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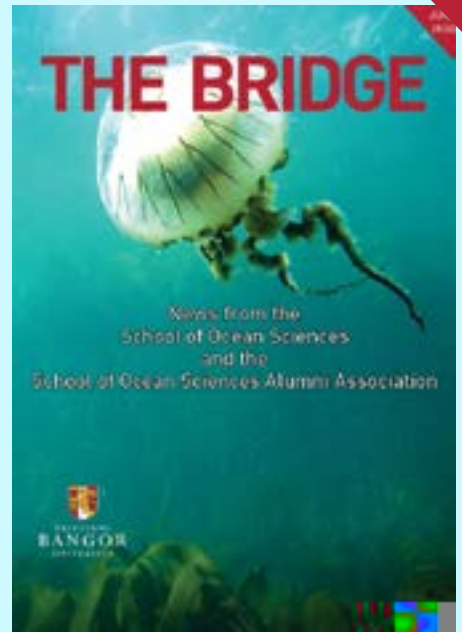
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CONTENTS

- 3
- 5
- 6
- 9
- 9
- 12
- 17
- 23
- 24
- 41
- 43
- 44

THE BRIDGE June 2020



Tom Rippeth, Editor

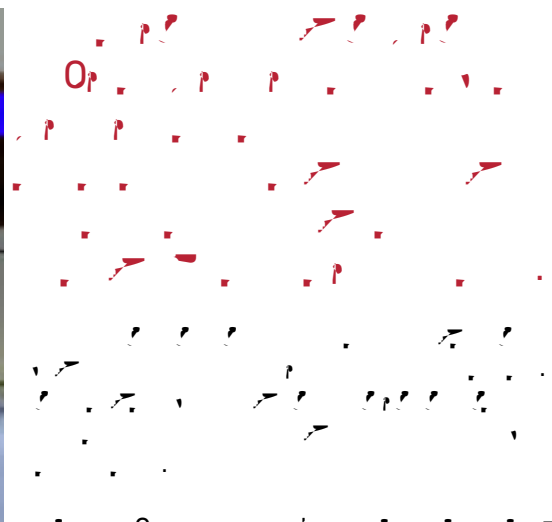
2020 OPEN DAYS

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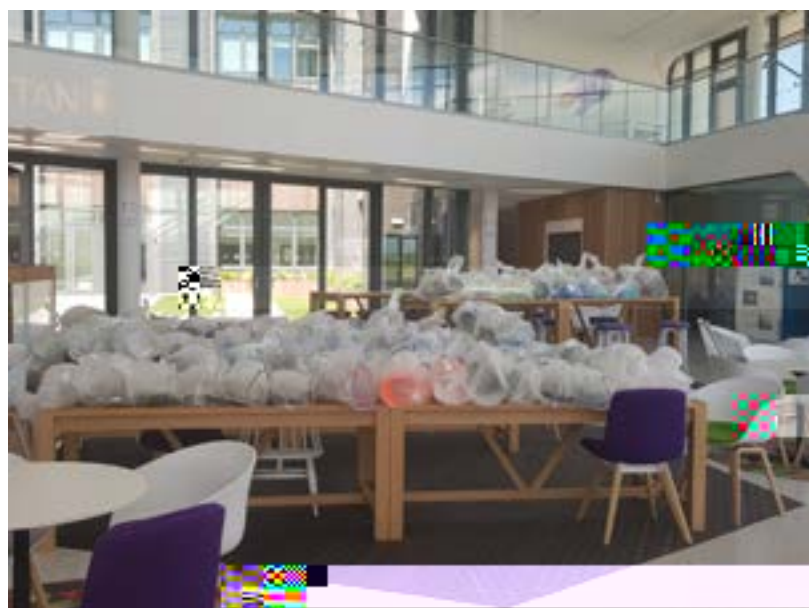
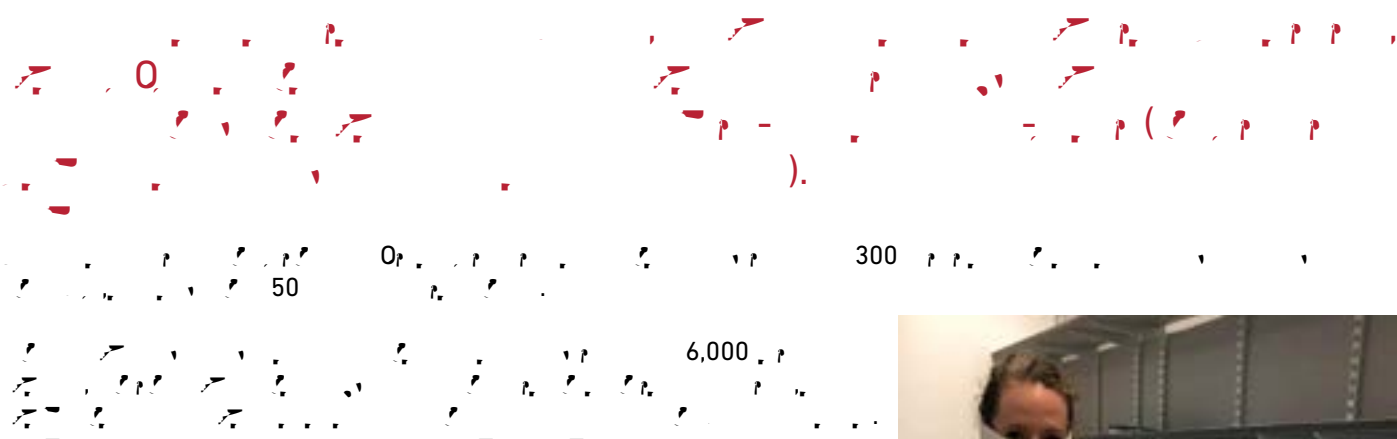


MAKING A DIFFERENCE IN THE CURRENT CRISIS

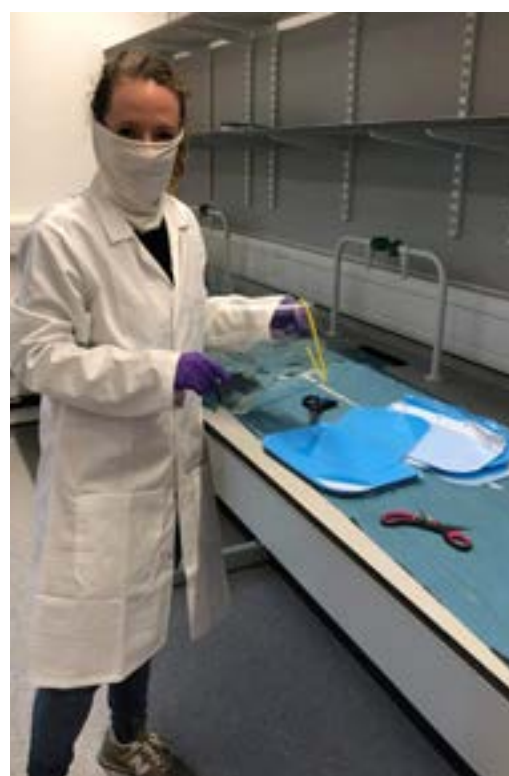
Ocean Science research to improve prediction of Covid-19 hotspots



Ocean Sciences staff and students help effort to provide personal protect equipment for frontline workers

