



ITALIAN UPDATE 2016

CNR "OFFICE FOR PLANNING"

Central Management for Planning and Infrastructure

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RV MINERVA UNO

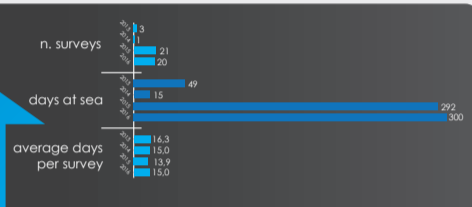
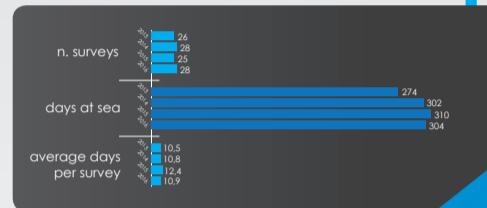


In early 2015 RV Minerva Uno was operational again after the end of the enhancement and improvement projects. Ever since, the vessel has carried out 21 surveys for C.N.R. collecting almost 300 days at sea. The wide range of activities performed by C.N.R. researchers onboard during the year has tested the new capabilities and performances of the vessel with excellent results and to the satisfaction of the involved people. As a platform, RV Minerva Uno features have enhanced in a significant way: fuel consumption has reduced importantly while operational speed has slightly improved; thanks to the new thrusters manoeuvrability and stability have further improved; comfort for people onboard is much better and so on. All of the new scientific equipments have been used in operational situations which is the only way to understand if they satisfy the researchers' needs. They all performed very well and accordingly to their features. One of the most important achievements of the year has been the operational deployment of the SUPER MOHAWK 3000 m R.O.V. that has proven to fulfill expectations.

MAIN TECHNICAL FEATURES

Category: Regional
Gross Register Tonnage (GT): 624
Length overall (m): 46.6
Breadth (m): 9.0
Depth (m): 4.5
Draft (m): 4.6
Max speed (kn): 13.0
Service speed (kn): 10.8
Main engine (kW): 2x746
Endurance: 30 days
Crew: 10 people
Scientific personnel: 12 + 1 people
Built year: 2003 (upgrading 2010 and 2014)

Authors: De Lauro M. and Grazzini A.



RV G. DALLAPORTA



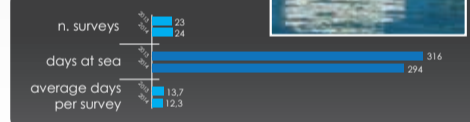
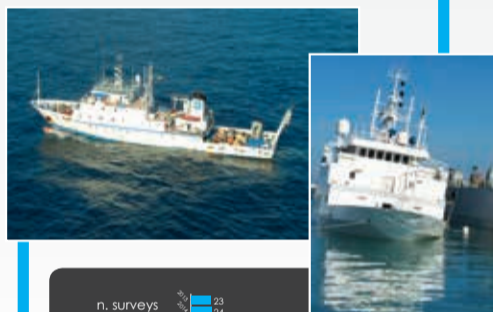
MAIN TECHNICAL FEATURES

Category: Regional
Gross Register Tonnage (GT): 285
Length overall (m): 35.3
Breadth (m): 7.7
Draft (m): 4.1
Service speed (kn): 11.5
Main engine (kW): 810
Crew: 8 people
Scientific personnel: 12 people
Built year: 2001

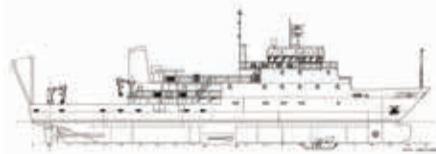
The stern of the RV Dallaporta is particularly suitable for surveys that require fishing operations, furthermore the boat is equipped with fishing cables, winches for the nets and echosounder transducers. The RV fits with oceanographic purposes thanks to a dedicated lateral winch allowing the deployment of rosette, CTD or other instruments. An UWTV system was designed by CNR-ISMAR of Ancona to be used on this RV, thus the stern has been adapted to accommodate an additional electronic winch for a coaxial towing cable reinforced with Kevlar. The latter is used to tow on the sea bottom a sledge housing of various instruments (eg. videocamera, lamps, multiparameter probes, bottom unit, recovery system), provide power and transmit the collected information to the surface unit located in the dry lab on board. The UWTV system has been developed for the quantification of some demersal fishery resources, but it can actually be helpful for various research purposes.

