain bended but afloat just for five minutes, before sink. The sinking of the boat was much rapid that neither the sailors had time to wear the life-jackets nor to activate one rescue raft; the causes of the incident have been examined but better judgement will be done when and if the ship could be recovered, since he is much neighbour to the beach in a little depth. Keep your **XR9A/MM** cards as a precious piece of history as I don't think **DAP Mares** will be again on the air shortly.



# Motor Vessel XUE LONG



The "Xue Long" was previously known as the "Snow Dragon". The vessel is the main Chinese Antarctic support vessel. It is based at Shanghai and provides Icebreaking capabilities to the Chinese when re-supplying their two main Antarctic bases. To see covers from these bases click on either **Great Wall Station** or **Zhong Shan Station**. It is currently the biggest vessel regularly engaged in Antarctic work.





## Motor Vessel JI DI



The "Ji Di" is an oceanographic ship built in 1971 for the North China Sea Branch of the State Ocean Administration, it is 152 metres longwith a 20 metre beam and a 20,000 nautical mile range. On the 30th of October, 1989 "Ji Di" departed Qingdao Port to commence the first Chinese Expedition (Chinare VI) of one ship to two Antarctic Bases. Under Captain Wei Wenliang the vessel first called at Zhongshan Station and then Changcheng Station (Now called Great Wall Station) before returning to Qingdao on the 10th of April, 1990. Wan Guoming was the leader of the Expedition.





# Sail Vessel Hrvatska Cigra





9AØAA/MM 1996-97 Expedition in Antarctica

http://www.spotsylvania.k12.va.us/nspt/magi/



Motor Vessel

Thala Dan





Motor Vessel

Kista Dan





Motor Vessel

Magga Dan





Motor Vessel
Nella Dan





Polar Vessel

## **Polar Bird**



**Motor Vessel** 

## Nanok S







# Orion (BI-91)



It has always been a national aspiration to count on suitable platforms to study our sea. That was one of the priorities of the Hydrographic Service of the Navy, created the 2 of February of 1932, which used, for its hydrographic tasks and of marking of buoys, small boats adapted for its specialized technical works.

Our predecessor, Hydrographic Service, required of a "hunter" of information and its imprisoned one was our territorial sea. It is for that reason that in 1.965 acquires the ex--USS Mulberry, of the type AN-27, that comprised of the Reserve in Suisunbay, California, with the name of BAE Orión. This unit made maintenances of Lights, buoys and hydrographic surveyings and oceanographic until 1979.

Later, the Oceanographic Institute of Armada (INOCAR), elevated to that category with Executive Decree Not 462 of 1972 July 18, used ship military BAE Emeralds, P-21, to make hydrographic surveyings during 1980 and 1981.

Finally, in December of 1981, it was incorporated to the Navy of Ecuador, the modern BAE ORIÓN, ship equipped with sophisticated equipment of investigation, which was constructed in the shipyards of ISHIKAWAJIMA HARIMA COMPANY of Japan. This constituted the accomplishment of one yearned for dream, because Ecuador was positioned when counting on a multipurpose unit in the marine scientific scope.

The BAE Orión is a platform multipurpose, very versatile, of excellent stability and low level of noise and vibrations, has an suitable distribution of laboratories and ample and comfortable spaces.

It has the following capacities: It can make deep and average water hydrographic surveyings (at the moment limited with soundings monkey you do), oceanographic rises, geologic and geophysical prospection (in limited form), environmental monitoreo, installation and maintenance of oceanic buoys or average waters.

In addition, by its characteristics, it has the capacity to conduct logistical operationses, such as: Supplying, hospital ship and transport.

Sleeve	10.6 mts.		
Prop	5.4 mts.		
Maxima length	70.2 mts.		
Openwork	3.6 mts.		
Displacement	1418 ton.		
Terminal velocity	12 Knots.		
Classification	ABS-AIE-AMS-ACCU		
Autonomy	30 days; 6000 miles		
Area of laboratories	105 mts Chemistry - Biology Geophysical Oceanography - Meteorology		
Propulsion	2 power plants		
Generators	3 main ones, 600 KW 1 emergency, 200 KW		
Dowry	6 Officials 36 crew 28 investigators		







## Motor Vessel Aranda





**R/V Aranda** is the third research vessel carrying the name with pride, and the fourth proper research vessel in the history of Finnish marine reasearch. The first vessel built for research

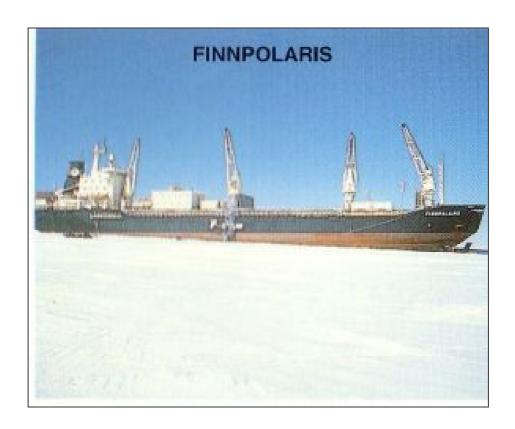
purposes was <u>S/S Nautilus</u> (pictures of <u>Nautilus</u> and <u>the Aranda ships</u>) which was in operation 1903 - 1939. Before that, already in the late 1800s, observations in marine science were made using several different state-owned ships. The modern Aranda was launched in Helsinki in June 1989. It is first research vessel which is owned by the Finnish Institute of Marine Research, and its home port is Helsinki. The length of the ship is 59,2 m, its beam 13,8 m and gross register weight 1734 GT. The ship accomodates a research staff of 25 - 30 persons.

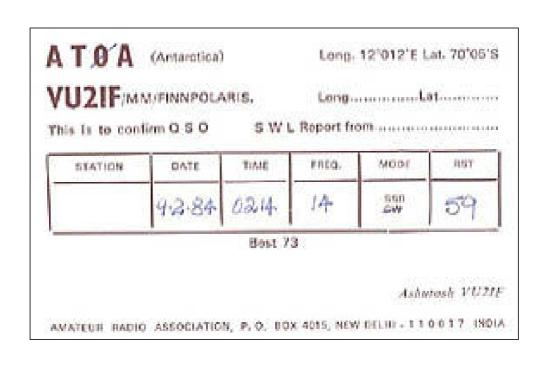
Aranda is a modern, ice-reinforced research vessel. She was planned for Baltic Sea research, but in principle, she is able to operate in all seas. Aranda has made scientific expeditions i.a. to Antarctic waters and the Northern Atlantic. The vessel is adapted to year-round multidisciplinary marine research, including biology, physics, chemistry and geology of the sea. The well-equipped laboratories and advanced computer systems facilitate sample treatment and data analysis under way.



As a result of advanced automation the functions of the modern Aranda can be managed by a smaller crew (12 - 13) than its predecessors. The manoeuvrability of Aranda has been dimensioned for demanding research work, the ship being able to stay exactly in position at a station with the aid of DGPS and taut wire systems. Aranda has the equipment to receive satellite and weather images, and its own versatile weather station. Drinking water can be produced out of seawater by an apparatus using reverse osmosis. As concerns research and safety to sea these installations are important on long cruises. For the purification of sewage, the ship has its own biological treatment plant. Its engines allow driving in either diesel or diesel-electric mode. There is enough power to drive in ice in the Baltic Sea.

# Motor Vessel Finnpolaris







#### **Polar Schooner**

### **TARA**

#### ex. Seamaster, ex. Antartica







**VESSEL**Tara, ex-Seamaster, ex-Antarctica
- Main Specifications: Environmentally friendly

Length 36 meters Width 10 meters

Hull material 16mm and 25mm high-grade marine aluminium 1.5 to 3.5 meters with fully retractable centerboards and

Draught rudders Masts 2 x 27 meters 400 sq. meters 6000 liters Sail area Water capacity Autonomy

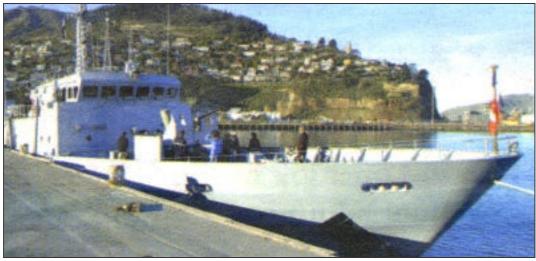
1 year + 1989 Built Capacity 18 people



#### **Patrol Ship**

# La Moqueuse (P-688)





The "Moqueuse" is a French Navy patrol boat based in Noumea with the French Pacific Fleet. She has a special affiliation with the Island of Rotuma. She is only 450 tons but with a length of 54 meters and a top speed of 23 knots she is well equipped for her patrol role. She carries a crew of 4 officers, 11 petty officers and 13 leading seamen or ordinary sailors.

# Motor Vessel Ile de la Reunion





# Motor Vessel L'Astrolabe



The "L'Astrolabe" is the main French Southern and Antarctic Territories support vessel. It is based at Hobart in Tasmania and sails each summer to the various French Bases both on the Antarctic Continent and in the Southern Indian Ocean.







## Motor Vessel La Curieuse



The "Curieuse" is a research ship based at Port aux Français, the main Port in the Kerguelen Islands in the French Southern and Antarctic Territories.

Patrol Ship
OSIRIS
(P)



In April 2000, Cisne Rojo and Cisne Azul, both flagged to Belize, were refused entry to the Western Australian Port of Fremantle. In 2001, Cisne Rojo was renamed **Lince** and flagged to Seychelles. In this year, she unloaded toothfish in Mauritius in January, April, August and November. In 2002, the vessel returned and unloaded toothfish in March, June and October.

Lince (sighted with the Alos) was apprehended by the **French Navy frigate "Nivose"** near **Kerguelen Island** in January 2003. The vessel was 80 nautical miles inside the French EEZ when intercepted, and was carrying 160 tonnes of toothfish on board. The vessel was converted into a French patrol boat, used around Reunion Island and called the **OSIRIS**.

Seychelles deflagged Lince and cancelled her licenses in March 2003.

**Oceanographic Research Vessel** 

## **Marion Dufresne**









**Marion Dufresne** was commissioned in 1995 to carry out global oceanographic research and to re-supply the French Austral islands of Crozet, Kerguelen, Amsterdam and Saint-Paul.

It is one of the world's largest scientific vessels, measuring 120 m in length and with a dead weight of 4,900 tons. She is shown at left berthed in Wellington on January 30th, 2006.

It carries a wide range of advanced oceanographic, geophysical and geological equipment. Among its arsenal of research tools are two that place this vessel at the forefront of global marine research: its giant piston corer 'Calypso,' capable of recovering deep-sea sediment cores 60 meters long and weighing up to 10 tons; and its multi-beam sonar mapper, which produces high-resolution images of the seafloor. She carries 3 helicopters and can carry 110 passengers.

# Sailing Yacht **Siwa**



Operated by F4ERF



#### Polar Iceabreck

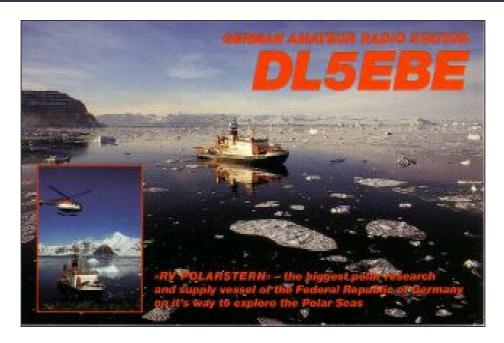
## **Polarstern**















The "Polarstern" is the main German Antarctic support vessel. It is a fully ice-strenthened icebreaker class vessel operated by the Alfred-Wegener Institute. Each year during the Austral summer it resupplies the German Neumayer Antarctic Base station as well as the Filchner Ice shelf station. In association with the South African SANAE it also helps in the resupply of the South African Bases.

#### **Motor Vessel**

### **Arkona**





The German Cruise Liner "Arkona" made its maiden call to Lyttelton on the 16th January, 1999 as shown above. Her home Port is Rostock and she was on a cruise around New Zealand and Australia.

The "Arkona" for this visit had available her regular circular ship cachet featuring the sun and compass headings which has had some words excised at top right. She also had a special boxed cachet showing a yacht in front of the Sydney Opera House and the text "**Neuseeland**, **Australien**"

## Motor Vessel Deutschland





The "Deutschland" is the epitomy of class and is the flagship of the German Company Peter Deilmann Cruises. She commenced service in May 1998 and is usually based in the Mediterranean but during the Northern Hemisphere winter she undertakes a Southern Hemisphere or around the world cruise.

She measures 574 meters long, has 318 cabins carrying 636 passengers and boasts a crew of 240. She caters mostly for German speaking passengers although most crew are bi-lingual.

#### Sail Ship

### **Noorderlicht**



The 46-meter (138 Ft.) two-mast sailing vessel 'Noorderlicht' was originally built as a lightship on the Baltic Sea. The steel hull of the ship was modified to endurance ice settings at sea. The Noorderlicht was bought in 1991 by the present owner and converted into a charter ship that conforms to the extremely stringent Dutch quality requirements, so she can be sailed around the world.

