



International Research Ship Operators (IRSO 2022)

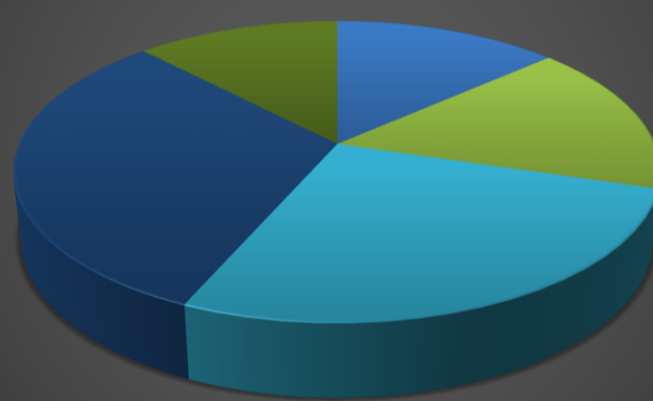
Honolulu, Hawaii, October 24th – 28th, 2022
 Marine Institute, Research Vessel Operations

R.V. Celtic Explorer

The Celtic Explorer is a multi-purpose research vessel, designed for fisheries acoustic research, oceanographic, hydrographic and geological investigations as well as buoy/deep water mooring and ROV Operations. At 65.5m in length, the vessel can accommodate 35 personnel, including 20-22 scientists.



R.V. Celtic Explorer 2021 Operations 313 Days @ Sea



■ ROV Operations ■ Hydrography & Geology ■ Fisheries Acoustic
 ■ Fisheries Demersal ■ Oceanography

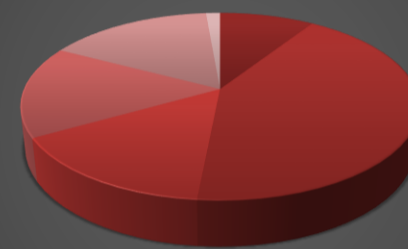
Figure 1. Survey type vs. days at sea Celtic Explorer 2021

R.V. Celtic Voyager

The Celtic Voyager, at 31.4m in length, is the smaller of our research vessels. It had an extremely busy 2021 – the final year of the vessel working from January through to December.



R.V. Celtic Voyager 2021 Operations 295 Days @ Sea



■ Environmental & Oceanography ■ Hydrography & Geology
 ■ Student Training ■ Marine Biology
 ■ Nephrops UWTV ■ Instrumentation Trials