Author: Martinelli M.

RV URANIA



On August 25th 2015 while RV Urania was in a floating dry dock in Livorno (Italy), a severe accident happened. For reasons still under investigation by the Italian Judicial Authorities and that are to be clarified by an official inquiry, the vessel suddenly heeled portside. In the accident one member of the crew died and others were injured with different seriousness.



This is how RV Urania should have looked after the end of interventions. At the time of the accident, many tasks were already fulfilled, among them:

- Lengthening of the hull
- Four new cabins for scientists
- Scientific winches inspection
- New DP1 system
- Steering gear adjustments to DP1
- New more powerful bow thruster
- New stern thruster
- Three newer and more powerful generators
- Power-plant noise insulation

Authors: De Lauro M. and Grazzini A.

RV LITUS



INSTRUMENTAL SETUP

- Multibeam System Kongsberg EM 2040D-C
- Positioning system Kongsberg Seapath 300 with DGPS correction
- Motion sensor Kongsberg Seatex MRU 5
- Valeport Mini SVS and AML Oceanographic SV Profiler

Author: Trincardi F.

RV TECNOPESCA II



MAIN TECHNICAL FEATURES

Gross Register Tonnage (GT): 25.0
Length overall (m): 16.25
Breadth (m): 4.80
Draft (m): 1.20
Max service speed (kn): 21
Main engine (Hp): 450x2
Electrical supply: 8 kW - 220 volts Diesel
Fuel tanks: 2,000 lt
Water tank: 1,000 lt
Crew: 2 people
Scientific personnel: 8 people
Built year: 1989

Equipment:

- Marine crane having a maximum load of 3,000 kg at 1 m of heel and 650 kg at 6.25 m;
- Hydraulic lifting winch (maximum load: 1,000 kg);
- Positioning system DGPS Trimble SPS855;
- Multibeam Echosounder Kongsberg EM 3002 Dual heads

Coastal navigation up to 20 nautical miles from the coast or 2 hours of navigation from the closest port. Usually employed for seabed mapping with acoustic equipments and ROV, sampling of water column, sediments, benthic communities and fish assemblages.

Author: Spagnolo A.

ACQUA ALTA OCEANOGRAPHIC TOWER



MAIN TECHNICAL FEATURES

Location (GPS): 45° 18' 51.29" N - 12° 30' 29.69" E
Height: actual 12.55 m s.l.m.m. (future 14.55 m s.l.m.m.)
Decks surface (within the main pillars): 35 m²
Installation depth: 16 m
Distance from the coast: about 8 nautical miles
Housing facilities: 5 people in complete autonomy for about 1 month
Research connections: LTER - Long Term Ecological Research Network

Equipment: Real time transmission and communication capabilities; ICT infrastructures; Biological laboratories; Housing facilities; Electrical supply by photovoltaic panels and wind turbines connected to lithium batteries and diesel generators.

Recorded time-series: meteo (air temperature and pressure, wind speed, gust and direction, RH, precipitation); ocean (pCO₂, temperature, salinity, dissolved Oxygen, fluorescence, turbidity, current speed and direction, sea level height, wave height, period and direction, images)

Authors: Bastianini M., Pomaro A. and Sclavo M.

MAIN TECHNICAL FEATURES

Overall length: 15 m
Beam: 4,3 m
Mean draught: 1,2 m
Max speed: 35 knots
Cruise speed: 28 knots
Propulsion: 2 Caterpillar 570 Hp engines
Electrical supply: 8 kW - 220 V diesel generator
Fuel tanks: 3000 l
Water reservoirs: 1000 l
Electrical bow-prop to maintain bearings during samplings
Mobile wing system to trim attitude
Fully air conditioned

Authors: Genovese L., Sprovieri M., Raffa F. and Buffa G.

RV LUIGI SANZO



The coastal monitoring boat remembers with its name the first director of the Istituto Talassografico in Messina, Prof. Luigi Sanzo, a worldwide known ichthyologist.