The Noorderlicht's elegant lines and balanced rigging attest to its excellent sailing attributes. Capable of sailing all the world's oceans and equipped for both warm and cold climates, this gorgeous schooner offers comfortable accommodation for the adventurous holiday-maker. There are attractive seating arrangements in the deckhouse and below, and the twin cabins are spacious and comfortable. There are four showers, five toilets, central heating and a well-equipped kitchen. The two-person cabins have hot and cold running water and there is continuously 220 V.



http://www.noorderlicht.nu/

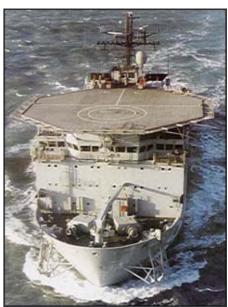


# HMS Diligence (A-132)



The "Diligence" is a Royal Fleet Auxiliary vessel. She was constructed in Sweden in 1981 and taken up from trade during the 1982 Falklands campaign and then purchased in 1983 and converted for use as a repairs and replenishment vessel for other Royal Navy ships and submarines operating away from their home bases. She is usually based in the South Atlantic.







Patrol Ship

# HMS Endurance (A-171)







The "Endurance" is the British Royal Navy ice strengthened vessel which operates in the South Atlantic and around the Antarctic Peninsula regions protecting England's interests in the area. Duties include the re-supply and support of British troops stationed throughout the area as well as fishery protection. It replaced an earlier "Endurance" which was decomissioned on 17 October, 1991 after 35 years of Polar service. The current "Endurance" was originally the Norwegian "Polar Circle" which was renamed "Endurance" in honour of its pre-decessor.





#### **Patrol Ship**

# HMS Leeds Castle



During the 1960s a number of Ton Class minesweepers underwent conversions into patrol craft and served with the Fishery Protection and Northern Ireland Squadrons. The Castle Class were designed as purpose built Offshore Patrol Vessels (OPVs) to either relegate the aging Ton Class vessels to coastal waters or replace them altogether. However, only two vessels of a possible class of six were ever ordered. Like the



<u>Island Class</u>, both Castle Class vessels- Leeds Castle and Dumbarton Castle- were build in Aberdeen by Hall Russell. Costing £12 million each they entered service in 1982. Officially designated 'Offshore Patrol Vessels Mark II' the design of the Castle Class incorporated significant improvements over the Island Class. Displacing 1,450 tonnes and measuring 81 metres in length, 11 metres in beam, and 3 metres in draught, they are much larger than the Island Class and can spend longer periods at sea. Powered by two Ruston Diesel engines they are also much faster with a maximum speed of 20 knots and a cruising speed of 15 knots (the Island class travel at 17 knots maximum). Most importantly they were built with a large flight deck capable of supporting a Sea King helicopter. Although no hanger is provided, refeuling facilities are available and allow the helicopter to operate at sea for longer periods of time without needing to return to base. For short periods of time the Castle Class

vessels can accommodate up to 120 troops or for longer durations 30 troops. As Offshore Patrol Vessels (OPVs) the two of the primary duties of these ship have been to patrol North Sea Gas and Oil Fields (with up to 50 Royal Marines embarked for anti-terrorist operations) and to act as Fishery Protection Vessels. However they are capable of a fulfilling a number of additional roles including that of environmental protection vessels (they have detergent spraying facilities for dispersal of oil slicks) and as minelayers (they have undergone tests for this role). During the Falklands Campaign (1982) they served as dispatch vessels and in recent years they have alternated the role of Falkland Islands Guardship, spending long periods of time (up to three years) in the South Atlantic, with their crews rotating every four months.

Patrol Ship

## **HMS Dumbarton Castle**

(P-265)





#### **Research Vessel**

## **Bransfield**





The RRS Bransfield, which was retired from service following 28 years of work.

#### **Research Vessel**

## **James Clark Ross**



The "James Clark Ross" is the main British Antarctic Survey vessel responsible for re-supply and support of the various British Antarctic Bases in the South Atlantic and the Antarctic. It is designated as a Royal Research ship.





Operated by Mike GMØHCQ/VP8CMH





QSL VP8CMH/MM (front)

VP8CMH/	/MM	confirms	the two	way	QSO with	VE7IG
Date 09 JAN 2005 26 FEB 2004	UTC 2241	Freq (MHz)		Mode CW CW	QTH	QTH Key B = Bransfield E = Ernest Shackleton J = James Clark Ross

The Royal Research: Ship James Clark Ross was launched on the 1st December 1990 by Her Majesty Queen Elizabeth II and entered service with the British Antarctic Survey in September 1991.

The ship is built to Lloyds 100 A1 fee Class 1A Super, has a length of 99.04m, breadth of 18.85m and a maximum draught of 6.30m. Passage speed is 12 knots with an endurance of 55 days. There is accommodation for 11 Officers and 15 Crew and up to 50 Scientific Personnel. The ship has a fully equipped hospital, some 400 cubic metres of laboratory space and can carry 1500 cubic metres of general cargo, 250 tonnes of bulk aviation fuel and 300 tonnes of diesel fuel.

The Radio Room is fitted with a GMDSS Area A4 station and has two 800 Watt HF transceivers. Sat B Immarsat, Iridum Satellite and varios VHF systems. The ship is registered in the Falkland Islands and it's callsign is ZDLP Thanks for the QSL card and 73's de Mike Gloistein

For further information and regular updates visit my website at: www.gmtheq.com For information on the British Astarctic Survey (including the weekly ship diary) visit www.antarctica.sc.uk

Pictured is the James Clark Ross at Signy Island, South Orkney Islands.

QSL VP8CMH/MM (back) Courtesey by VE7IG



# Motor Vessel Discovery



The M.V."Discovery" is a 20,216 tons single ship operation catering for the exotic destination market. The vessel was built in 1972 in Germany as the "Island Venture" but spent the 1974 to 2001 period as the "Island Princess" of Princess Cruises. Between 2002-03 she underwent an extensive rebuild returning to service in mid 2004. She carries 650 passengers when cruising and has a crew of 305.



Polar Icebreak

## **John Biscoe**





#### Research Vessel

## **Ernest Shackleton**



The "Ernest Shackleton" was built in 1995 for the Norwegian Rieber Shipping Company of Bergen and was named "Polar Queen". She is a 80 meter ice strengthened vessel specially designed for polar research work. She served both in the Arctic and Antarctic before in 1999 being renamed "Ernest Shackleton" and being chartered on a long term bareboat charter to the British Government. She was registered with the Falkland Islands Government on the 30th September, 1999. The view above shows her arriving at Port Stanley on the 12th of January 2000 after returning from a relief voyage to Halley Antarctic Base.





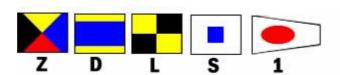


The Royal Research Ship Ernest Shackleton was built in 1995 at the Kvaaerner Kleven Leirvik yard, Norway, for Rieber Shipping of Bergen and was acquired by the British Antarctic Survey in August 1999 to replace the RRS Bransfield, which was retired from service following 28 years of work for the Survey.

The Ernest ShackIteon is an ice strengthened cargo/survey vessel, with a length of 80.0m, breadth of 17.0m and draft of 7.35m. Gross Tonnage is 4028 Tonnes. Propulsion is via two 3604 HP engines, which drive a single propeller via a gearbox.

There are four thrusters and an Azi-pod for position holding during survey operations. The vessel is equipped with a hospital and carries both a doctor and dentist whilst working in the Antarctic. The vessel carries 21 Officers and Crew and there is room for a further 50 supernumerary personnel.

A cargo boat, 'Tula' is used to discharge cargo to bases that don't have alongside access. The radio station is GMDSS compliant for Sea Area A4 and has two HF transceivers capable of all band/mode operations. Most of the vessels communications is now carried using e-mail via a high speed data link through the C-Band satellite system (which also provides Internet access and cheap telephone calls for all onboard). Also fitted is a Inmarsat B system, which is used mainly for backup.



**Patrol Ship** 

# HMS Protector



**HMS PROTECTOR** 

(A Brief History)

The HMS Protector we so lovingly called home for our trips South to the Antarctic and the Falklands was laid down as a fast net layer at Messrs Yarrow & Co Ltd, of Glasgow in August 1935. She was launched in August 1936 and commissioned on the 30th December 1936. During the war period she spent time, 1939, in the South Atlantic then in 1940 in home waters during



the early Norwegian campaign before being sent out to the Mediterranean May of the same vear. It was whilst on station in the Med that an arial torpedo hit her. Emergency repairs were undertaken before she was towed to Bombay and spent from 1942 - 45 undergoing major engine room repairs before returning too blighty.

After spending time in the fleet reserve as a training ship she was then on

display at the Coronation Review of the Fleet at Spithead on Monday 15th June 1953 along with other ships of the line and visiting Commonwealth Navy's. The following year, 1954, she underwent a transformation from Net Layer to Ice Patrol Ship in the Davenport dockyard where a flight deck was built above her net deck and the "shed" (lovingly called a hanger) for the choppers, of which there were two on the ships "flight".

On the 3rd October 1955 she slipped her moorings in Portsmouth and set sail for her very first Thirteen such seasons followed until the 3rd May 1968 when she paid off before making the final shipyard in the sky at Inverkeithing in voyage to the great During her 13 years of honourable and stoic service to the Falkland Islands and its Dependencies, many changes took place to the old girl, not least the addition of her new bows, gallons of red lead and pussers The stories that can be told by the members of her crews over the years are what comedy films are made of, that though is another story. Some of these are now surfacing after decades in the of old sailors be heard during and can our It was also during her thirteen years of Antarctic service several famous people crossed the quarterdeck, Sir Edmund Hillary and Dr Vivian Fuchs being two of the better-known names. This probably came about after the Protector and her crew came to the rescue of the MV Theron after it became stuck in the ice and the two intrepid explorers were aboard the Theron. HMS Protector was a happy ship, as each commission year will vouch, mainly we believe because she was an independent command whilst serving the Falklands and the Antarctic Survey Bases. This feeling of well being and happiness remains even today and is more than evident at all our reunions that are held during the course of a year. Perhaps some of you that are reading this piece were a member of the ships company at some time during her life, if that is the case and you are curious about your old shipmates, then why not join us.

For those of a technical bent the following may be of interest,

#### Ships Compliment

21 Officers and 238 Senior and Junior Ratings

Displacement approximately 4000 tons

Dimensions Length......346ft

Beam.....35ft Draught.....16ft

Machinery Four Admiralty 3 Drum Boilers

Two British Thomson - Houston geared Turbines

Maximum Speed 19 Knots

Armament Twin 4" Mounting

Twin Oerlikon Mountings Hotchkiss 3pdr Saluting Gun

Aircraft Two Westland Whirlwind Mk1 Helicopters (upgraded to Mk 9's later)

Sailing Yacht

### Sarah W. Vorwerk

**Operated by VP8CWZ** 



Sailing Yacht

## **Breackpoint**

Operated by VP8DJW





# Motor Vessel Archangelgracht



"Archangelgracht" is a Container ship operated by the Dutch shipping company Spliethoff as part of their world wide fleet of "gracht" vessels. The name "gracht" meaning "canal" in Dutch.

"Archangelgracht" was built in 1990 and has a cubic capacity of 525,000 cbft. The vessel has 3 cranes capable of lifting 40 metric tons each. The vessel has a A-1 ice strengthened hull mainly used for Baltic Sea work. In February, 2001 she was contracted by the United States National Science Foundation to act as their second Antarctic supply vessel of the season taking containerised and other cargo from Lyttelton to McMurdo Sound and returning to Lyttelton with backloaded containers.





Motor Vessel

Arctic Sunrise



The "Arctic Sunrise" shown above is a former seismic research vessel based in Amsterdam which operates world-wide on environmental protests. It is a 1A1 Class Icebreaker originally built in 1975 as the Polar Bjorn. In 1998 it visited New Zealand for a refit and then was sent to Antarctic waters in search of illegal Toothfish pirate fishing vessels suspected to be operating in waters south of Australia.

Motor Vessel

Raimbow Warrior



The "Rainbow Warrior" is the new flagship of the world-wide Greenpeace Environmental Organisation. It replaces the previous "Rainbow Warrior" which was sunk in Auckland Harbour by French Secret Service (DGSE) Agents in 1985. The current "Rainbow Warrior" continues the same role of environmental protest ship. The above view shows "Rainbow Warrior" in the inner Lyttelton Harbour on 31st March 1998.

### Sail Vessel

### **Europa**



The Bark "Europa" was launched in 1911 as the lightship "Senator Brockes" and served in this role at the mouth of the river Elbe in Germany until the mid 1970's.

After several years laid up she was rescued by Dutchman Harry Smit who restored her and in 1994 she commenced a new life as a traditional 3 masted sailing vessel.

In 2002-2003 she undertook her first Antarctic trip arriving in Ushuaia in December 2002. She promptly left for a trip to South Georgia arriving at Grytviken on 8th December, 2002. She visited King Edward Point before sailing to the Falklands and arrived back in Ushuaia on new year's eve where she is shown berthed at left.