Figure 2. Survey type vs. days at sea Celtic Voyager 2021



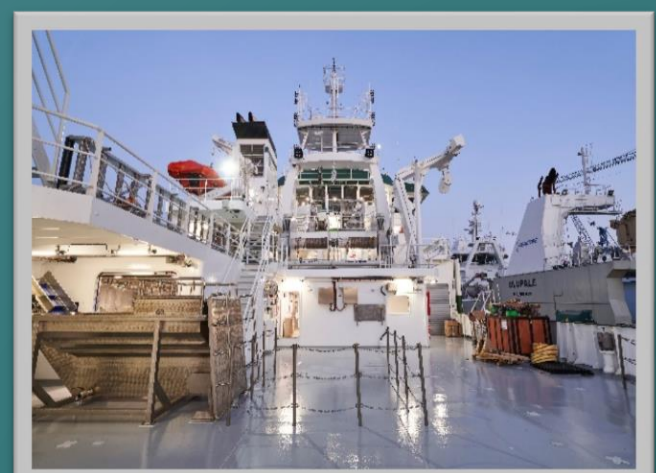
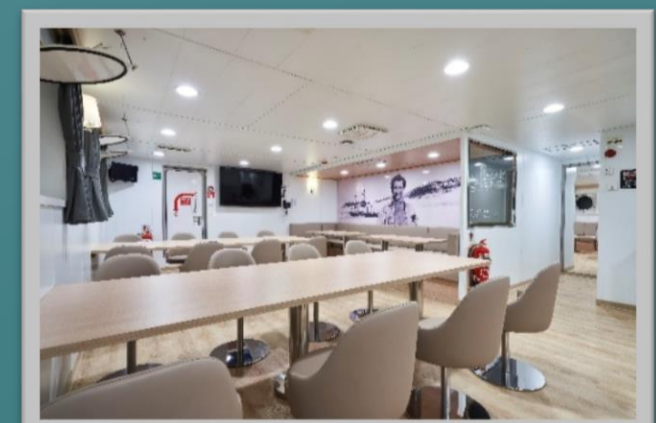
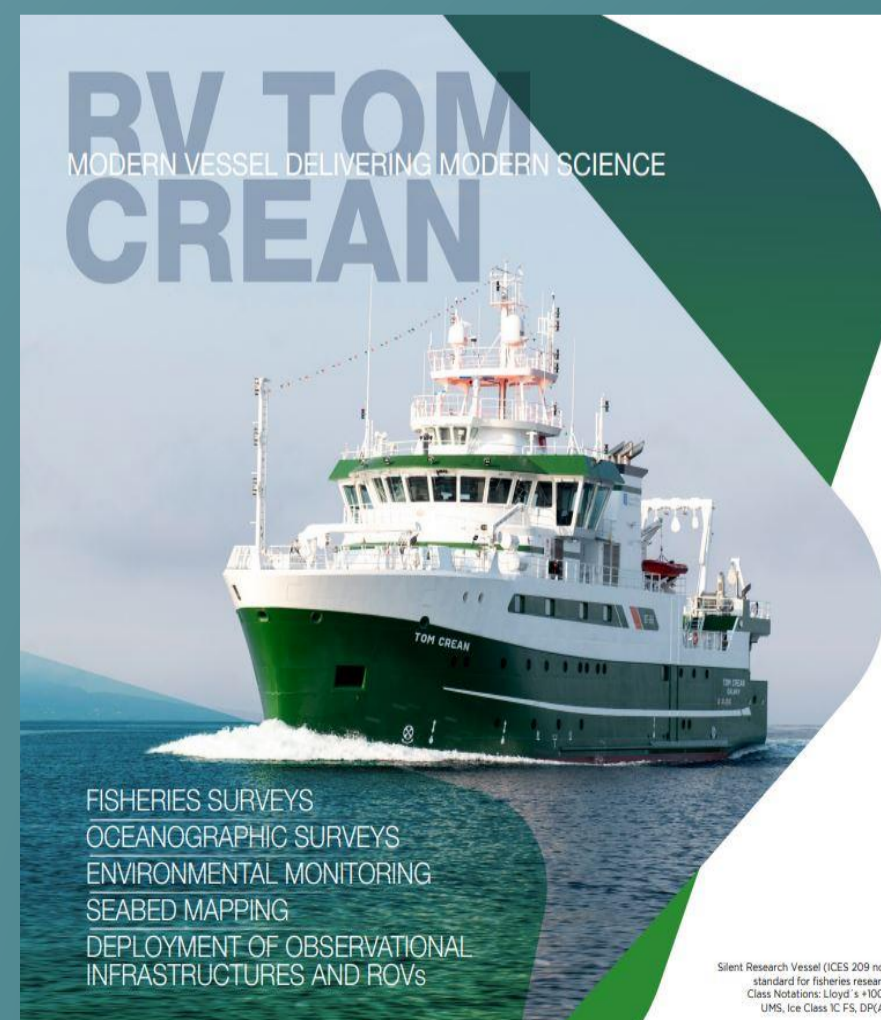
The 2021 *Nephrops norvegicus* UWTV survey science team & crew, in Cork, after transiting home from the Bay of Biscay.

R.V. Tom Crean

The RV *Tom Crean*, a 52.8m multi-purpose research vessel, replaced the R.V. *Celtic Voyager* in July 2022. The vessel was designed by Skipsteknisk AS of Norway and built by Astilleros Armon, Vigo, Spain.

VESSEL OVERVIEW

Vessel Specifications	Power
Length Overall: 52.8m	Power Generation: 2 x 1350kw 1 x 400kw
Length PP: 48m	Main Propulsion Motor: 2000kw INDAR
Beam: 14m	Bow Thruster: 780kw Schottle SPJ 132 RD
Draft: 5.2m	Stern Tunnel thruster: 400kw Schottle
Endurance	Imo Tier III compliant
21 Days	DP1 Dynamic Positioning
8000 nautical miles	3 x 20ft Containers



2021 Celtic Explorer Highlights

- The Marine Institute Ocean Climate Section survey took place over the Porcupine Bank & Rockall Trough. 196% of the original cruise objectives achieved. High quality oceanographic data acquired over 44 stations, two successful ARGO float deployments & a glider deployment.
- The 'Advanced Mapping of Complex Marine Structures' survey conducted ROV & AUV dives off coastal Donegal. University of Limerick's ROV *Étaín* and Scottish Association of Marine Sciences AUV *Freya* were deployed. > 40 hours of in-water ROV time. 140 lines of multibeam over 5 shipwreck survey sites acquired and successfully trialled a live broadcast from the vessel and the ROV.



- The PORO-CLIM (Deep Structure of Porcupine Ridge and Rockall Plateau Margins) survey acquired 800km of seismic data over the Rockall Plateau & Porcupine. 47 ocean bottom seismometer deployments and recoveries took place, along with high quality multibeam acquisition.