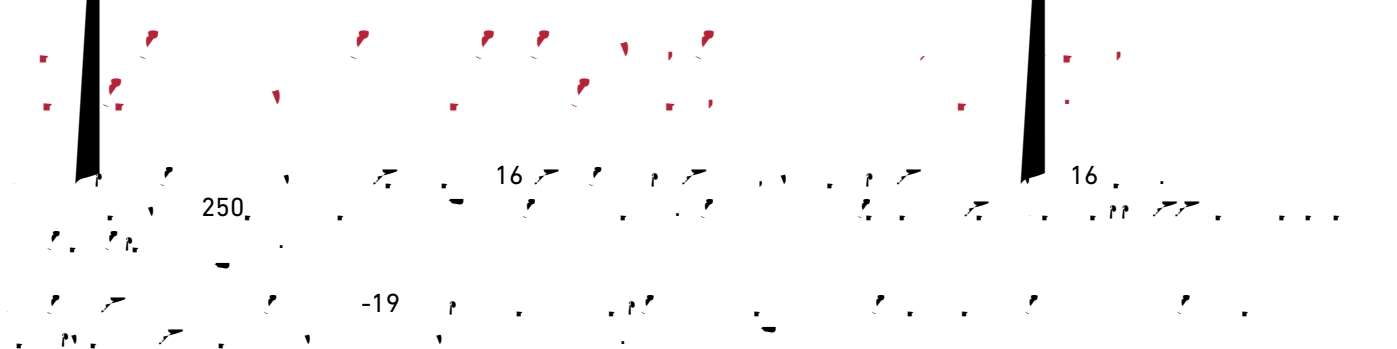


M-Sparc Science Park



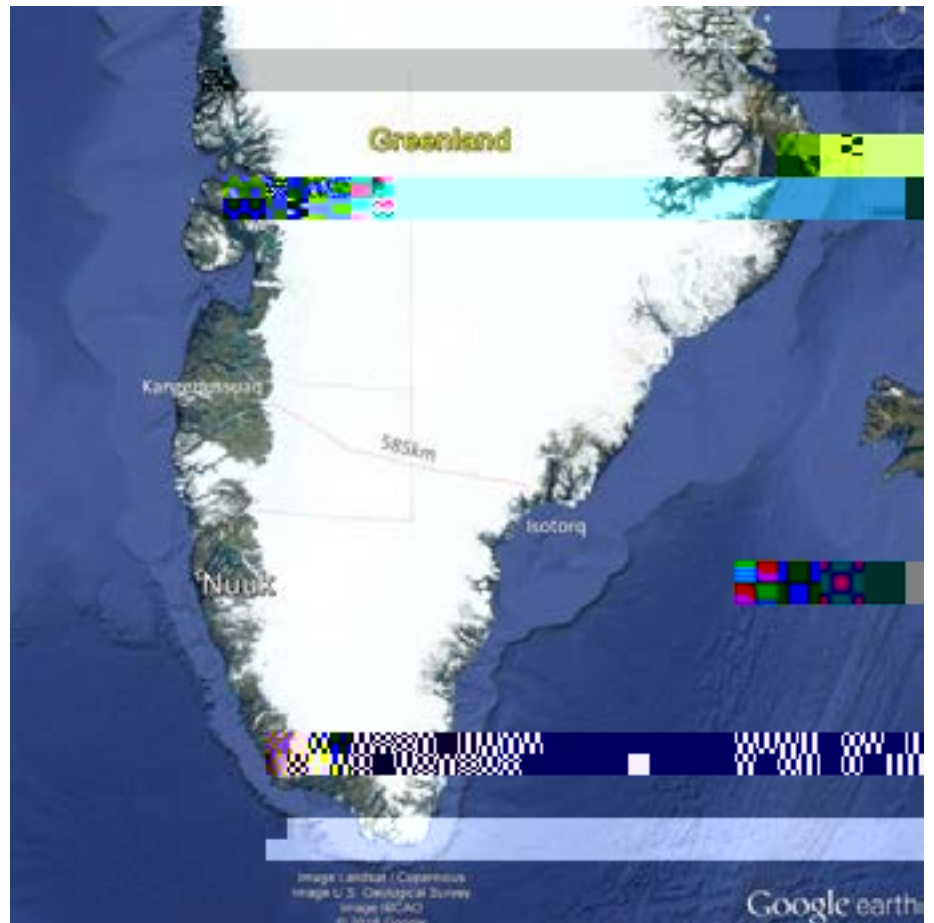
Susan Allender of the School of Ocean Sciences constructing protective face masks.

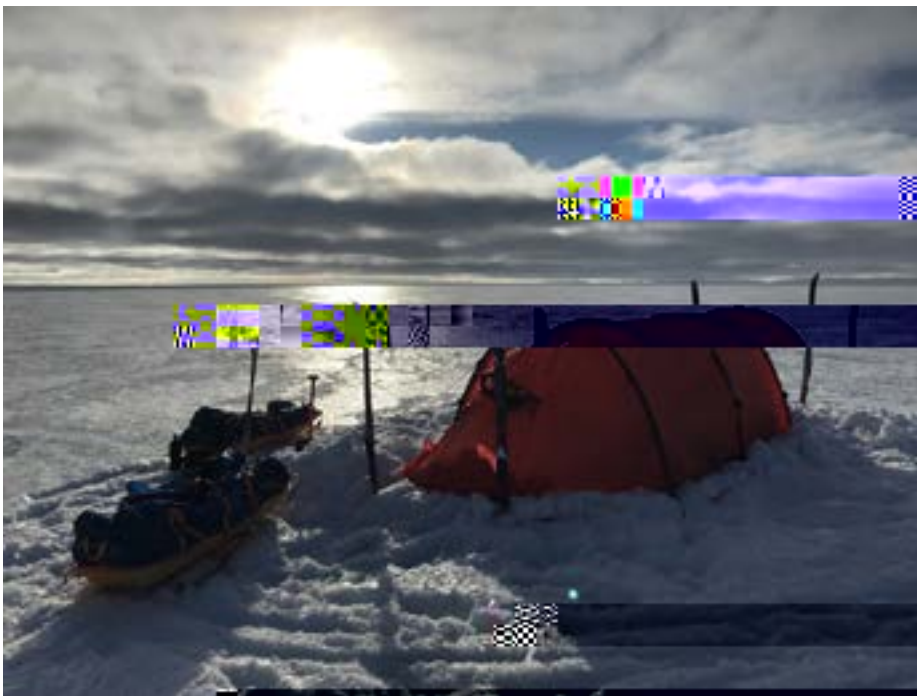
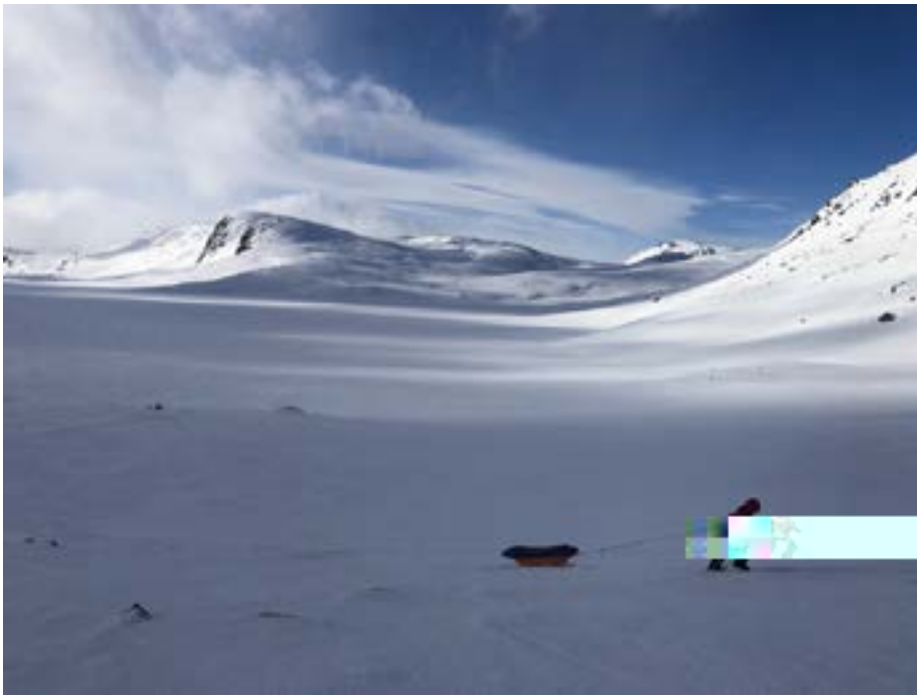
University Sports Hall becomes a field hospital