# HMNS Vædderen (F358)



## **Galathea 3** (from www.galathea3.dk)

Galathea 3 is the largest Danish scientific expedition for more than 50 years. The aim of the expedition is to strengthen Danish scientific research, not just by virtue of the research projects that have been included in the expedition, but also in relation to the recruitment of the coming generations of research scientists.

The foundations of Galathea 3 and all the educational perspectives and dissemination of information activities surrounding the expedition consist of the total of 71 research projects that will be on board when the navy surveillance vessel Vaedderen ('The Ram') sails around the World from August 2006 until April 2007. The ship has room for approximately 35 research scientists onboard, in addition to whom there will be just under a dozen journalists, photographers and TV crew members, plus a couple of students and their teacher. And then, of course, the 50-man crew, who are to keep the ship sailing, maintain the course and perform the many other tasks necessary onboard a ship that accommodates nearly 100 people.

There is thus a considerable amount of ambition as concerns education and dissemination of research information attached to the project. Galathea 3 is to enhance the Danes' perception of modern science as relevant and meaningful, and bring especially natural science research into primary and upper secondary schools in a form that appeals to a combination of adventurousness, curiosity and insight. With a direct satellite link from the expedition ship to classrooms in Denmark, it will be possible to include the research carried out on Galathea 3 actively in classroom teaching, and show the flesh and blood realities of being a research scientist.

First class research will be characterising the third Galathea expedition. Prior to the selection of the participating projects, all projects have been submitted to the thorough assessment of the independent governmental research councils, and only project proposals that have received research council approval have made it through the eye of the needle.

The final selection of the projects has been made by the Danish Expedition Foundation and received the approval of the Foundation's Board of Trustees. You may read about the process that has preceded the plan for the voyage in the box on the right.

Research scientists from several Danish and some foreign universities and sector research institutions stand behind the Galathea 3 projects. Most of the projects fall within the category of natural science, but also other research areas of relevance to the places that the expedition is going to visit have found room onboard. And the expedition encompasses both sea and land based research projects.

The themes on which the natural science researchers are going to focus will include biological processes, climatic changes and earthquakes.

In addition, a number of classical biology projects will contribute to our actually rather limited insight into marine animal and plant life, and also the very small organisms, such as bacteria, plankton and algae, will be studied. A very modest share of such organisms are known to science today.

Similarly, the research projects within the humanities range very far, but a number of them are concentrated within the area of Galathea 3's visits to the former Danish colonies in Tranquebar and the West Indies.





## Motor Vessel Italica



The "Italica" has served as the main Expedition vessel for the Italian national Antarctic research programme since the 21th Expedition in the 1990-91 season. It is ice strengthened and each year carries south a number of helicopters as deck cargo. It calls into Lyttelton (Christchurch's port) both on the way south and north to exchange cargo and personnel with the Italian Antarctic base depot at Christchurch Airport.





The ship is the means classic with which it can be arrived in Antarctica: with the ship it came completed the first circumnavigation of Antarctica (1775), first sights (1820), first disembarks (1895). The ports of departure for the crossing one in ship are distributed on the southern tips of the 3 continents of the austral hemisphere: Capetown (Sudafrica), *Hobart* (Tasmania, Australia), *Christchurch and Dunedin* (New Zeland), Punta *Arenas* (Chile) and *Ushuaia* (Argentine).

Last the 2 ports, situate to you on the tip of the South America, respective on the Strait of Magellano and on the Channel of *Beagle*, they to be distant only a thousand of km from the Antarctic Peninsula and, just for the short distance, they come chosen in the majority of the cases from the tourist ships, even if the feature of sea to cross is the ill-famed Passage of *Drake* with *Horn Head*. The same ports come use you from Chile, Argentine and other nations who have Bases scattered on the Peninsula and the Subantartiche Islands border.

In the event of Italian Shipments, it comes used the cargo-oceanographic ship Italica, than tonnage very 5600 tons and is long approximately 130 m.

The ship pause to Ravenna for the preparation of the laboratories and the boarding of how much necessary one for the development of the Shipment. The departure happens, generally, around to the half of November and the arrival to the austral port of *Hobart* (Australia) a month after, provide here to the drainage of the materials, of the instruments and of the equipments it assigns you to the Base Italian-French Concord.

This year the Italica, boarded how much necessary (Jet A1 FSII and staff), will sail from 5 Lyttelton January 2003 making broken off towards BTN, in the Sea of Ross, where the arrival is previewed for 13 January.

During the approach to BTN scientific activities will be carried out; once it arrives to you are it unloads the refueling to you for the Base and disembarks the staff of 3° the period, therefore, the ship will head in operating zone in order to carry out the Campaign of physical and chemical oceanography.

The Italica is one ship from Italian search (MN = Motion Ship) constructed in 1981 in the yard of Vyborg in Russia and commissioning in 1983.

In the course of the years it has been equipped of suitable instrumentation for searches of chemical and physical oceanography, of geology and marine Biology.

And' equipped of an integrated system of navigation, a eco-fathom, a *sub-bottom profiler*, 2 it arranges of communication INMARSAT, *Simrad and Biosonics*, of 7 winches and 2 *frame*, systems of core boring and dredging and approximately 250 mg of laboratories.

Of continuation they come to bring back, in synthetic way, the main characteristics:

Class ice: 100 To 1.1 River, RG1, Super Ice 1A

Length: 130 m
Width: 17.3 m
Draught: 6.93 m
Tonnage: 6.000 t
Ability cargo: 4.000 mc

Bigo: 3 from 20 t + 1 from 40 t

Power: 6,100 HP

Auxiliary motors: 3 diesel generators from 400 KVA + 1 from 125 KVA

Helideck for Bell 212:1

Pontoon: L = 13,50 m/4,7 L = m capacity approximately 35 t

Pilotina: with ability to 15 persons

Ability tanker: approximately 820 mc of combustible type JP8

Crew: 93 members

Scientific staff: 27 members





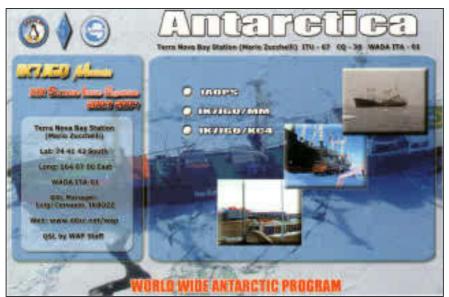




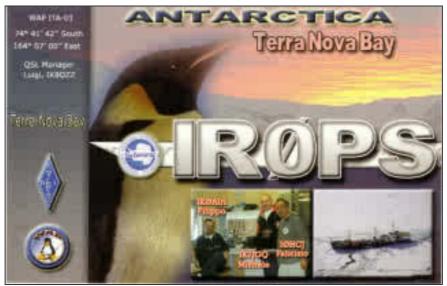








QSL Card IK7JGQ/mm



**QSL Card IRØPS/mm** 

### **Research Vessel**

### **OGS Explorer**





The OGS "Explora" was constructed at Elmsfleth in Germany in 1973. She measures 1,400 tons. In 1988 she was acquired by the Italian National Oceanographic Institute and based in Trieste. Her role was as a Polar and Oceanographic research vessel with a special emphasis of the Antarctic. Between 2003 and 2005 she underwent an extensive modernisation acquiring more modern ocean bed scanning equipment. In the 2005-06 Season she undertook an extensive cruise to the Ross Sea engaged in mapping the ocean also other sampling programmes.





### **Motor Vessel**

## **Barken**



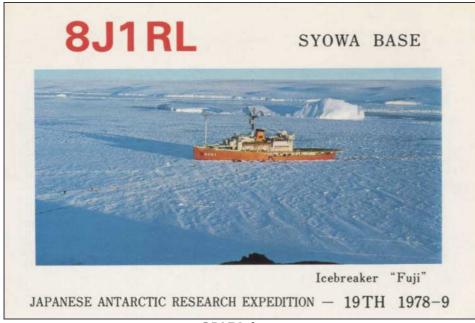




**Polar Iceabreak** 

### FUJI AGB-5ØØ1









8J1RL/mm 1978-79 Expedition in Antarctic



The icebreacker Fuji is remove in 1985, now is a Museumships.



**Polar Iceabreak** 

### **SHIRASE**

AGB-5ØØ2







## **M/V "UMITAKA MARU"**



Motor Vessel
HAKUHO MARU





M/V "KAIYO MARU"



## M/V "HAKUREI MARU"





# Research Vessel Magdalena Oldendorff



The "Magdalena Oldendorff" was built in 1983 as a ARCTIC-21 Ice Class multi-purpose Ro/Ro vessel. She is one of a large fleet operated by her German owners.

In late 2000 it was announced that "Magdalena Oldendorff" would be the support vessel for the 20th Indian Antarctic Expedition. She left Capetown on the 31st December, 2000 bound for the Antarctic continent taking the Indian Expedition led by the Geologist Marvin D'Souza. Her establishment included two New Zealand helicopters with New Zealand and Indian aircrew.

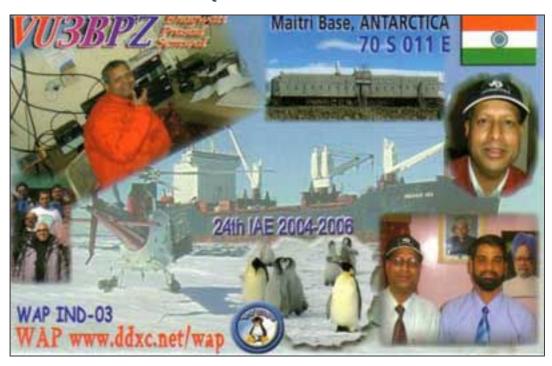


### **Research Vessel**

### **Emerald Sea**



QSL Card from VU3BPZ

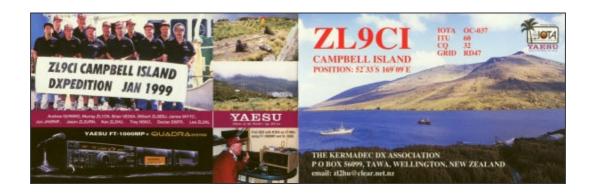




## Motor Vessel Braveheart



The "Braveheart" is a ex Japanese research vessel operated by the Stoney Creek Shipping Company of Palmerston North in New Zealand. She was refitted for this special voyage to Campbell Island where she acted as mother ship to an International Expedition of Dxer's in January 1999. The picture above shows the "Braveheart" in Wellington Harbour prior to departure.



#### **Research Vessel**

### **Tangaroa**



The "Tangaroa" is an Oceangraphic and fisheries Research vessel operated by the New Zealand Institute of Water and Air (*N.I.W.A.*) and is based in Wellington. In 1998 she was involved in New Zealand's contribution to OCEAN'98, the United Nations "International Year of the Ocean". Capable of working throughout New Zealand's Exclusive Economic Zone (EEZ) in conditions ranging from subtropical to subantarctic, Research Vessel *Tangaroa* is well equipped for a wide range of stock assessment work. Because some of New Zealand's most important commercial fish species (such as orange roughy) are found at great depths, *Tangaroa* can trawl down to 2000 m. It can also accommodate a wide range of commercial and research midwater and bottom trawl gear. Powerful, low pressure hydraulic winches feature up-to-date autotrawl technology. Electronic monitoring systems give full information on gear depth, doorspread and net opening. *Tangaroa* is also fully equipped for fisheries acoustic work. Recent modifications for marine geological research include a deepwater coring system (to 5000 m) and air compressors for seismic surveys.

http://www.niwavessels.co.nz/

map, / www.madaesseisteemz,	
Name of Vessel	RV Tangaroa
Owner	NIWA Vessel Management Ltd.
Flag	New Zealand
Call Sign	ZMFR
Port of Registry	Wellington
Classification	DNV - 1A1 (stern trawler/research vessel) + Ice 1C (light ice)
Year of Construction	1991
Length	70.0 metres
Beam	13.8 metres
Draft	7.2 metres
Hull	Ice Strengthened
Gross Tonnage	2282 tonnes
Nett Tonnage	684 tonnes
Cruising speed	12-13 knots

# Te Kaha (F-77)



This February 1999 view shows the New Zealand Anzac class frigate "Te Kaha" patrolling amongst Antarctic Icebergs while looking for Illegal Patagonian toothfish pirate fishing ships. She has also acted as a replenishment and personnel transport ship to a variety of sub-Antarctic islands.



The "Te Kaha" during 1999 and 2000 also played a leading role in several United Nations peace keeping operations around the world. She was in the first fleet to go to the aid of East Timor in 1999 and then departed for 6 months work in the Persian Gulf in the UN sponsored embargo of trade with Iraq. She has also served off Bougainville during peace talks and was at Fiji for the 2000 Coup led by George Speight. In August 2000 she sailed for Honiara in the Solomon Islands where she served as the conference venue for Peace talks between the Solomon Islands Government and Malaita rebel forces. Many of these tasks have been undertaken at short notice and often in secret so mail from the vessel has been difficult to obtain.

# Canterbury (F-421)





The "Canterbury" was an improved "Leander" class frigate which was comissioned into the Royal New Zealand Navy in 1971. She carried a helicopter and had a crew of 239. She was a popular ship and remained in commission until 2005 being the last of the New Zealand Navy's Leanders.

