UNIVERSITY of TASMANIA

Marine Biodiversity Hub

National Environmental Science Programme

oceans of the unknown

This exhibition

is funded by a University of Tasmania Cross Disciplinary Incentive Grant. It flows from conversations between scientist Vanessa Lucieer, and artists Jan Hogan and Annalise Rees. Together they explore the use of line and image to communicate ideas about the unseen.

Institute for Marine and Antarctic Studies Exhibition Space
Hobart, Tasmania
August 2016

The science

The landscape of the Earth's ocean floor has been mapped to a scale of five-kilometres using measurements from satellites. But only five percent of the ocean is mapped at scales fine enough to reveal significant areas of life on the seafloor.

To deliver this detail, sonar and other instruments are deployed beneath the ocean surface, on ships and autonomous underwater vehicles (AUV).

In coastal Tasmania, AUVs have been used to map the seafloor in greater detail than is achievable from ships, supporting surveys of new reef communities from the Friars off Bruny Island to the Hippolyte Rocks east of the Tasman Peninsula.

A new AUV being developed for Antarctica will sample marine life and seafloor structure under the ice shelf in the coming years.

On the continental shelf, ships and AUVs are helping scientists locate and classify rocky reefs in Commonwealth Marine Reserves so their status can be monitored and managed.

Accurate seabed maps also support forecasting models used to plan for marine disasters wrought by tsunamis, storm surges and large wind waves.

Mapping Australia's seafloor is a challenging task, but provides a rich blue vein of inspiration for both art and science.

How do you create an image of something unseen

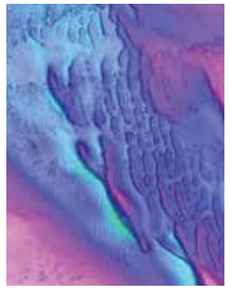
An autonomous underwater vehicle (AUV) is launched into the waters of Tasmania allowing the sea floor to be 'swath-mapped' by sonar and translated into lines to form 'acoustic images'. Drawing a line becomes a rich field of discussion across disciplines as new technologies provide data in new formats and interpretations. This project is a dialogue between two visual artists and a scientist: a printmaker, a drawer and a marine spatial analyst. Each use line to create imagery describing maritime environments. Senior Research Scientist and marine spatial analyst, Dr Vanessa Lucieer from the Institute for Marine and Antarctic Studies uses remotely sensed data to create visualisations to better understand marine environments. She has been in conversation with artist, Dr Jan Hogan and PhD student, Annalise Rees from the Tasmanian College of the Arts who are similarly interested in the role the image plays in communicating ideas about the unseen. Through their respective fields of expertise each of these researchers has been exploring ways in which the image is used to describe and understand the unknown marine environment – that which lies beyond the blue curtain.