FOLLOWING IN THE FOOTSTEPS OF NANSEN

– the Greenland Crossing Expedition





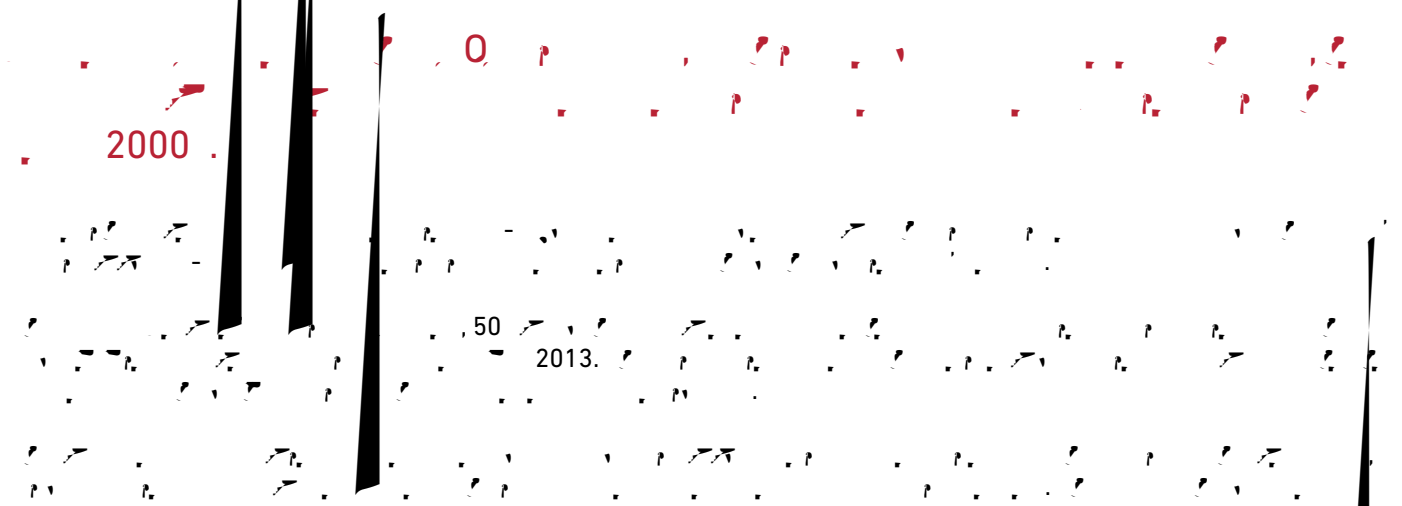
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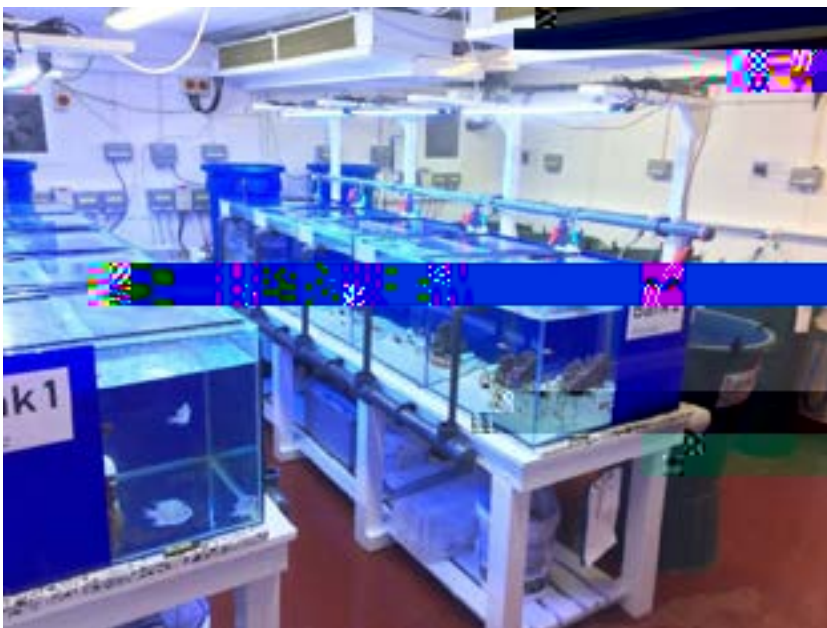
Mangroves and blue carbon



Development of tools to assist the development of sustainable fisheries



The School of Ocean Sciences is also home to the only marine ornamental fish research hatchery in the UK. It has been developed as part of the SustainAble Aquariums Project (SNAP); a collaborative research and development project between The Deep, Merlin Entertainments Ltd (SEA LIFE), the Zoological Society of London (ZSL) and the Centre for Applied Marine Sciences. This unique facility is run by Dr Tom Galley and Dr Nick Jones..



INTRODUCTIONS, PROMOTIONS AND AWARDS

1. Introduction
2. Promotions
3. Awards

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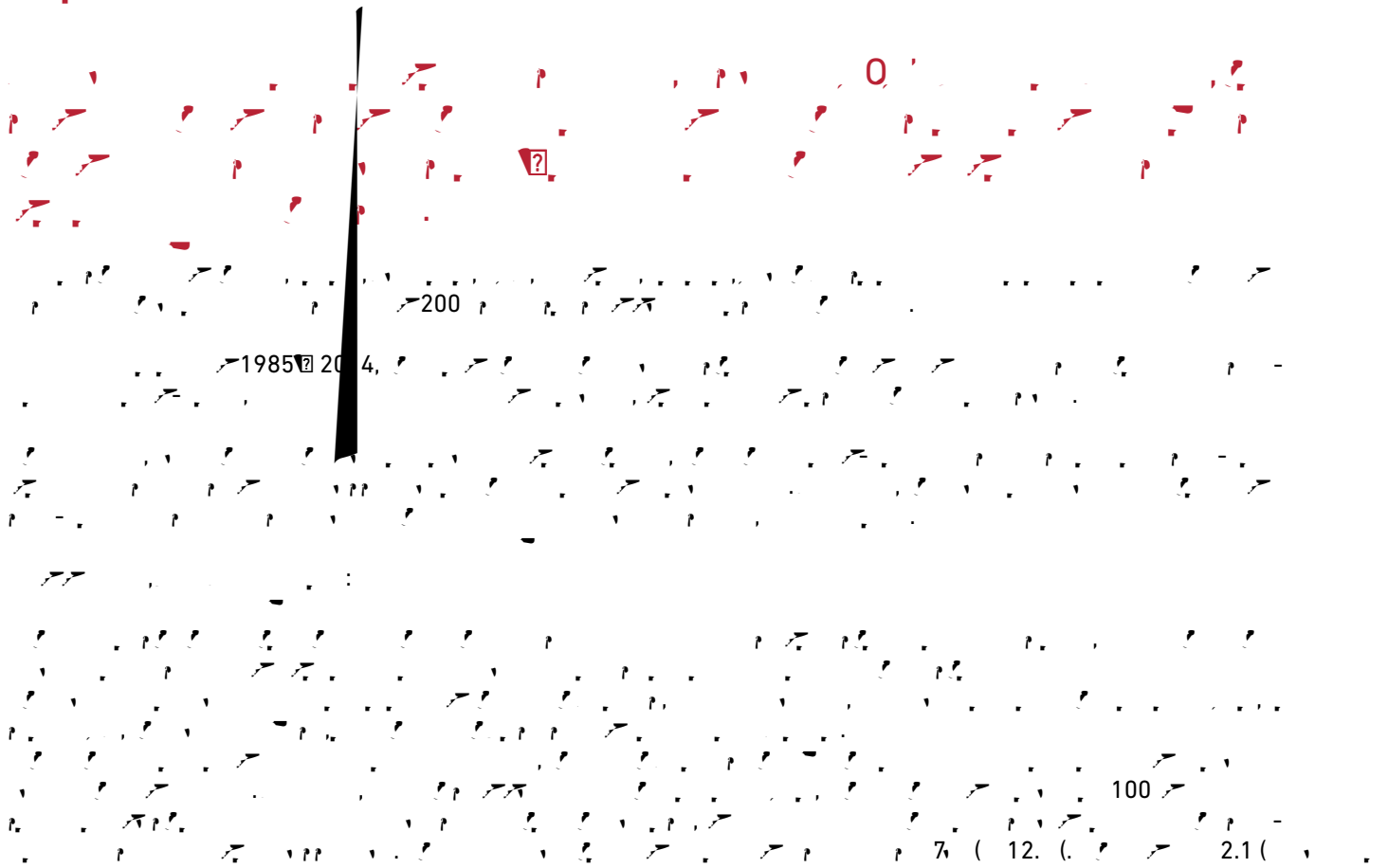
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Ocean Sciences Successes in this year's Student Led Teaching Awards