## Research Vessel Tradewind





The "tradewind" is a 2 masted historic sailing vessel which in the late 1980's was based in the South of New Zealand and during this time undertook a series of cruises to various sub-Antarctic Islands. Originally built in Holland in 1911 she has a square topsail schooner rig.

## Hidrographic Ship Monowai



The "Monowai" was the New Zealand hydrographic Survey ship from when she was commissioned in 1977 until retirement in 1998. She had previously been the New Zealand Goverment Island supply vessel "Moana Roa". During her naval service she remapped most of the New Zealand coastline including the many sub-Antarctic islands as well as several Pacific islands in New Zealand's responsibility. She also often acted as re-supply vessel to Campbell and other sub-Antarctic island groups. She carried a helicopter and often undertook rescue or aid missions.

#### **Motor Vessel**

### **Sea Surveyor**

The motor vessel "Sea Surveyor" in January 1999 left the Southland Port of Bluff carrying a wildlife recovery party from the Rare Breeds Conservation Society. The aim of the Expedition was to recover from the remote sub-Antarctic Islands both live animals and genetic samples of others to enable to survival of the gene pool of the long isolated Auckland Island wild pigs prior to the Department of Conservation eradication programme intended to return the Islands to their natural state



Oceanographic Ship

# Lance (W-311)





### **Research Vessel - Tug**

## Rig Mate

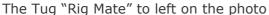
Norwegian ship tug, the Rig Mate of 900 tons be rent by the first Italian shipment in Antartide.

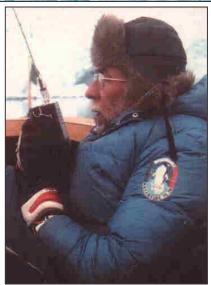












I1SR - Mr. Cepparo leader teams.

### **Polar Vessel**

### Nordnorge



The "Nordnorge" was built in 1997 for the Norwegian Coastal Fleet and during the northern summer operates between Bergen and Kirkenes. She was built to navigate shallow and narrow waters as well as open sea and is classified for light ice conditions. She normally carries 460 passengers but during Antarctic operations this will be limited to 350 passengers. The "Nordnorge" uses eight zodiacs while in the antarctic and is restricted by I.A.A.T.O. to having 100 passengers go ashore at any one time.

# Polar Icebreak Polar Queen





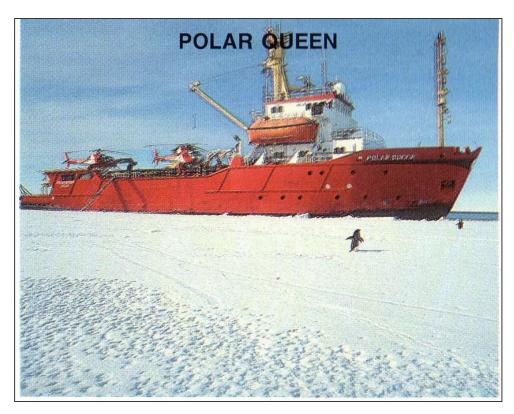
The "Polar Queen" was built in Norway in 1983 as a polar logistics vessel. She could accomodate



53 passengers and had a large helicopter deck. Ice strengthened and fitted for long term expedition work she was employed variously by the German, Italian and Australian Antarctic programmes in the Antarctic. She also did considerable work in the Arctic.

The "Polar Queen" is a Norwegian owned ice strengthened vessel built in 1995 for Rieber Shipping of Bergen. The vessel has been chartered several times for Australian Antarctic Base resupply voyages. In early 1999 with the unavailability of the "Aurora Australis" due to breakdown, the "Polar Queen" was again

chartered to carry out urgent Base re-supply. The following season the vessel was renamed "Ernest Shackleton" and bareboat chartered to the British Antarctic Survey for a 10 year period.



### **Polar Icebreak**

### **Polar Duke**





The "Polar Duke" is an ice strengthened vessel owned by Polar Ships A/S of Norway which specialises in providing specialist charter vessels. The "Polar Duke" was built in 1983 and since then has visited the Antarctic many times. To read an interesting story about the vessel and to see a nice selection of photos taken during her 1999-2000 Antarctic expedition to Northern Victoria Land.







## Polar Icebreak Humboldt





The "Humboldt" is the Antarctic supply vessel operated by Peru in support of its Antarctic base"Machu Picchu" situated on King George Island in the South Shetland Islands off the Antarctic Peninsula.

The "Humboldt" was built in 1979 and has an ice re-inforced hull. She has a 100 person capacity and is currently captained by Commander Gustavo Otarola. her home port is Callao, near Lima.





# S.A. Agulhas



The "Agulhas" is the Antarctic Support vessel operated by the Republic of South Africa. She is equiped to work in heavy pack ice and is used for supply to bases in the various sub-Antarctic islands as well as to the SANAE Base on the Antarctic Continent itself.

Outeniqua (A-302)





The "Outeniqua" is a South African Navy logistics ship which in recent years has operated as the main logistics ship for South Africa. It is based in Cape Town Naval Base.

For the 1997-98 Summer season both the "Outeniqua" and the supply ship "Agulhas" arrived at the main SANAE Base from Cape Town to commence the rebuilding of the main base.

The "Outeniqua" made a short return voyage west to Rampen to off-load personnel and cargo for the Nordic Antarctic Research programme. After returning to SANAE she conducted several oceanographic research experiments before returning to Cape Town at the end of February with mail being postmarked at Cape Town on 4th March 1998.



# Motor Vessel Lyubov Orlova



The "Lyubov Orlova" is one of a quartet of Russian cruise ships operated by the far Eastern Shipping Company of Vladivostok. She and her sister ships are named after famous Russian actresses. Lyubov Orlova (1902-1975) was a Soviet movie star famous for her lyrical musical comedies. The vessel is shown above berthed in Ushuaia.



# Research Vessel Grigoriy Mikheev



The "Grigoriy Mikheev" was built in Finland in 1990 for the Hydrographic Institute of St. Petersburg as an ice strengthened research ship. However with the breakdown of the Soviet Union she was converted into an expedition cruise vessel in the Netherlands and placed under long tern charter contract by Oceanwide Expeditions. The vessel now has a 20 man Russian crew and caters for between 36 and 46 passengers who all have access to the large bridge and the use of the vessels zodiacs. The photo above shows the "Grigoriy Mikheev" arriving in Ushuaia on 7th January, 2003.



**Research Vessel** 

## **Aleksey Maryshev**





#### **Research Vessel**

### **Prof. Multanovsky**



The "Professor Multanovskiy" is a sister ship to the "Professor Molchanov". Both were built in Finland in 1982/83 for polar and oceanographic research but have since been converted to polar cruising. They both carry a maximum of only 49 passengers in twin or single cabins. They are Ice class A1A and have Russian officers & crew with English speaking expedition staff. They usually operate 1 week to 3 week cruises ftrom Ushuaia in Southern Argentina to the Antarctic Peninsula with some longer cruises also taking in South Georgia and the Falkland Islands. The Professor Multanovskiy" is shown above tied up in Ushuaia prior to an Antarctic trip.

The *M/S Professor Multanovskiy* was built in Finland in 1982 for polar research. She is now refurbished and ideally suited for passenger expedition cruising. The *Multanovskiy* carries a maximum of 49 passengers in outside triple, twin and superior cabins, and one suite. All cabins have a desk and ample storage space. Cabins on Decks 4 and 5 have private facilities with upper and lower berths. There are a few exceptions on Deck 4 where some of the cabins have lower berths. The cabins on Deck 3 have lower berths and convenient shared facilities.

#### **Research Vessel**

### **Prof. Molchanov**



The M/S Professor Molchanov was built in Finland in 1982 for polar research. She is now refurbished and ideally suited for passenger expedition cruising. The Molchanov carries a maximum of 52 passengers in outside triple, twin and superior cabins, and one suite. All cabins have a desk and ample storage space. Cabins on Decks 4 and 5 have private facilities with upper and lower berths. There are a few exceptions on Deck 4 where some of the cabins have lower berths and convenient shared facilities.



#### **Polar Icebreak**

## **Akademik Fedorov**



The Russian "Akademik Federov" was built in Rauma Repola, Finland in 1987 as an ice strengthened vessel. she is a sister ship to "Michael Somov". She has 12 laboratories on board and has a heli-pad on her aft deck.





**Polar Icebreak** 

### **Michael Somov**

Type Research- and Supply vessel

Classification KM \* ULA [I] USSR, 1975 Yard

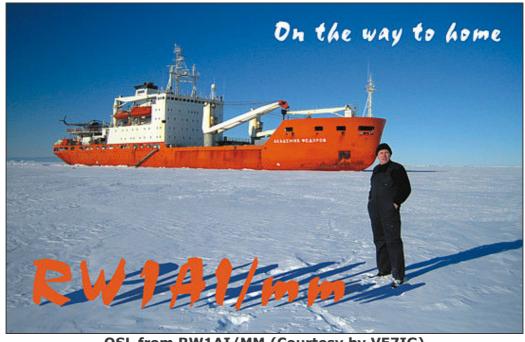
**URWW** Radio call sign.

**Vessel dimensions** 

Length 133,13 m Breadth 18,84 m Draft: 9,05 m **DWT** 5.305 t **GRT** 7.695 NRT 3.011

**Machinery** 

16,2 knots Speed Main Engine 1 x 2854 kW



QSL from RW1AI/MM (Courtesy by VE7IG)

#### **Sailing Yacht**

## **Apostol Andrey**



The "Apostol Andrey" is a Russian oceanic yacht launched in 1996. She has a steel hull, is 16.2 metres long and 25 tons. She is Bermuda Ketch rigged and normally carries a crew of 6.

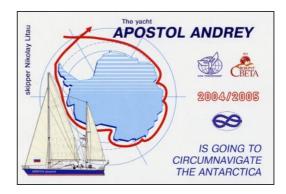
She has since launching become famous for several global circumnavigations including one done entirely in the Arctic Ocean.

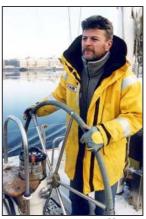
On the 14th September 2004 she again set out from Kronshtadt in Russia, this time to circumnavigate Antarctica. The voyage was timed to commemorate the 200th Anniversary of the circumnavigation of the world by the two Russian vessels "Neva" and "Nadeshda" in 1805. These vessels had also set out from Kronshtadt.

The "Apostol Andrey" is shown at right at th King Edward Point wharf in South Georgia After successfully travelling around most of th East Antarctic Continent the yacht called int Dumond D'Urville French Antarctic Base.









R3AL op. Nik

#### **Polar Icebreak**

## **Akademik Aleksander Karpinsky**



#### Specifications and main technical characteristics of the vessel

Flag	Russia
Port of registry	Saint-Petersburg
Call Sign	UIZO
Classification	KM(*) L2 [1] A2 (Russian register)
Registry No.	830588
IMO No.	8227238
Year/Place of building	1984/Nikolaev (Ukraine)
Length, m	104.5
Width, m	16
Draft, m	6.9
Registered tonnage (gross/net), tons	4430/1329
Displacement (empty/loaded), tons	3833/5715
Cruising speed maximal, knots	15 (with 2 engines)/ 11 (with 1 engine)
Cruising speed economical, knots	13 (with 2 engines)/ 9 (with 1 engine)
Cruising range, nautical miles	30000
Fresh water capacity, cub. m.	89
Fuel capacity, tons	1240 (heavy)/88 (light)/44.6 (oil)
Endurance, days	100

Polar Icebreak

Prof. Kurentsov



Under the project, completely advanced by the factory experts, there was modernized a scientific-research ship "Professor Kurentsov" of the Finnish construction under a class of seismic investigation with use of the ship equipment nuclear underwater submarines. Many deposits, open on the Arctic shelf, of petroleum and gas - result of activity the "Professor Kurencov", and one of deposits is named in honour of a vessel "Kurencovskoe".



Research Vessel **Akademik S. Vavilov** 





Research Ship

Akademik Shokalskiy



The Spirit of Enderby



The "Spirit of Enderby" is a sister ship to the "Akademik Shokalskiy" which Heritage Expeditions of Christchurch had operated for 10 seasons up to the end of the 2003-04 season. Her registered name is "Professor Khromov". She was built in 1984 and refurbished in Lyttelton in 2004 before commencing tourist work. She carries 48 passengers and is equipped with several naiads, all terrain vehicles and for Antarctic work also carries a helicopter.

#### Polar Icebreak

## Krasin





#### **Polar Icebreak**

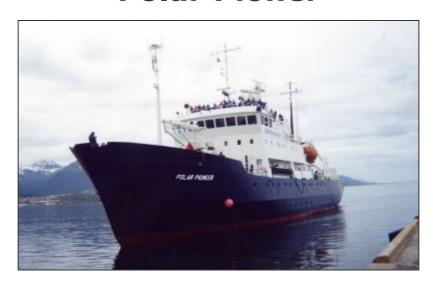
#### **Yamal**





The *I/B Yamal* is the most powerful icebreaker in the world with a displacement of 23 000 tons, a total of 75 000 horsepower and a 48 mm hull! Designed as a working vessel to keep shipping lanes open along Russia's Northern Route, *Yamal* meets the challenge of the heaviest ice. The ship is a model of technology - and of passenger comfort: after having been converted in 1993 to carry passengers to the North Pole she has 55 first class outside cabins and suites, all with private facilities, large windows, desk, television and other comforts.