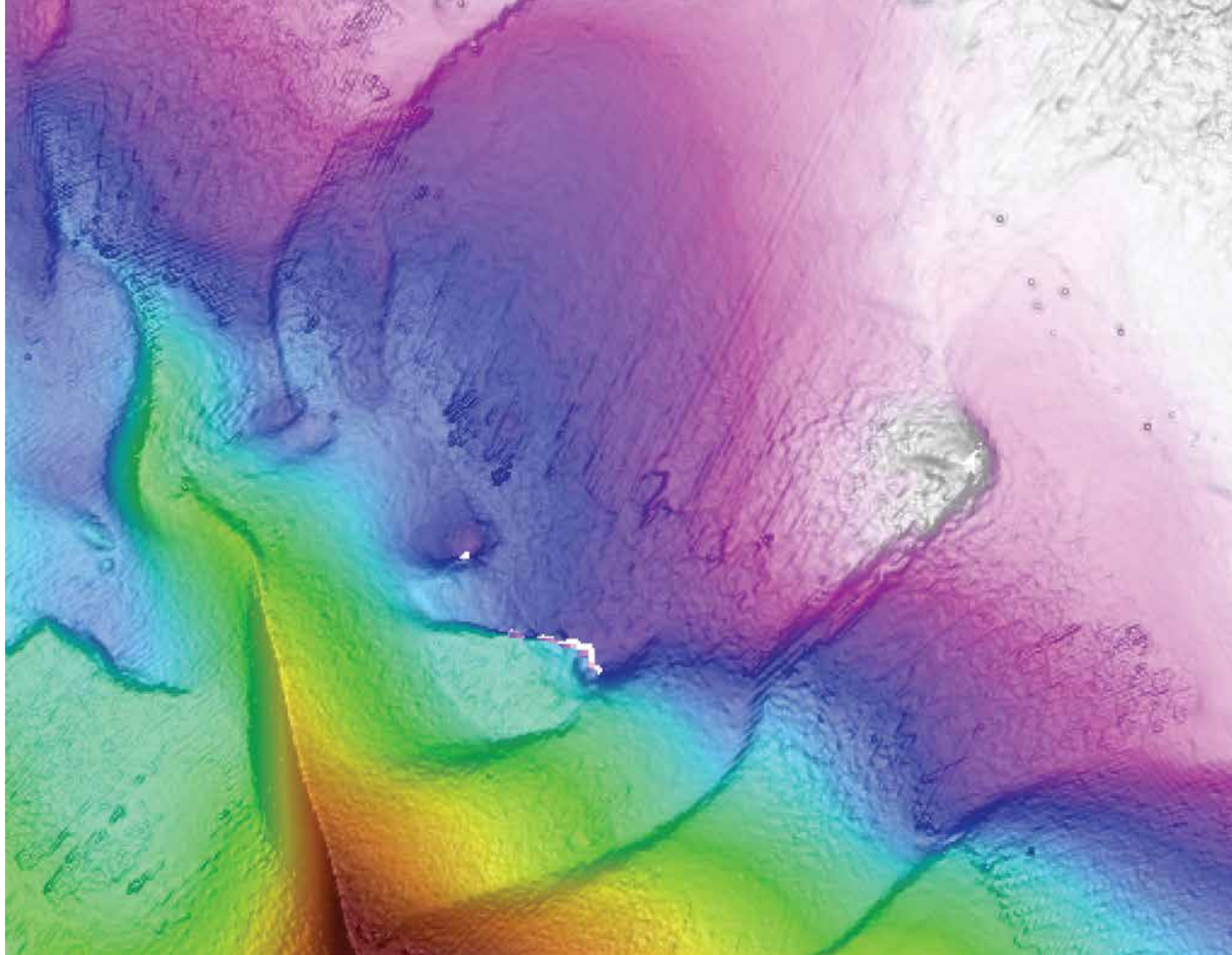
Science and the visual arts both utilise the image as a means of visualising information explaining our complex relationship to the world. The image becomes an abstraction of data, re-presenting and translating ideas linking the material and immaterial, seen and unseen. Line is a key element within image making. It is a universal visual language and signifier, employed globally and yet with cultural and discipline specific conventions. This project imagines the possibility of line in terms of both abstract thinking and physical application. Through their cross-disciplinary collaboration and the production of creative works, these three users of line explore the differing views and use of line between the two disciplines and their specific expertise. Line is considered through the activity of drawing as a physical and cognitive process, a type of way finding. In addition, it considers the implications this approach might have for the ways in which we structure the world and ourselves within it.

Vanessa Lucieer

is a marine spatial analyst at the Institute for Marine and Antarctic Studies at the University of Tasmania. She uses marine surveying and remote sensing to study and map the ocean, providing information to marine biodiversity assessment and resource management.

In the past 15 years Vanessa has explored the shapes and textures of seafloor habitats from Norway to Antarctica. While gathering and processing data at her desk and at sea, she has harboured a desire to create artworks that portray the beauty of the seafloor, and the challenge of marine discovery. The models, etchings, sculptures and prints in her first artistic showcase draw from her collection of acoustic data and engineering plans.





Jan Hogan

is Head of Printmaking at the Tasmanian College of the Arts. She has lived and worked in diverse communities and environments around Australia including Darwin, Uluru, Sydney, Canberra and Kununurra. Her teaching and art practice is based on testing the materials and methods of printmaking and drawing in response to her surroundings.

Jan's research explores traces left in the land by past events, intertwining deep geological time with historical events and the present. This led her to immerse herself in the Derwent River to understand the environments mapped through marine surveying and remote sensing. Jan exhibits regularly and her work is represented in national and state collections.

Annalise Rees

was born on Kangaroo Island, South Australia. She studied at the Adelaide Central School of Art, and in 2013 began a PhD scholarship at the Tasmanian College of the Arts, University of Tasmania. Her work is drawing based, informed by historical practices of exploration, navigation and cartography. She has worked with the International Cartographic Association and exhibited and participated in residencies in Australia, India, Japan and Canada.

Annalise investigates how physical and metaphorical manifestations of the unknown drive searching and enquiry. She has spent many months with her sketchbook at sea, most recently on the Marine National Facility RV *Investigator* voyage to Heard and McDonald Islands in the sub-Antarctic.