SOS RESEARCH HIGHLIGHTS

Scientists complete largest global assessment of ocean warming impacts



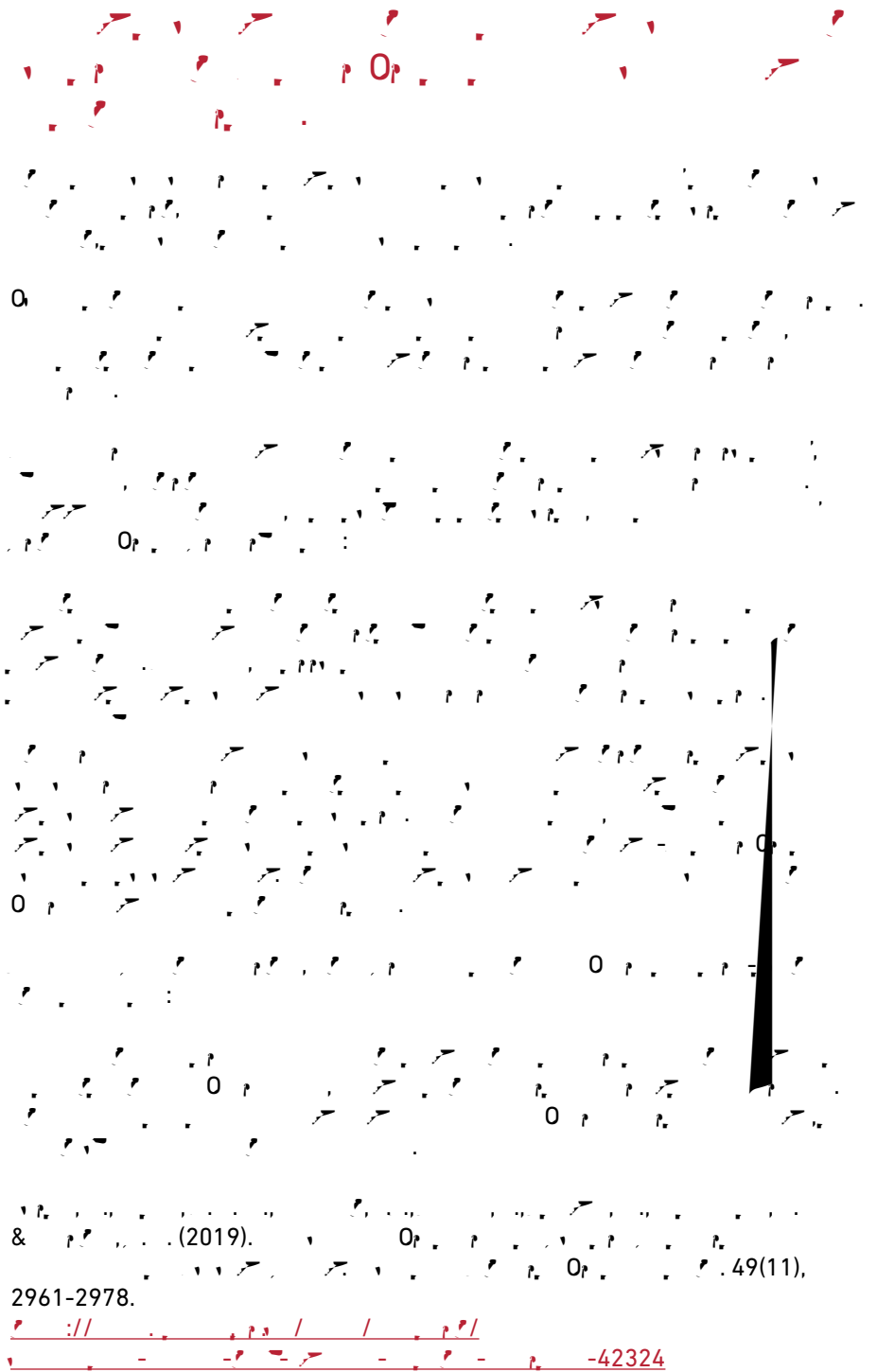
Underwater Gliders help improve weather forecasts



An underwater turbulence glider.
Copyright: Rockland Scientific



Wind rows illustrated in this seascape
looking towards Penmaenmawr



Use of LED lights substantially reduce the number of unwanted fish in trawl nets

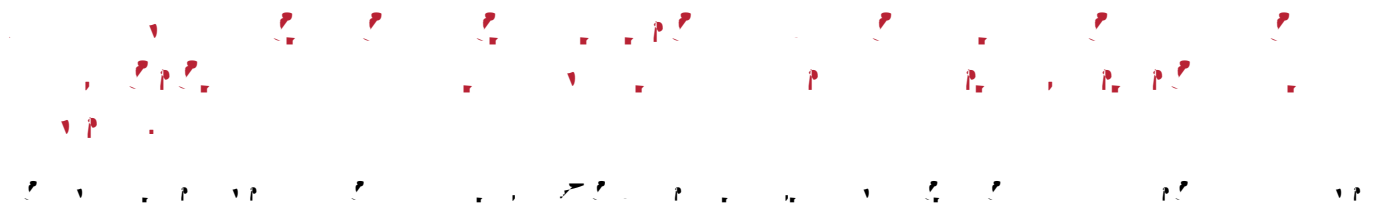


Figure 1. The number of unwanted fish in trawl nets under different light conditions. The number of unwanted fish was significantly lower in the LED light + blue light + red light condition compared to the other conditions (p < 0.05).