## Polar Icebreak Polar Pioner

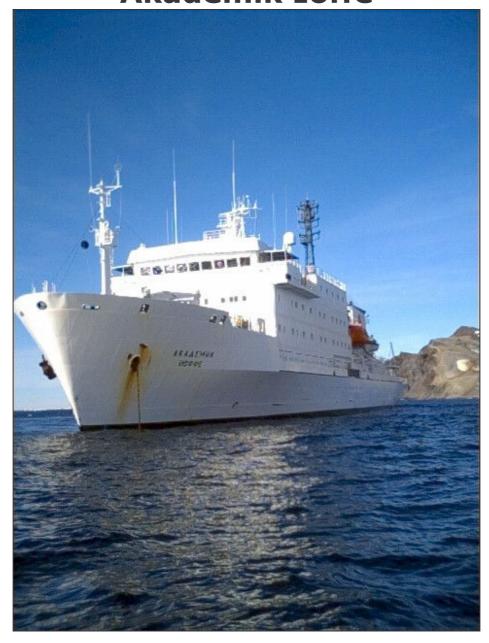


Polar Pioneer was built in Finland in 1985 as an ice-strengthened research ship, designed for Arctic Ocean travel. In 2001 she was totally refurbished to provide comfortable accommodation for 54 passengers. This class of vessel has a fi ne reputation for polar expedition cruising, due to its strength, manoeuvrability and small number of cabins, all of which have sea view and ample storage space. The Russian captain and crew are among the most experienced ice navigators in the world. The spacious bridge is always open to us and the decks are ideal for viewing the dramatic polar landscapes and wildlife. The chefs are Western and the dining room is attended by Russian stewardesses. Other facilities on board include a lecture room, a sauna, a bar/lounge and a small library stocked with a good collection of polar books.



Research Vessel

Akademik Ioffe



The "Akademik Ioffe" was built in 1989 in Finland for Russia as a geophysical research vessel specilaising in oceanographic biology. Ioffe is based in Kaliningrad. During the southern summer she is chartered by Peregrine Antarctic Adventures as a cruise vessel carrying about 100 passengers from Ushuaia to the Antarctic Peninsula on each of 3 cruises she undertakes each season.

## Polar Icebreak Kapitan Khlebnikov



Akademik Boris Petrov



The "Akademik Boris Petrov" is the Russian ice strengthened vessel shown above at Ushuaia on the 14th of January 2000. She has undertaken several Antarctic cruises from the South of America and operates under charter to Peregrine Adventures.





# Polar Icebreak Paardeberg ex. Outeniqua



The "Paardeberg" is a ice strengthened (Ice class A2) multi-purpose auxillary replenishment vessel which was built in the Ukraine in 1991. She is flagged at Kingston in St. Vincent but owned by an Israeli company which bases her at Capetown in South Africa. She was previously the South African Navy vessel "**Outeniqua**". The view above shows her berthed at Cape Town in March 2006.





#### **Research Vessel**

#### Onnuri



The "Onnuri" is a South Korean Research and Antarctic supply vessel built in 1991 at Bergen in Norway. She has a sister ship called the "Eardo". Both have compliments of 15 crew and 17 scientists. Both are operated by the Korean Ocean Research and Development Institute known as KORDI. the picture above shows the "Onnuri" berthed at Punta Arenas in December 1999 prior to her departure to the South Korean Antarctic Base, "King Sejong" on King George Island.





**SPAIN** 

**Hidrographic Ship** 

# Hesperides (A-33)



The "Hesperides" is Spain's main Antarctic support vessel. She was built in Spain at the Cartagena Shipyards and delivered in April, 1991. She has 9 officers, 46 other crew and can carry 30 scientists. She has an endurance of 90 days.





# Las Palmas (A-52)



The "Las Palmas" is a spanish Antarctic support vessel built in 1978 in Satander, Spain. It was the vessel used for the first Spanish Antarctic Expedition in 1989-90 and for the following 2 seasons until replaced by the larger and newer "Hesperides". It has again been used in recents season supporting both the Spanish and the Bulgarian Antarctic Programmes.







#### **Swedish Vessel ODEN**

#### **Icebreacker**







Class **Oden** 

Götaverken Arendal – Göteborg (Sveden); 1987÷89

Length: 107,4 Width: 31,5 Knots: 17

HP: 24.500 (18.000 KW)

Radar: 2 Rascar

Crew: 32 + 49 passengers

12900 t.pc.;

Note: All the ships icebreack of Swedish flag they belong to the Office of the Transports, but they are submitted to the management of the Navy.

#### Sailing Yacht

## Lindisfarne

(SM6YXB)



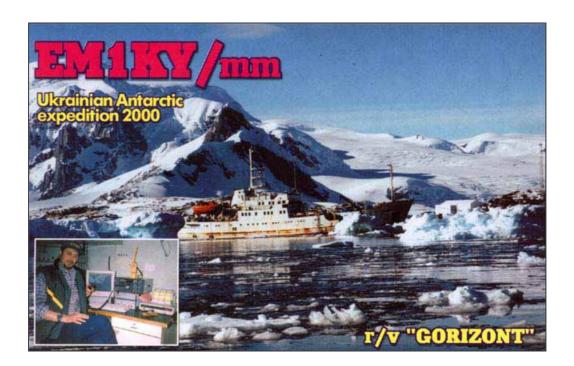




### Research Vessel



The Ministry of Science and Education / Sevastopol Group of Research Vessels has research vessel "**Gorizont**" (Gross tons: 1347 t, Speed: 15.4 knots; Length: 59.90 m; Width: 10.40m; Cruising range: 2200 miles (maximum speed); Crew: 28, Passenger: 34; Labs: biological, chemical). Was built in 1963 in Gdansk, Poland, and modernized in 1987 (Yarna, Bulgaria).

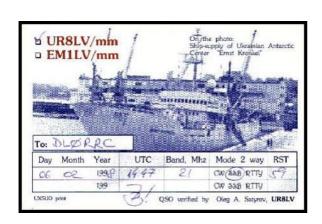


## Motor Vessel Ernst Krenkel



The UkrSCES has the following research vessels that are used for expeditions in the remote areas and coastal zones:

"Viktor Bugaev", "Georgi Ushakov", "Ernst Krenkel" (Gross tons: 4400 t; Speed 13.5 kn; Type: ice-breaker; Endurance: 55 days; Crew + scientists: max 110).



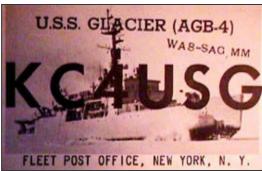




## **USS Glacier**

(WAGB-4)
Decommissioned: 7 JULY 1984











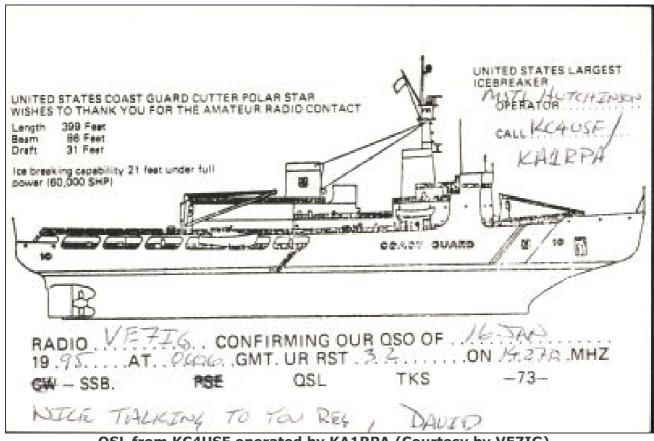


## **USCGS Polar Star**

(WAGB-10)







QSL from KC4USF operated by KA1RPA (Courtesy by VE7IG)

### **USCG Polar Sea**

(WAGB-11)



The "Polar Sea" (WAGB-11) is one of two United States Coast Guard Icebreakers stationed in the Pacific which alternatively provide the Ice Breaking support to the American "Operation Deep Freeze" program based largely in McMurdo Sound area of the Ross Dependency. Her sister ship is the "Polar Star".









## **USCG Michael Healey**

(WAGB-20)







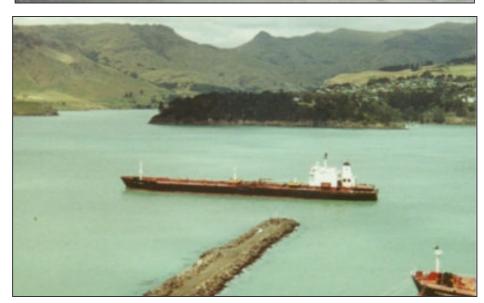


## **USNS Gus W. Darnell**

(T-AOT 1121)







## **USNS Paul Buck**

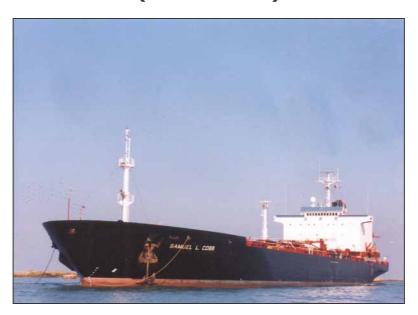
(T-AOT 1122)



The "Paul Buck" is a United States Military Sealift Command tanker which has been used as the tanker for McMurdo fuel supply a number of times. She is shown above being escorted into McMurdo Sound by the chartered icebreaker "Krasin" on January 21st, 2005. Ross Island can be seen in the distance.



## USNS Samuel L. Cobb (T-AOT 1123)



#### AOT-1121 Champion Class T-5 Tanker:

- Built in 1985 by American Ship Building Co., Tampa, FL. for Ocean Product Tankers of Houston, Texas, for long-term time charter to MSC
- Delivered in 1985 and placed in service by the Military Sealift Command (MSC) as USNS Samuel L. Cobb (T-AOT-1123)
- **Samuel L. Cobb (T-AOT-1123)** is one of MSC's four Transporter Tankers purchases by the US Navy from Ocean Product Tankers in 2003

#### **Specifications:**

Displacement 41,500 t.(fl)

Length 615'

**Beam** 90'

**Draft** 24' 8" (mean)

Speed 16 kts.

**Complement** 24

Cargo Capacity 237,766 bbls

**Armament** none

**Propulsion** 1 Sulzer 5RTA 76 diesel; 18,400 hp sustained; 1 shaft

## **USNS R. G. Matthiesen**

(T-AOT 1124)



For the 1999-2000 Austral summer season the United States Antarctic Programme used the Military Sealift Command common user tanker "Richard G. Matthiesen" for its supply run to McMurdo Sound. The vessel is 39,624 tons displacement and was particularly suited to this task as it has a double hull and is also ice strengthened. It was built in 1985 and has hull number T-AOT 1124.













## USNS Lawrence H. Gianella (T-AOT 1125)



The "Lawrence H. Gianella" is a United States Military Sealift Command tanker which has been used as the tanker for McMurdo fuel supply a number of times. Her previous visit to McMurdo was in January 1999.



## **USNS Eltanin**

Decommissioned:



**Reserch Vessel** 

#### **USARP** Hero

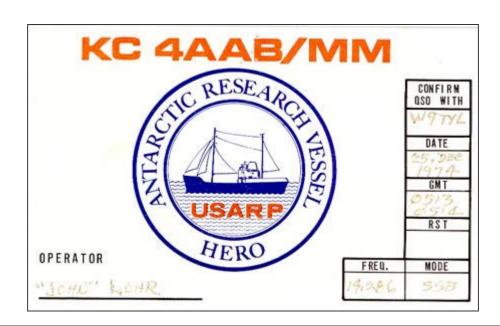


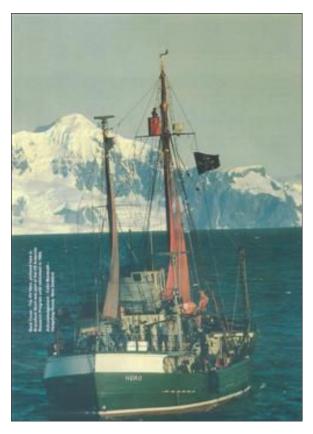


## RESEARCH VESSEL "HERO" An Important Part Of

#### THE U.S. ANTARCTIC RESEARCH PROGRAM

Designed and built for the United States Antarctic Research Program, HERO, operting from its Antarctic base at Palmer Station serves as a mobile laboratory platform for scientific investigation throughout the Antarctic Peninsula area and in the adjacent seas and ocean waters. This 125' diesel-powered and sail-equipped wooden hull ship was launched in March 1968 and began her Antarctic service in November of the same year. HERO carries a crew of 12 and has accommodations for 8 scientists. She is fully equipped to support investigations in biological, geological oceanographic, and related fields. Owned by the National Science Foundation. Operated by Holmes & Narver, Inc., Anaheim, Calif., with the crew being furnished by General Oceanographics, Inc., of Newport Beach, California.





The Research Vessel Hero, was built specifically to do scientific research in the Antarctic. This research included marine biology, geology, bio physical acoustics, atmospheric and oceanography. The ship was used from 1968 to 1985 and operated by the National Science Foundation is the agency of the U.S. Government responsible for the coordination and management of the United States Antarctic Research Program. "USARP" whose logo is shown above. The ship is 125 feet long, 30 feet wide. The Hull is Oak Planking, sheathed in South American Hardwood "Greenhart" for protection from ice scraping. She is powered by 2 Diesel Engines, 380 Horse Power Each with a top speed of 12 knots (about 14 miles per hour).

Dedicated to support of science and international cooperation in the Southern Oceans, the Antarctic research ship Hero was an important part of the United States Antarctic Research Program of the National Science Foundation. She is the namesake of a 47-foot American sailing sloop captained by Nathaniel B. Palmer, who in 1820 became one of the first to view the Antarctic mainland. This modern Hero was built to serve as

a mobile platform for the conduct of research in Antarctic Peninsula waters, augmenting the facilities of the U.S. Palmer Station on Anvers Island.

The Hero is a diesel-powered but sail-equipped wooden ship. Wood provides resiliency in sea ice and acoustic quiet. Sails assure steadiness, safety and, again, silence. Her oak hull is sheathed in tough South American greenheart to protect against abrasion by floating ice.

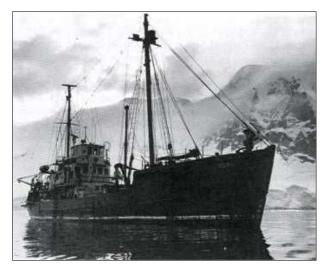
Six scientists and a crew of 12 comprised Hero's normal complement, which for special cruises may have been increased by 2 shipboard investigators or 7 transient personnel. Designed primarily for trawling and other biological collecting, Hero has 2 laboratories to support such diverse activities as physical oceanography, bio acoustic studies, onshore geology and biological investigations.

The Hero's areas of operation from the spring through the fall were the often stormy waters of the Antarctic Peninsula and the Scotia Sea. She operated out of South American ports during the wintertime when long hours of darkness and heavy ice kept her out of sub-Antarctic waters.



Hero was designed by Potter & M. Arthur, Inc., naval architects of Boston, Massachusetts, and constructed by Harvey F. Gamage, Shipbuilder, Inc., South Bristol, Maine. During its

commissioned years, the Hero was owned by the National Science Foundation, and operated by ITT Antarctic Services, Inc.



The National Science Foundation is the agency of the U.S. Government responsible for the coordination and management of the United States Antarctic Research Program. USARP investigations conducted comprises university and government scientists and other researchers at stations on the Antarctic continent and aboard vessels on surrounding oceans. When in active service, Hero's home port was Palmer Station. Like the other U.S. Antarctic stations, it is maintained by the U.S. Naval Support Force, Antarctica.

Sails, used for "Silent Running" produce a top speed of 8 knots (about 9½ miles per hour). The ship carried a working crew of 12, plus 6 to

12 scientists. The Winter months were spent doing research off Argentina & the Chilean Coast.



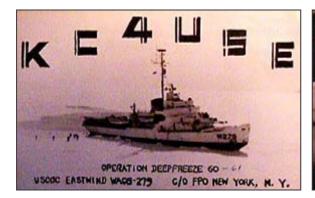




## **USCGC Eastwind**

(WAGB-279)
Decommissioned:











## **USCGS Southwind**

(WAGB-280)

**Ex. USS Atka**Decommissioned: 1974



### Burton Island Class Icebreaker:

- Authorized as *Miscellaneous Auxiliary* (AG-90)
- Laid down, 20 July 1942, at Western Pipe & Steel Co., San Pedro, CA.
- Launched, 8 May 1943
- Commissioned USCGC Southwind (WAGB-280), 15 July 1944, Cdr. R. M. Hoyle, USCG, in command
- Decommissioned, 25 March 1945 and transferred (loaned) under terms of the Lend-Lease Program, to the USSR, renamed Kaptian Belusov
- Returned to US Naval custody 28 December 1949, at Yokosuka, Japan
- Commissioned USS Atka (AGB-3), 1 October 1950, at Yokosuka
- Decommissioned, 31 October 1966 and transferred to the US Coast Guard
- Struck from the Naval Register, 1 November 1966
- Commissioned **USCGC Southwind (WAGB-280)**, 18 January 1967
- Decommissioned, circa 1974
- Final Disposition, fate unknown

### **Specifications:**

**Displacement** 6,481t.(fl) 3,052 t.(lt)

Length 269'

**Beam** 63' 10"(max)

**Draft** 25' 9"

Speed 16 kts.

Complement 353

**Armament** one single 5"/38 dual purpose gun mount

**Propulsion** two electric motors driven by six Westinghouse DC generators, driven by six Fairbanks-Morse, 10-cyl 2-cycle diesel engines, twin shafts, 10,000shp

## **USCGC Northwind**

(WAGB-282)

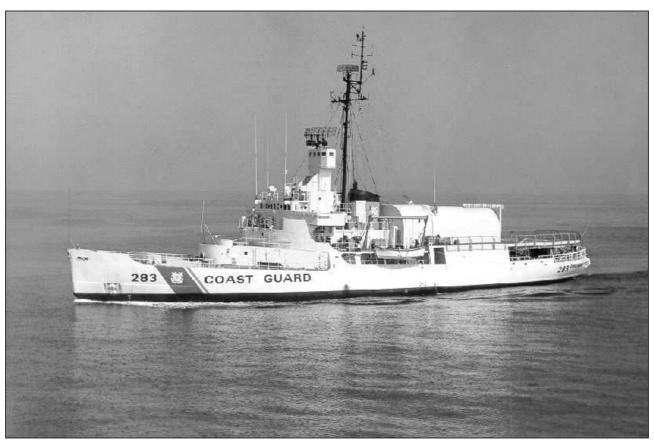
Decommissioned:



## **USCGS Burton Island**

(WAGB-283)

Decommissioned:







## **USCGC Edisto**

(WAGB-284)

Decommissioned: 15 November 1974



### **CUTTER HISTORY:**

Congress authorized the construction of *Edisto*, one of the world's most powerful icebreakers, as a U.S. Navy vessel on 17 December 1943. Two years later, on 15 May 1945, the Western Pipe and Steel Company laid the ship's keel at San Pedro, California. The ship, sponsored by Mrs. George B. Gelly, was launched on 29 May 1946. It was commissioned into the U.S. Navy on 20 March 1947 as the USS *Edisto*, AG-89, later to be reclassified as an AGB-2 on 28 January 1949.

She is named for an island lying at the mouth of a river of the same name about 20 miles south of Charleston, South Carolina. The island and the river, in turn, had gained their names from the Edisto Indians who inhabited the island and the surrounding area. Her outer hull plating was constructed with 1-5/8 inch thick high tensile steel. She had a double bottom above the waterline with the two "skins" being approximately 15 inches apart. Framing was closely spaced and the entire hull girder was designed for great strength. Her bow had the characteristic sloping forefoot that enabled her to ride up on heavy ice and break it with the weight of the vessel. Her stern was similarly shaped to facilitate breaking ice while backing down. The sides of the icebreaker were rounded, with marked tumble home, that enabled the ship to break free from ice by heeling from side to side. Such heeling was accomplished by shifting water rapidly from wing tanks on one side of the ship to the other. A total of 220 tons of water could be shifted from one side to the other in as little as 90 seconds, which induced a list of 10 degrees. Ballast could also be shifted rapidly between fore and aft tanks to change the trim of the ship.



On 11 April 1947 USS Edisto sailed for the east coast on a shake-down cruise. That summer, during a training cruise to Greenland, she crossed the Arctic Circle for the first of many times in her career. Upon her return to Boston, Edisto was assigned to Task Force 39 for the Second Antarctic Development Project. She sailed 1 November for a rendezvous via the Panama Canal with USS Burton Island (AG-88) at Samoa. Together, they ventured south, becoming the first ships to penetrate the pack ice east of the Ross Sea. While in the Antarctic on this deployment, Edisto trained sailors and tested cold weather equipment, as well as investigating installations and equipment left by Operation HIGHJUMP of the previous year. She also collected valuable scientific data concerning geographic, hydrographic, photographic, oceanographic, meteorological, and electromagnetic conditions in the south polar regions.

Upon her return to Boston on 31 March 1948, Edisto immediately began preparing for operations in the far north. During this summer deployment, her task force resupplied weather stations at Thule, Greenland, and on Ellesmere and Ellif Renghes Islands. The ships in this task force did reconnaissance to establish additional weather stations, trained men in cold weather operations, tested equipment, and collected a variety of data. Except for brief repairs in Boston for replacement of a broken propeller shaft, Edisto continued this grueling grind until 25 September 1948. Three months later, in company with USS Hoist, she successfully rescued the USS Whitewood, damaged by ice and grounded in a Greenland fjord at Narsak.

The next cruise of *Edisto* to the north polar regions was for purely exploratory purposes. Not even waiting for summer, she sailed out of Boston Harbor on 24 January 1949 to determine how much an icebreaker would be limited by the foul Arctic storms and lowest temperatures. She weathered extreme sub-zero conditions and returned to Boston on 25 March.

From 1949 until her transfer to the U.S. Coast Guard on 20 October 1965, *Edisto* continued her indispensable support to exploration in both Arctic and Antarctic regions. She supplied bases, reported ice packs and floes, took part in oceanographic, hydrographic, geological, coast and geodetic, and hydrophone surveys, and participated in Arctic convoy exercises. In 1949, for instance, she took part in Operation BLUEJAY, the construction of radar stations in the far north. The following year, on 6 August 1950, *Edisto* set a record for northern penetration by reaching latitude 82 degrees North while conducting oceanographic surveys. In 1952, the work she had begun in Operation BLUEJAY was completed.

While participating in Operation DEEPFREEZE I during the winter (Antarctic summer) of 1955-1956, *Edisto* penetrated unexplored areas in the Antarctic near Cape Hallett, leaving Edisto Bay and Edisto Acres penguin rookery named in her honor. After her return to Boston, the ship was again assigned to Arctic missions, aiding shipping in the Newfoundland and Labrador area for the remainder of 1956 and all of 1957. In December 1958, *Edisto* departed for Operation DEEPFREEZE IV. Her work in the Antarctic this time was in support of the International Geophysical Year. En route home, she stopped in Uruguay, which was



experiencing disastrous floods. The crew labored many long hours in flood relief work, thereby receiving the personal thanks of the president of Uruguay on their departure.

Her next Antarctic trip came during the winter (Antarctic summer) of 1960-1961 as a member of Operation DEEPFREEZE 61. While operating far south of New Zealand in an attempt to salvage a naval vessel that had broken loose from its moorings, *Edisto* encountered what was probably the worst storm of her career. With tons of ice loading her topside down, she staggered to regain stability at the end of each long, agonizing roll. Before the storm had blown itself out, she had lost most of her rigging and her starboard propeller.

As a unit of the task force for Operation DEEPFREEZE 63 in 1962-1963, she spent 131 consecutive days in the ice. During this time, her crew witnessed the breakup of Admiral Byrd's Little America III, built in 1940-1941. Instead of going south for the 1963-1964 season in the Antarctic, *Edisto* entered the Boston Naval Shipyard for an overhaul. Then, on 15 June 1964, she departed Boston for military resupply operations in the Arctic. While on this cruise, *Edisto* used Prince Christian Sound instead of rounding Cape Farwell, probably making her the first U.S. naval vessel to transit this sound since the USCGC *Northland* in 1941. Before returning to Boston in early October, she picked up some scientists in Iceland and proceeded to the waters between Greenland and Spitzbergen to carry out an oceanographic survey.

On 10 December 1964, *Edisto* departed for the Antarctic as a unit of the task force for Operation DEEPFREEZE 65 on an assignment unprecedented in icebreaker history. She had the responsibility for constructing the New Palmer Station for Marine Biological Studies on Anvers Island off the Antarctic Peninsula. No sooner had she accomplished this assignment and returned to Boston, than *Edisto* was ordered to sail on a polar rescue mission. Drifting south was the Ice Island *Arlis II*, with 20 scientists on board waiting to be evacuated before the island broke up underneath them. Departing Boston on 6 April 1965, after a stay of only five days, she battled some of the thickest and hardest ice ever encountered by an American icebreaker to moor alongside *Arlis II* and to effect the evacuation of the men and equipment.

During the summer of 1965, *Edisto* again sailed to the Arctic in support of the northern defense outposts and for oceanographic survey work. Before her return to Boston in early October, a message informed her that she would be the first of the U.S. Navy icebreakers

turned over to the U.S. Coast Guard under the transfer agreement signed between the Treasury and Navy departments. As *Edisto* sailed south, Coast Guard officers, who would command the vessel following the turnover, came on board.