The use of LED lights in trawl nets has been shown to significantly reduce the number of unwanted fish. This is likely due to the fact that LED lights are more targeted and efficient than traditional lights, allowing for a more precise selection of fish. The addition of blue and red light to the LED light further reduces the number of unwanted fish, suggesting that these colors may be particularly effective in attracting or repelling unwanted species. This reduction in unwanted fish is a significant benefit for trawling operations, as it can lead to higher yields of the desired fish and a reduction in bycatch. The use of LED lights is also more energy-efficient and longer-lasting than traditional lights, making it a more sustainable option for trawling operations. Overall, the use of LED lights in trawl nets is a promising technology that can help to improve the efficiency and sustainability of trawling operations.

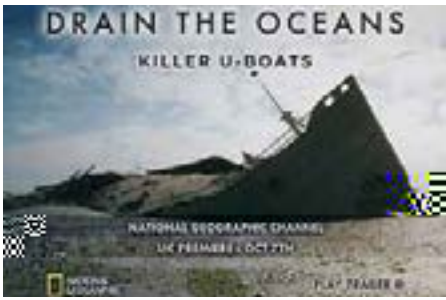
Figure 2. The number of unwanted fish in trawl nets under different light conditions. The number of unwanted fish was significantly lower in the LED light + blue light + red light condition compared to the other conditions (p < 0.05).

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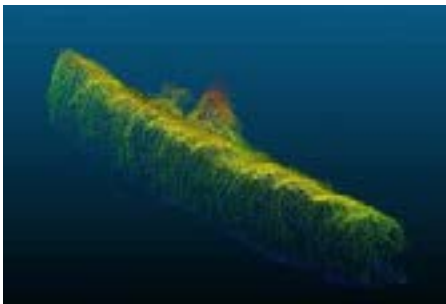
Figure 3. The number of unwanted fish in trawl nets under different light conditions. The number of unwanted fish was significantly lower in the LED light + blue light + red light condition compared to the other conditions (p < 0.05).

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University's U-Boat research featured in "Drain the Oceans"

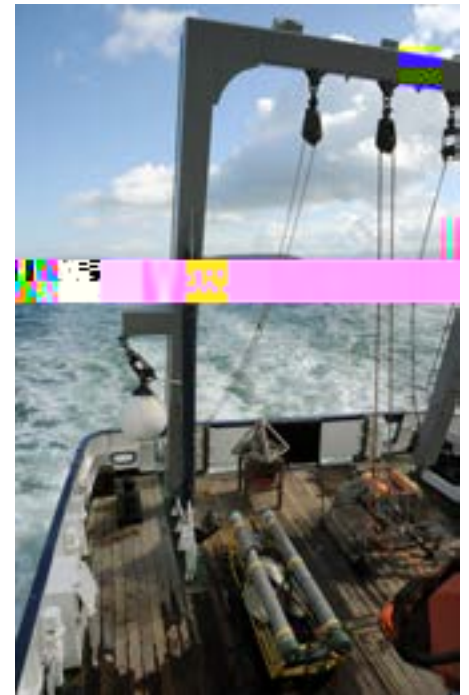


Operation U-boat, the hunt for the U-boat, and the hunt for the U-boat, 1914-18.



A new image of U-87 which was damaged and sunk on Christmas Day 1917

Operation U-boat, the hunt for the U-boat, and the hunt for the U-boat, 1914-18.



Operation U-boat, the hunt for the U-boat, and the hunt for the U-boat, 1914-18.

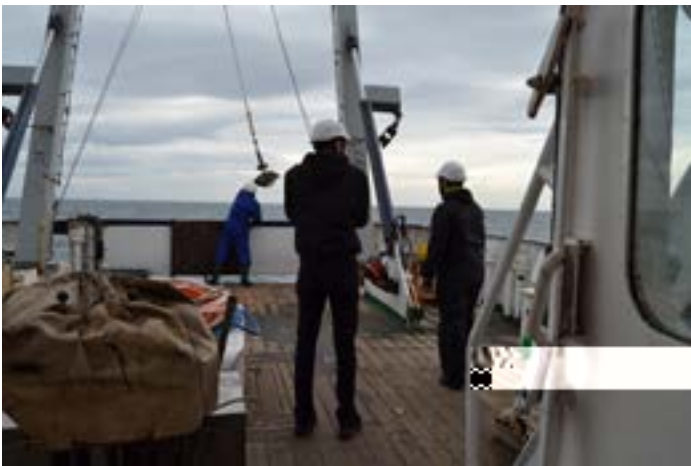
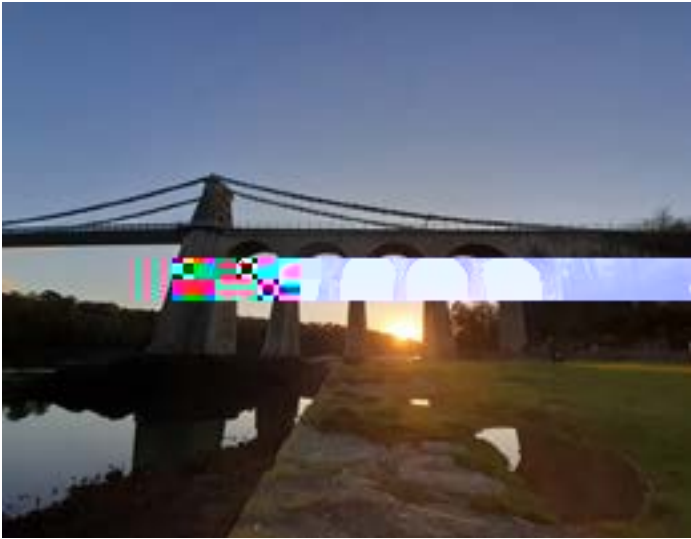
Operation U-boat, the hunt for the U-boat, and the hunt for the U-boat, 1914-18.

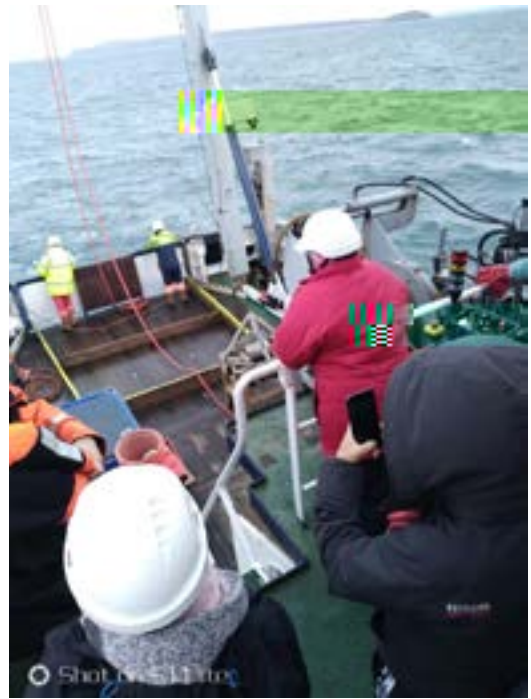
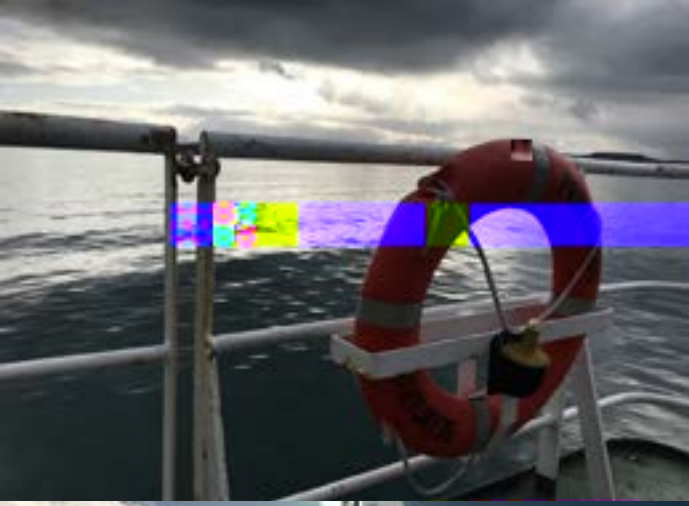
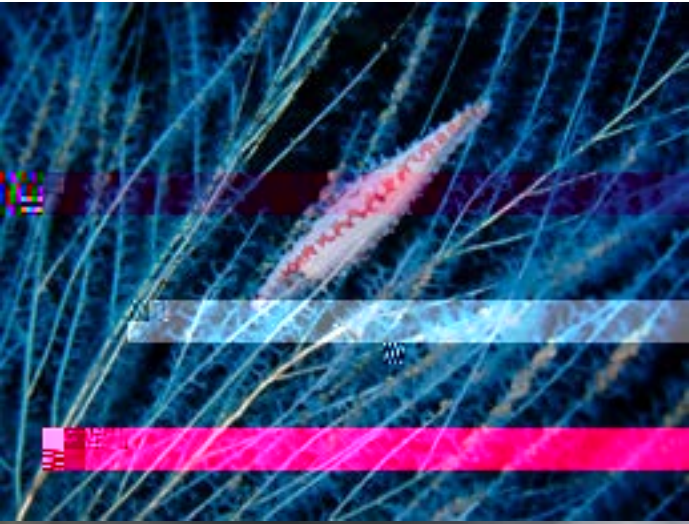
Operation U-boat, the hunt for the U-boat, and the hunt for the U-boat, 1914-18.