On 20 October 1965, the ship became USCGC *Edisto*, when the icebreaker was decommissioned by the Navy, transferred, and immediately commissioned by the Coast Guard at Constitution Wharf, Coast Guard Base, Boston. The Coast Guard changed her hull number to WAGB-284. Her first mission as a Coast Guard icebreaker came the following month, when a vital undersea defense cable near Thule, Greenland, broke. Although she got underway on short notice and steamed far north to join the other Canadian and American icebreakers in the repair operation, *Edisto* arrived only to learn that the cable had already been repaired.

After her return in early December 1965, the vessel spent the entire winter in the Bethlehem Steel Shipyard, where she underwent major repairs and alterations. Part of the alterations consisted of installations of a new flight deck with a telescopic hanger to house two helicopters which she would carry. The summer of 1966 saw the *Edisto* deployed to the arctic waters off Greenland and Iceland to participate in "Arctic East" operations, which entailed the annual resupply of American bases in the Arctic and the advancement of polar sciences. As in the previous winter, *Edisto* was ordered on an unusual winter penetration into northern Baffin Bay. The vital undersea cable connecting the American far north defense outposts with the mainland of the United States had broken again. Reaching the break area on 12 December 1966, the icebreaker braved extreme cold, continual darkness, gale winds, and heavy icing until the break was located and repaired. For their exceptionally meritorious performance during this emergency, *Edisto* and her crew were presented with the Unit Commendation Award the same month.

In 1967, while in company with the *Eastwind*, the *Edisto* made an unsuccessful attempt to circumnavigate the Arctic, a feat that would have rivaled the 16th Century voyages around the world of Magellan and Drake and has yet to be accomplished by surface vessels of any nation. In 1968 and 1969, the *Edisto* participated in Antarctic polar deployments in support of operations DEEPFREEZE 69 and DEEPFREEZE 70, respectively.

In 1971, as in every summer since she became a Coast Guard icebreaker, *Edisto* took part in "Arctic East" operations. In December of that year, she was temporarily transferred to Milwaukee to take part in a test, along with USCGC *Mackinaw*, of icebreaking operations designed to extend the length of the shipping season on the Great Lakes and the St. Lawrence

Seaway System. In the fall of that year, however, she conducted icebreaking operations off Greenland in concert with the Navy oceanographic research ship USNS *Mizar*. She was sent there from the Great Lakes after the cutter originally assigned the duty, USCGC *Southwind*, suffered an engine casualty, although she remained off Greenland. The *Edisto* arrived in the Arctic on 30 September and began escorting the *Mizar* into the icepack for oceanographic research. At one point, the two were as far as 40 miles into the heavy ice, some of which was a thick as six feet. In early October, one of the *Mizar's* engines went out, so the *Edisto* took her in tow, intending to take her out of the ice. On 6 October, *Mizar* slipped out of its tow with the *Edisto* and collided with the icebreaker, doing minor damage to *Edisto's* starboard side superstructure. Later, *Edisto*, due to the heavy ice, lost her starboard propeller and damaged her rudder and starboard shaft.

Although *Mizar* repaired her engine, the ship could not break ice, so the need for a fully operational icebreaker still existed. Coast Guard officials, through the U.S. State Department, arranged for the use of Canada's 315-foot icebreaker *John A. McDonald*, in case the *Southwind* was unable to free *Mizar*. *McDonald* sailed from Baffin Bay around the southern tip of Greenland and berthed at Reyjkavik, Iceland, and awaited a call for assistance. But *Edisto* managed to work her way through the open leads in the ice while *Southwind*, with only four of her six engines running was able to reach the *Mizar*, still icebound where it had struck the *Edisto*, and freed her. *Southwind* then took *Edisto* in tow, and made for Reyjkavik. They arrived on 23 October and the *Edisto's* crew made temporary repairs to her rudder for the long tow back to the U.S. They departed and headed for the U.S., but the repairs did not hold and they once again returned to Iceland. On 2 November they once again set sail.

Coast Guard Headquarters decided that *Southwind* would take *Edisto's* place on the Great Lakes for that season. They were under pressure to get a second icebreaker there before the Welland Canal closed on 15 December. To lessen the impact on the crews, headquarters also determined that the ships would simply exchange their entire crews. *Southwind's* men would take over during the repairs on *Edisto* while *Edisto's* crew would join *Southwind* once she made her new home port of Milwaukee in preparation for the winter season.

On 10 November the cutter *Morgenthau* rendezvoused with the icebreakers and prepared to take over the tow but severe weather prevented a switch. By 13 November, however, the weather moderated and she took over the tow and set course for Baltimore. *Southwind* then made her way to the Great Lakes. On 24 November she rendezvoused with USCG *Chilula* approximately 35 miles west of the Nantucket Lightship after first dodging a storm by sailing towards Nova Scotia. *Chilula* took over the tow and headed to Hampton Roads and then to the Coast Guard Yard, where the two cutters arrived safely on 30 November.

After repairs were finished she was homeported in Baltimore and used for icebreaking. Her final cruise was a three-phase "Arctic East" voyage that commenced from Baltimore on 7 July 1974. She first sailed in support of the International Ice Patrol, studying some 35 icebergs of varying sizes and shapes off the west coast of Greenland and the east coast of Baffin Island, Canada. Her crew took aerial, surface, and sonar measurements of bergs to be used by marine scientists to determine their rates of deterioration and drift. Interestingly, as a tribute to their wives, some of the crew named the icebergs under study after their loved ones. During the voyage north, the *Edisto* assisted the USNS *Private John R. Towle*, a cargo ship that sustained ice damage to her hull off Hamilton Inlet, Labrador.

Edisto then sailed for Edinburgh, Scotland, arriving 12 August 1974. She departed Edinburgh on 17 August and headed for the Icelandic Sea for the second phase of her cruise, where she worked in conjunction with the Icelandic government. Her crew took 40 "Nansen Casts" in the Icelandic Sea and then, on 2 September, made Reykjavik. Edisto departed Reykjavik on 5 September and sailed for the Labrador Sea for the third phase of her cruise. Arriving off Cape Farewell on 8 September, her crew took 52 "STD Casts" in the Labrador Sea and along the coast of Labrador. On 14 September she finished the third phase and began her return journey to Baltimore, arriving there on 24 September.

She was decommissioned at Baltimore on 15 November 1974 and then transferred to the General Service Administration (GSA). GSA sold her on 29 September 1977 to Boston Metals Company of Baltimore which then sold her to the Union Minerals Company of Carey, New Jersey. They dismantled her for scrap in the Baltimore Shipyard.





LISS HISSEM (DER-400)
FLEET POST OFFICE - NEW YORK, N. Y.

KØCSJ/MM

OPERATION DEEP FREEZE ''1964''



HISSEM AROUND THE WORLD

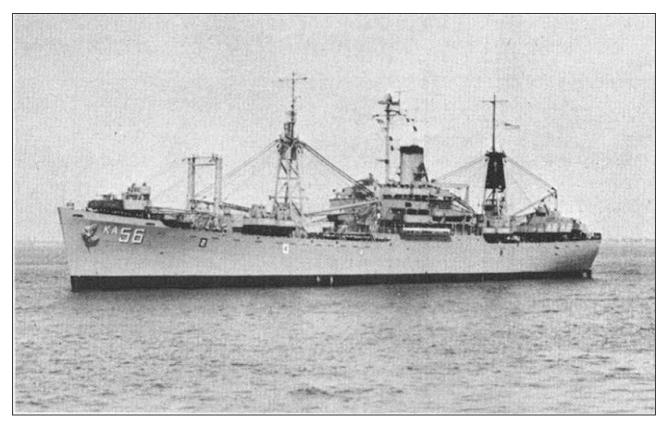


### **Supply Ship**

### **USS Arneb**

(AKA-56)

Decommissioned: 12 August 1971



The brightest star in the southern constellation Lepus with a magnitude of 2.7 and a diameter nine times that of the Sun. It is 900 light years from the Earth.

(AKA-56: dp. 14,200; l. 459'2"; b. 63';:dr. 26'4"; s. 16.5 k.; cpl. 429; a. 1 5", 8 40mm., 12 20 mm.; cl. *Andromeda*; T. *C2-s-B1*)

Arneb (AKA-56)¹ was laid down under a Maritime Commission contract (MC hull 1159) as Mischief by the Moore Drydock Co., at Oakland, Calif; launched on 6 July 1943; sponsored by Mrs. Carol J.- Palmer, the daughter of a plant engineer; acquired by the Navy on '16 November and towed to Portland, Oreg., where she was converted to an attack cargo ship by the Willamette Iron and Steel Co.; and commissioned on 28 April 1944, Comdr. Howard R. Shaw in command.

Outfitted and loaded with stores for her first cruise by 10 May . 1944, the attack cargo ship steamed to San Diego for shakedown training which was made unexpectedly interesting by her rescue of the three-man crew of a Navy Grumman TBF that had had to "ditch". During June .and July, 'the ship practiced amphibious maneuvers using Army troops to make landings on San Clemente Island.

On 22 July, *Arneb* sailed for the Hawaiian Islands, and arrived at Pearl Harbor on 30 July. After debarking passengers, the ship continued on to Guadalcanal for training. On 29 August, the ship got underway with three transport divisions to rehearse - landings for the invasion of the Palau Islands. On 8 September, she sortied with Transport Division (TransDiv) 32, and headed for Angaur Island.

The cargo ship arrived on 17 September and lowered all of her boats off the west side of the island to feign landings in that quarter in an' effort to 'divert Japanese defensive forces. The next day, she actually landed troops and equipment of the 306th Engineers. *Arneb* remained in the Palaus. until 23 September, when she began carrying cargo and troops to Ulithi, Hollandia, and the Admiralty Islands.

At Manus, she fueled and loaded supplies for training and rehearsal exercises for her next operation, the liberation of the-Philippines. She got underway on 12 October, arrived off Leyte on the 20th, and, despite enemy shelling, immediately began discharging, her cargo and troops. *Artieb\_* next steamed to Guam to take on more cargo and troops for 'delivery at Leyte on 23 and 24' November.

Following her second voyage to Leyte, the ship steamed to Hollandia to onload provisions, cargo, and personnel as well as to receive minor repairs. *Arneb* departed , Hollandia on 27 December to participate in the invasion of Luzon', 'anchoring in Lingayen Gulf on 9 January 1945. Since she was not carrying nigh priority .cargo, her boats helped transports in landing troops and cargo on D-day before they began unloading her own cargo on the. following day. Although enemy air and small craft activity was intense, *Arneb* only lost one LCVP.'She returned to Leyte on 15 January and ferried troops and supplies to Luzon for the assault on the area around La Paz on the 29th. During the next few weeks, the vessel took on fuel, cargo, and other supplies in Leyte Gulf in preparation for her next major task, the invasion of the Ryukyus.



On 27 March, Arneb left Leyte Gulf, arrived off Okinawa on 1 April, and unloaded supplies despite enemy air attacks. She retired to Guam and was ordered to proceed on 10 April via Pearl Harbor to the United States. The ship arrived in San Pedro on 3 May and was given a 15-day availability. Then, after loading ammunition and other supplies, she sailed for Pearl Harbor on 8 June. She returned to the west coast before the

end of the month and moved into drydock at the Moore Dry Dock Co. On 20 July, the cargo ship was once again headed for the Hawaiian Islands on the first of two voyages made before the end of August. During the ship's second run to Oahu, Japan capitulated, ending the fighting in the Pacific.

While in Pearl Harbor on 28 August, *Arneb* received orders to load cargo and sail for the China coast to support the occupation forces. She ferried cargo and troops between Okinawa and China until 26 October, when she headed for San Francisco. Diverted to Seattle en route, she arrived there on 13 November 1945. The ship was then assigned to the Naval Transport Service and made cargo runs between the west coast and the Far East until December 1947. Placed in reserve at the Philadelphia Naval Shipyard on 16 March 1948, *Arneb* was modified to prepare her for polar operations. Equipped to become Rear Admiral Richard E. Byrd's flagship for a planned Antarctic cruise, she was recommissioned on 19 March 1949. Following shakedown training out of Guantanamo Bay in April and May, *Arneb* cruised in the North Atlantic from June to October to test the effectiveness of the cold weather equipment installed. After her return to Norfolk on 1 November, the ship trained in Chesapeake Bay.

Arneb, needed to supplement the 6th Fleet in the Mediterranean in early 1950, returned to the east coast in May, and underwent a three-month availability. She resumed normal

training and support services for the Atlantic Fleet when the Korean War compelled postponement of the Antarctic expedition. Nevertheless, the ship utilized her cold weather gear from March to December 1951 when she rendered logistic support to naval activities in England and North Africa, including an amphibious training operation in Greenland.

Until March 1955, *Arneb* cruised primarily in the warm waters of the West Indies. From January to April 1952, the transport ferried cargo between islands in the West Indies. After a yard overhaul, she participated in the lengthy, large-scale NATO Operation "Mainbrace" in the North Atlantic and Mediterranean. After her return to the east coast in February 1953, *Arneb* made six cruises to the West Indies, before beginning preparations for an extended operation at Antarctica.