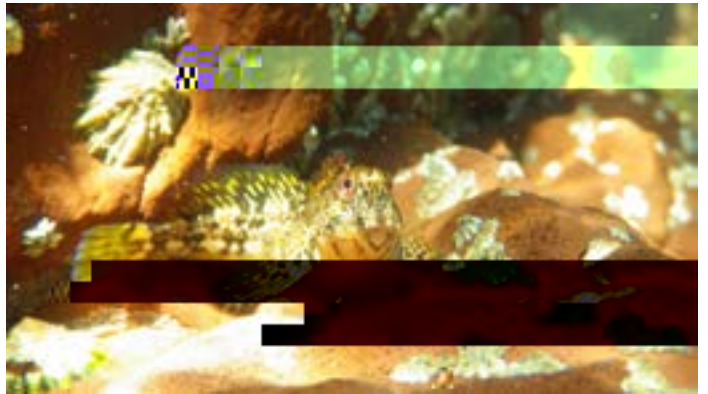
Operation U-boat, the hunt for the U-boat, and the hunt for the U-boat, 1914-18.

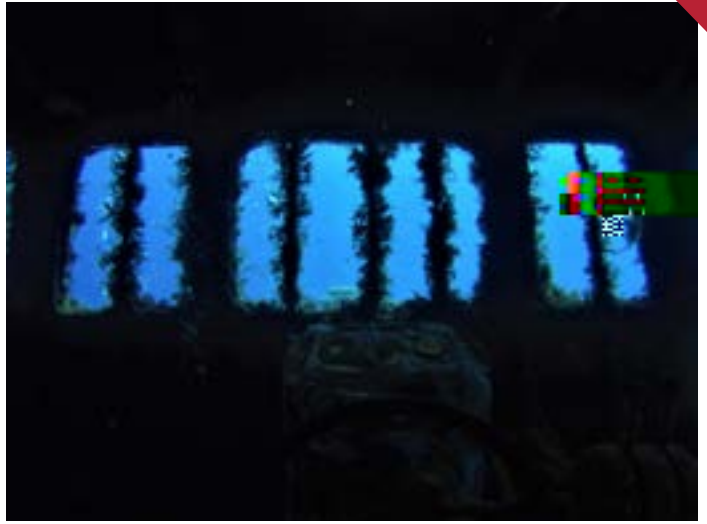
Research highlights from elsewhere in the

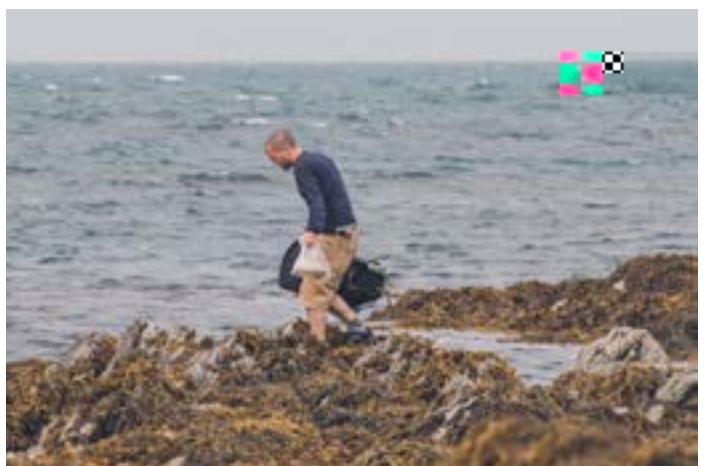
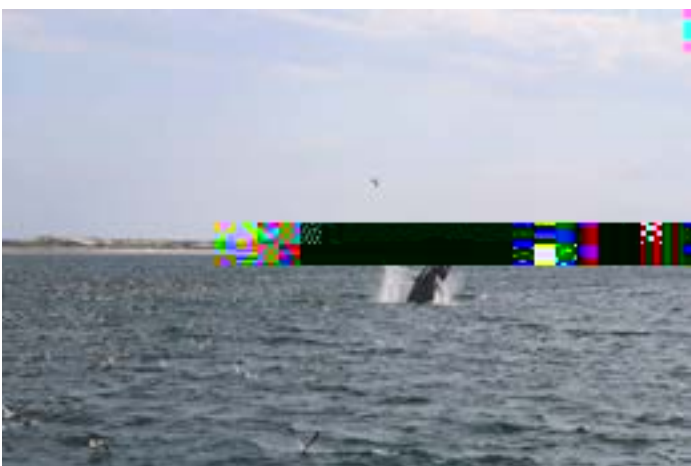
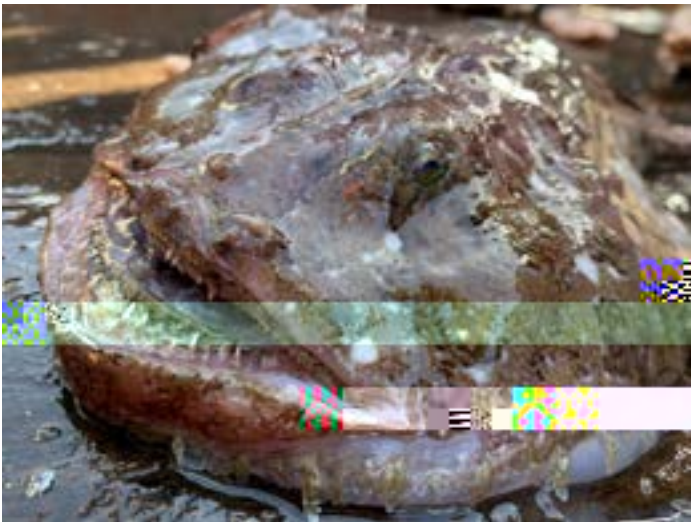
COLLEGE OF ENVIRONMENTAL SCIENCES AND ENGINEERING















Celebrating over 50 years of *Prince Madog* science

1968 1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020

Figure 6 The water column structure running west–north–west from the mouth of the River Mersey (left-hand side of section) to the north of Anglesey and across the western Irish Sea front to north of Lambay Island (see Figure 5). The three sections are **(a)** temperature (°C), **(b)** salinity (p.s.u.), and **(c)** σ_t (kg m^{-3}). Liverpool Bay, the 4°W front and the Irish Sea front are labelled for purposes of this article. (Reproduced from Rippeth et al., 2001; © 2001 American Meteorological Society (AMS).)

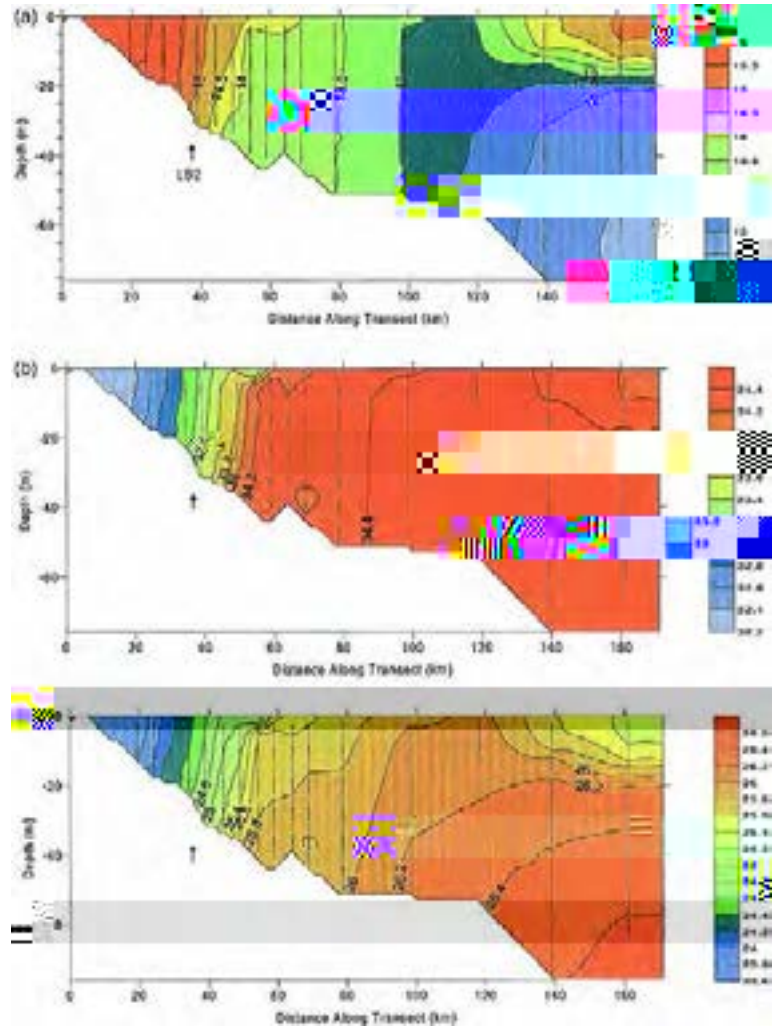
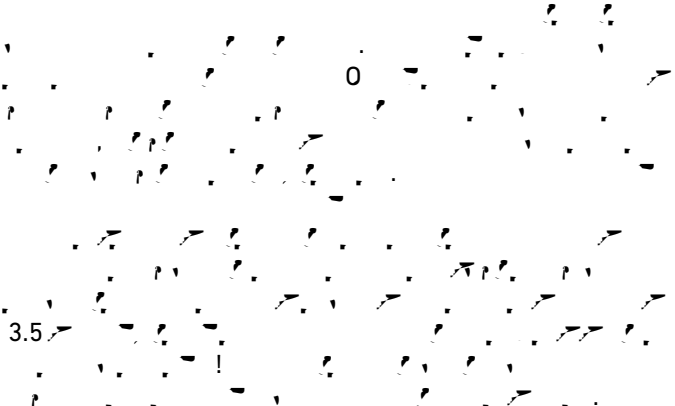
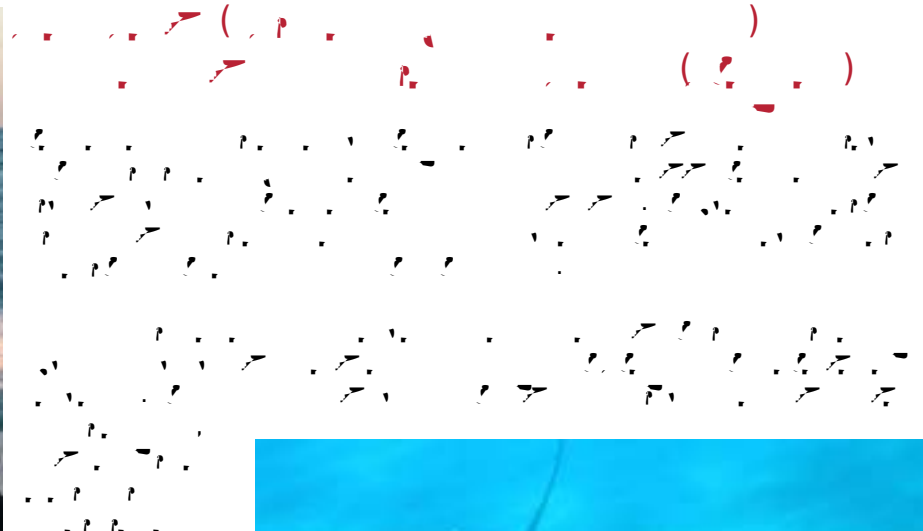
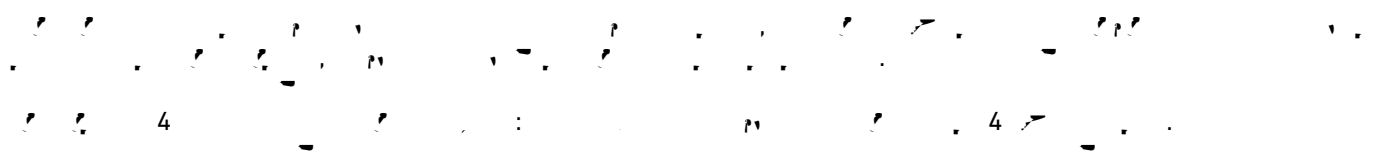