As a preliminary trial before her cruise southward, *Arneb* participated in an operation in waters north of the Arctic Circle along the east coast of Baffin Island in August and September and then returned to Norfolk for final outfitting. On 14 November, *Arneb* got underway as flagship of Operation "Deep Freeze I" that would allow her to claim the distinction of crossing both the Arctic and Antarctic Circles in the course of one year. She transited the Panama Canal on 20 November, stopped at New Zealand and Franklin Island before arriving at Kainan Bay and McMurdo Sound, where she stayed from 27 December 1955 to 30 January 1956. She returned to the United States via the Indian Ocean, the Mediterranean Sea, and the Atlantic Ocean, completing her circumnavigation of the globe upon her arrival at Norfolk on 5 May 1956.

After undergoing an overhaul from May to August and refresher training at Guantanamo Bay, *Arneb* was prepared for Operation "Deep Freeze II." She departed Norfolk in November; stopped at Wellington, New Zealand; entered the ice field on 16 December; and rendezvoused with the Coast Guard icebreaker *Northwind* (WAGB-282). *Arneb* experienced no difficulty in following the icebreaker during the first day of movement through the frozen sea; but, on the 18th, a quarter-inch crack—apparently caused by contact with ice during the previous two days— appeared in her hull running some 31 inches above and below the waterline. *Arneb's* men repaired the damage, enabling the ship to make slow but steady progress toward McMurdo Sound, where the ships arrived on Christmas Eve.

Upon completion of their work there, the two ships returned to Cape Hallett, where *Arneb* moored to the ice while *Northwind* proceeded into Moubray Bay to clear an unloading site. On the last day of 1956, the ice pack into which *Arneb* was nosed began to move and soon surrounded the ship with solid ice pressing against her hull. The framing on both sides of the ship began to buckle, rivets popped, seams split, and beams ripped. Frigid water and ice began flooding into several cargo holds at a combined rate of 1200 gallons per minute. Damage control parties worked doggedly to contain the inrush of water, but the men were only able to stay in the water for a few minutes at a time. Nevertheless, by using mattresses, steel plates, and shoring timbers, they managed to reduce the flow of water until the pumps could lower the water level.

On 3 January 1957, the ice pack had loosened; and enabled *Northwind* to lead the battered *Arneb* into port. After unloading the cargo, the crew repaired the cracks and split seams by listing the ship alternately to port and to starboard. Although having suffered a bent rudder post and a broken propeller blade, *Arneb* was able to continue the operation.

No further mishaps occurred until 30 January when *Arneb*, the icebreaker *Glacier* (AGB-4), and USNS *Greenville Victory* (T-AK-237) attempted to push through the icepack off Knox Coast. A large chunk of ice broke off and brushed *Arneb's* port side, ripping a gash 12 feet long and one-half inch wide and once again flooding the holds as well as buckling plates, popping rivets, and opening seams. The experienced damage control parties used the same techniques to patch the new wounds in her hull. The ships then got underway again, with *Glacier* towing *Arneb*. Early the next morning, they arrived at Knox Coast and once again, the damage was repaired. *Arneb* left the ice fields on 17 February and steamed to Sydney, Australia, without incident. There, she went into drydock and, after minimum repairs, got underway on 28 February 1957

for the continental United States.



In spite of her troubles with ice damage, *Arneb* made five more cruises to Antarctica to resupply the research stations and to transport hundreds of scientists involved in research on the frozen continent. During "Deep Freeze 61" she even delivered the foundation of a nuclear power plant to McMurdo Sound. Following "Deep Freeze 63," *Arneb* was modified to enable her to return to normal duty with the Amphibious Force of the Atlantic Fleet. She underwent intensive training in amphibious operations through participation in major Caribbean exercises. In 1965, she transported much-needed supplies to American forces operating in the Caribbean during the crisis in the Dominican Republic.

Arneb began a routine of operations in Atlantic and Caribbean waters and practiced with Navy and Marine Corps personnel in actual landings at Onslow Beach, N.C., and Vieques Island, Puerto Rico. During one such exercise, "LANTFLEX 66," 94 Atlantic Fleet ships took part in a three-week opposed approach, landing, and departure from Vieques under the surveillance of a Soviet intelligence-gathering trawler.

Between 8 and 22 February 1967, *Arneb* was in drydock at the Bethlehem Steel Corp., in Baltimore. She then moved to the Berkeley yards of the Norfolk Shipbuilding and Drydock Corp. for the remainder of her overhaul. With the overhaul completed and following refresher training during the summer of 1967, *Arneb* resumed her standard operating schedule of local Atlantic coast operations.

Arneb deployed to the Mediterranean in January 1968 and spent five months there as part of the 6th Fleet's Amphibious Ready Force. In August 1968, the cargo ship became the first amphibious ship and the first AKA qualified for spacecraft recovery duty, and she was on station

as the secondary recovery vehicle for the *Apollo 7* flight in October. On 1 January 1969, *Arneb* was reclassified LKA-56.

Arneb made three more Mediterranean cruises in 1969 and 1970 and participated in numerous Caribbean exercises before the Navy decided to end her naval service. Rather than inactivate and preserve the worn old ship, the Board of Inspection and Survey for the Atlantic Fleet recommended that Arneb be disposed of by sale. She was decommissioned at Norfolk on 12 August 1971, and her name was struck from the Navy list the following day. She was sold on 1 March 1973 to Andy International Inc. of Houston, Texas, and scrapped.

*Arneb* received four battle stars for her World War II service and a Meritorious Unit Commendation for the recovery mission for *Apollo 7*.

### Andromeda Class Amphibious Cargo Ship:

- Laid down as **SS** *Mischief*, a Maritime Commission type (C2-S-B1) hull, under Maritime Commission contract (MC hull 1159), at Moore Drydock Co., Oakland, CA.
- Launched, 6 July 1943
- Acquired by the US Navy, 16 November 1943
- Towed to Portland OR. for conversion to an Attack Cargo Ship (AKA)
- Commissioned USS Arneb (AKA-56), 28 April 1944, at Willamette Iron and Steel Co.
   Portland OR., Cdr. Howard R. Shaw in command
- Decommissioned, 16 March 1948, at Philadelphia, PA.
- Laid up in the Atlantic Reserve Fleet
- Recommissioned, 19 March 1949
- Redesignated (LKA-56), 1 January 1969
- Decommissioned, 12 August 1971 at Norfolk, VA.
- Struck from the Naval Register, 13 August 1971
- Returned to the Maritime Administration for disposal
- Final Disposition, sold, 1 March 1973, for scrapping to Andy International, Houston, TX.
- Arneb received four battle stars for her World War II service and a Meritorious Unit Commendation for the recovery mission for Apollo 7

### **Specifications:**

Displacement 6,556 t.(lt) 13,900 t.(fl)
Length 459' 2"
Beam 63'
Draft 26' 4"
Speed 16 kts.
Complement 247
Cargo Capacity 4,450 dwt
Propulsion steam turbine, single shaft, 6,000shp

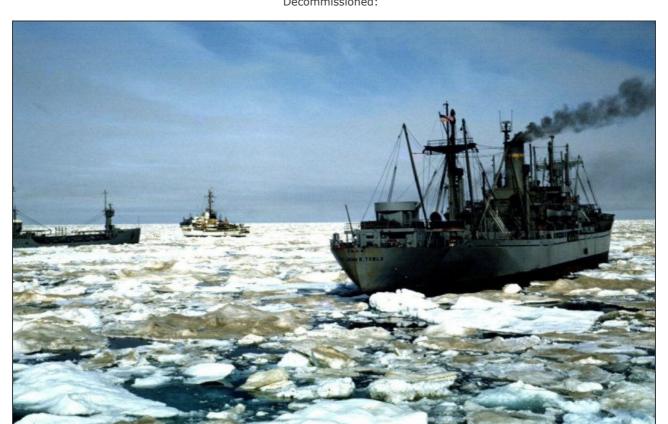
### **Armament**

one single 5"/38 dual purpose gun mount four twin 40mm AA gun mounts eighteen single 20mm AA gun mounts **Boats** 8 LCMs 1 LCP(L) 15 LCVPs

## **USNS Jhon R. Towle**

(TAK-240)

Decommissioned:











**Motor Vessel** 

## **American Tern**













Research Vessel

## Laurence M. Gould

### The Icebreacking research ship



The "Laurence M. Gould" is named in honour of Laurence Mckinley Gould the polar explorer and geologist who was second in command during Admiral Richard E. Byrd's first Antarctic expedition during 1929-1930.

The vessel is a sister ship to the <u>"Nathaniel B. Palmer"</u>. It was launched in 1998 and has ice-breaking capability while preforming mainly a research and supply role. The photo above shows the "Laurence M. Gould" off the US Palmer Antarctic Station.







### Research Vessel

## **Nathaniel Brown Palmer**

The Icebreacking research ship





Supply Ship

Green Wave









Polar Icebreak

## **Abel J**



#### **Research Vessel**

## Melville



RV *Melville* is a multipurpose research ship that has served oceanographic scientists well for more than 30 years. It has sailed hundreds of thousands of miles in almost every ocean, carrying out scientific missions involving geology, geophysics, physical oceanography, marine biology, and chemical oceanography.

Melville is owned by the US Navy and operated by the Scripps Institution of Oceanography (SIO), a graduate division of the University of California, San Diego. The ship, which is 278 feet (85 meters) long, is named after Henry Wallace Melville, a pioneer Arctic explorer and an innovative US Navy engineer who served in the early 1900s.

RV *Melville* was built in 1969 for SIO by the US Navy as part of a focused plan to improve the academic oceanographic fleet. It is the sister ship of the RV *Knorr* of the Woods Hole Oceanographic Institution. RV *Melville* was overhauled about 10 years ago and lengthened by about 30 feet to add laboratory space, berthing, endurance, and working area to the fantail for large-scale oceanographic sampling expeditions. Three Z drives were added to increase maneuverability and station-keeping ability. A multibeam echo sounding system was also installed to gather high-resolution bathymetry data.

*Melville* carries a crew of 23 people and 38 scientists and has an endurance of about 60 days at sea. It normally cruises at a speed of 12 knots.







### **Support Ship**

## General Artigas (ROU-Ø4)

Ex. "Freiburg" of German Navy



Support ship and Control ROU "Gral. Artigas"; ex- "Freiburg" of German Navy. This ship was deactivated in December of 2003 with all its vital systems working, having put in state of conservation with special lubricants the diesel engines of generating propulsion and moto. Its last entrance to dock was made in 2002. The National Navy from the beginning of the present quinquennium fixed between its objectives, the incorporation of units floating, with the particularitity that the selected ships arranged, among others, capacity to operate with

ship-borne helicopter.



The designation of this ship to the Division Escort of the Forces of Sea, will allow to operate the multiple possibilities that the binomial shiphelicopter offers, and of fulfilling greater effectiveness inherent tasks to the Mission of the Navy, between which it stands out the Support to Operations of the Fleet, Search and Rescue in the Sea and the Control of Territorial waters. This last one visualized the future facing near, which

it will impose to the Navy responsibilities in the fulfillment of the tasks of protection of the marine resources of the Country, in a zone in the Atlantic front that could reach the 350 miles of the line bases. The ship that made its first Test of Sea of the 31 of March to 1° of April, is characterized for being of low consumption and great autonomy, capacity of supplying of ships in the sea, operation of ship-borne helicopter, reduced crew, maneuver of fuel transference and lubricants, and potential cargo capacity of troops, vehicles and sanitary support.

### **Ship specificationses**

Maxima length:118,75 msMaxima sleeve:13,23 msOpenwork:4,35 msDisplacement:3,984 ton.Propulsion:Axes: 2

Total power: 5120 KW

Helices: controlable step

**Terminal velocity:** 15 knots **Economic:** 12 knots **Dowry:** 14 officials

45 to subalter to us

**Load:** 700 m3 combustible marine diesel

engine

200 m3 combustible aviation 250 ton loads in general **Consumption:** 175 lts. /hora





Rescue Ship

# Vanguardia (ROU-26)



Name:	VANGUARD
Type:	2
Class:	PIAST 570
The numeral International:	CWBP
<u>Date</u> <u>Launching:</u>	28 of December of 1976
<u>Date</u> <u>Adornment</u> <u>with flags:</u>	18 of December of 1991
Maximum length:	72.62m
Maximum sleeve:	12.03m
Prop:	8.55m
Total displacement:	1872,2 TN
Maximum openwork:	4.23m





### **WEB REFERENCE LINKS:**

- WAP Web Site (<u>http://www.ddxc.net/wap/default.php</u>)
- http://www.histarmar.com.ar/index.htm
- Cronicas del Irizar <a href="http://www.cronicasdelirizar.com.ar/index.htm">http://www.cronicasdelirizar.com.ar/index.htm</a>
- http://www.irizar.org
- http://www.colto.org/Vessels/vess Lince.htm
- GM0HCQ Web Site <a href="http://www.gm0hcg.com/">http://www.gm0hcg.com/</a>
- Australian Government Antarctic Division <a href="http://www.aad.gov.au/">http://www.aad.gov.au/</a>
- http://www.asci-ipy.de/2007.html
- http://www.newzeal.com/steve
- http://www.bergenships.com
- http://www.btinternet.com/~warship/Today/castle.htm
- Instituto Oceanografico de la Armada del Ecuador http://www.inocar.mil.ec
- http://www.noorderlicht.nu/
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