Figure 7 Norman Holme deploying a 'Pho

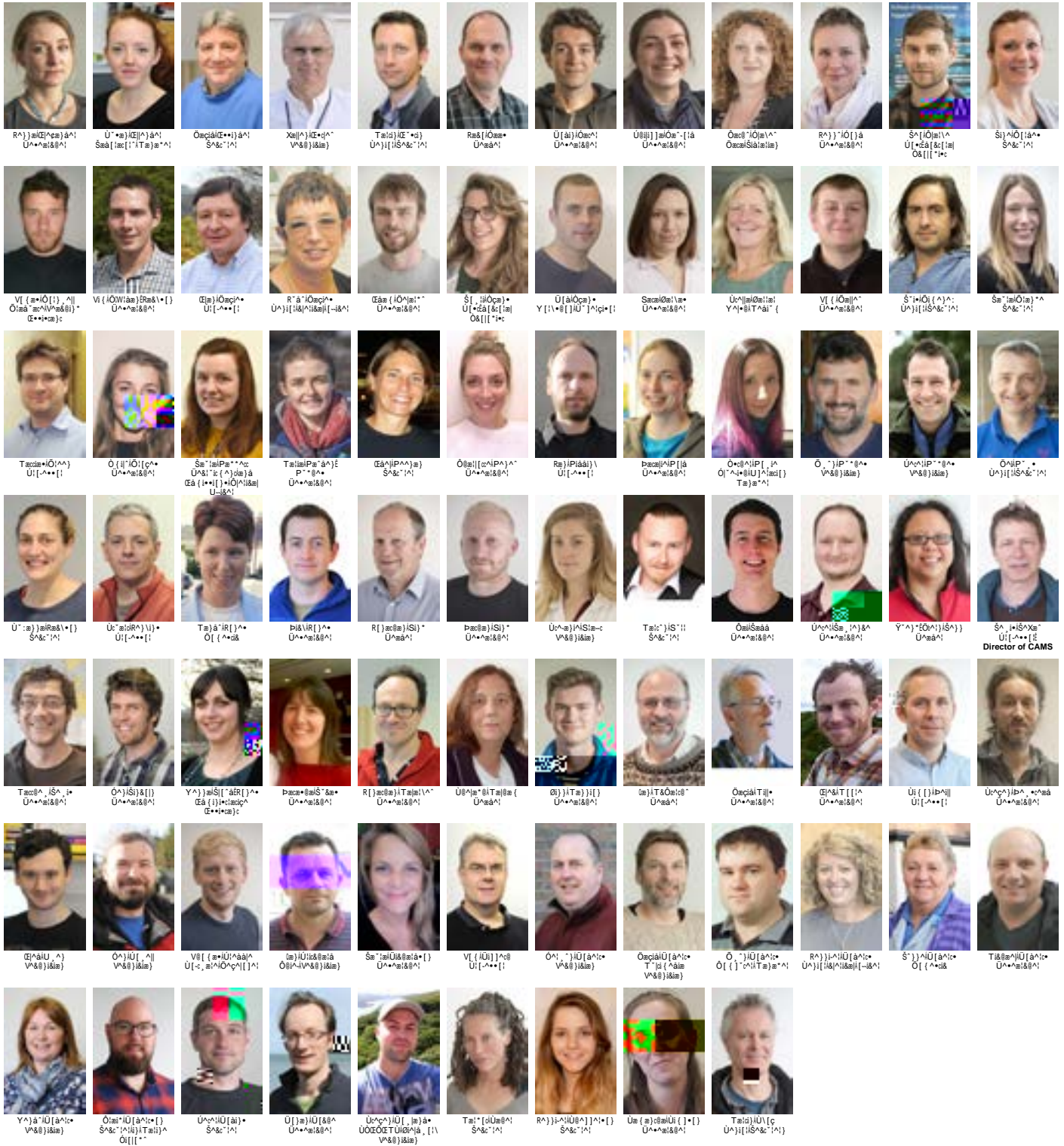
Over the past 10 years the *Prince Madog* has been an important component of Bangor University's programme providing fisheries advice to the Isle of Man Government. Each spring the *Prince Madog* has provided a platform for a two-week survey of Manx scallop stocks, sampling fixed stations covering both king and queen scallop fisheries within the Isle of Man's territorial sea. A set of four survey dredges are towed at each station and the number, age and weights of scallops caught are recorded along with information on bycatch. The data

WHERE ARE THEY NOW?



3.5

SCHOOL OF OCEAN SCIENCES STAFF



PUBLICATIONS (NOVEMBER 2019 - MAY 2020)

Exploring perceptions of marine biosecurity interventions: insights from the commercial marina sector.

Journal of Applied Ecology, 13, 2020, () : .

Blue carbon gains from glacial retreat along Antarctic fjords: what should we expect?

Journal of Applied Ecology, 2020, : .26, 5, .2750-2755

Integration of physiology, behaviour and life-history traits: personality and pace-of-life in a marine gastropod.

Physiology, behaviour & life history

Journal of Applied Ecology, 2020, : .163, .155-162

Species richness in North Atlantic fish: Process concealed by pattern

Journal of Applied Ecology, 2020, : .29, 5, .842-856

Sub-lethal predatory shell damage does not affect physiology under high CO₂ in the intertidal gastropod *Tritia reticulata*

Journal of Applied Ecology, 28, 2020, () : 0, .68

Different bottom trawl fisheries have a differential impact on the status of the North Sea seafloor habitats

Journal of Applied Ecology, 25, 2020, : .

Modelling fine-scale distribution and relative abundance of harbour porpoises in the Southern Bight of the North Sea using platform-of-opportunity data

Journal of Applied Ecology, 24, 2020, : .

Editorial: Structure, Functioning and Conservation of Coastal Vegetated Wetlands

Journal of Applied Ecology, 22, 2020, () : .

Localized outbreaks of coral disease on Arabian reefs are linked to extreme temperatures and environmental stressors

Journal of Applied Ecology, 20, 2020, : .

Artificial skyglow disrupts celestial migration at night

Journal of Applied Ecology, 16, 2020, () : .

Foraging Seabirds Respond To An Intermittent Meteorological Event In A Coastal Environment

Journal of Applied Ecology, 15, 2020 : .48, 1, .123-131

Final deglaciation of the Malin Sea through meltwater release and calving events

Journal of Applied Ecology, 7, 2020, : .

Losses of Soil Organic Carbon with Deforestation in Mangroves of Madagascar

Journal of Applied Ecology, 6, 2020, : .

Multiple trait dimensions mediate stress gradient effects on plant biomass allocation, with implications for coastal ecosystem services.

Journal of Applied Ecology, 4, 2020, : .

Design, specifications, and first beam measurements of the compact linear accelerator for research and applications front end

... ..

Coral species composition drives key ecosystem function on coral reefs

Journal of Ecology, 2020, 108, 1921–1922. doi: 10.1111/1365-2745.13652

Elevated pCO₂ does not impair performance in autotomised individuals of the intertidal predatory starfish *Asterias rubens* (Linnaeus, 1758)

Journal of Experimental Marine Biology and Ecology, 2020, Volume 531, Pages 153, 104841.

The effect of ocean acidification on the intertidal hermit crab *Pagurus criniticornis* is not modulated by cheliped amputation and sex

Journal of Experimental Marine Biology and Ecology, 2020, Volume 531, Pages 153, 104794.

Temperature-mediated changes in zooplankton body size: large scale temporal and spatial analysis

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 153, 104794.

Decreasing carbonate load of seagrass leaves with increasing latitude

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 159, 103147.

Integrating field and laboratory approaches for ripple development in mixed sand-clay-EPS

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 66, 7, 2749-2768.

The contribution of surface and submesoscale processes to turbulence in the open ocean surface boundary layer

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 11, 12, 4066-4094.

Using Machine Vision to Estimate Fish Length from Images using Regional Convolutional Neural Networks

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 10, 12, 2045-2056.

External conditions drive optimal planting configurations for salt marsh restoration

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 26, 27, 2749-2768.

Prey-size plastics are invading larval fish nurseries

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 116, 48, 24143-24149.

Ocean community warming responses explained by thermal affinities and temperature gradients

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 9, 12, 959-963.

Pattern, style and timing of British-Irish Ice Sheet retreat: Shetland and northern North Sea sector

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 21, 22, 2749-2768.

Mapping the consequences of artificial light at night for intertidal ecosystems

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 691, 760-768.

The impacts of tidal energy development and sea-level rise in the Gulf of Maine

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 187, 115942.

Using vertebrate environmental DNA from seawater in biomonitoring of marine habitats

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 14, 15, 2749-2768.

Ecological role of an offshore industry artificial structure

Journal of Experimental Marine Biology and Ecology, 2019, Volume 529, Pages 6, 14, 675.

cts pl@vn Biology.

Micro-scale geochemical and crystallographic analysis of *Buccinum undatum* statoliths supports an annual periodicity of growth ring deposition