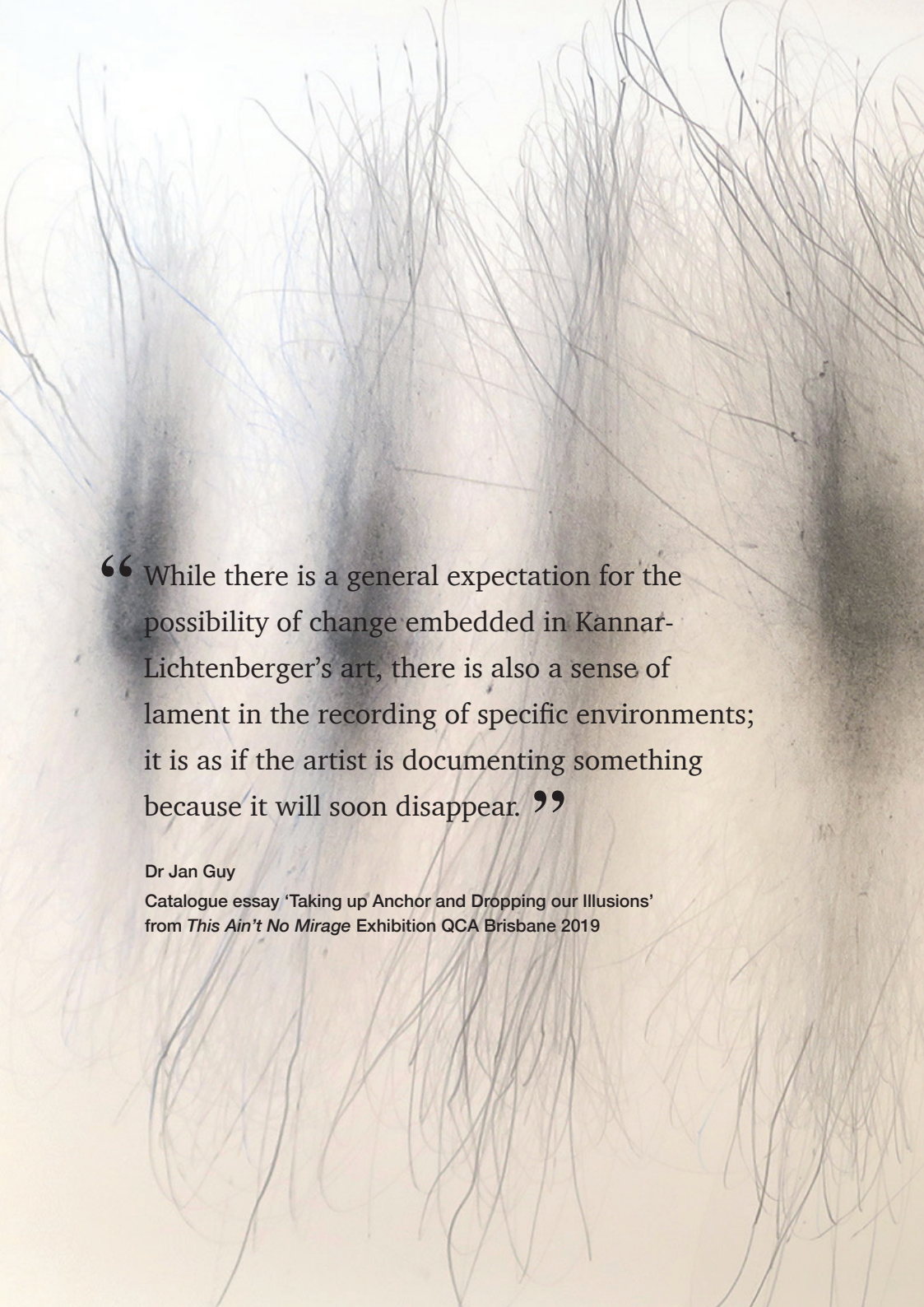




LEA KANNAR-LICHTENBERGER

AQUATIC VERIDICAL:
EXAMINING THE APPOSITION OF
TIME IN UNDERSEA LANDSCAPES

VERIDICAL



“ While there is a general expectation for the possibility of change embedded in Kannar-Lichtenberger’s art, there is also a sense of lament in the recording of specific environments; it is as if the artist is documenting something because it will soon disappear. ”

Dr Jan Guy

Catalogue essay ‘Taking up Anchor and Dropping our Illusions’
from *This Ain’t No Mirage* Exhibition QCA Brisbane 2019

LEA KANNAR-LICHTENBERGER

AQUATIC VERIDICAL:
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TIME IN UNDERSEA LANDSCAPES

August 24 to September 17

Barn Gallery, Montsalvat

7 Hillcrest Avenue Eltham, Victoria



CATALOGUE ESSAY

by Dell Walker PhD

The Truth about Water, Aquatic Veridical Mapping the Sea

To the lay person, the idea of charting the deep oceans with sonar is an obscure process. Lea Kannar-Lichtenberger's objective here is to bring to us all something of the shape of those inky depths, and the enormous difficulty of the scientists' task in bathymetry¹.

The Research Vessel *Falkor's* target zone was, incredibly, between 50m and 4,500m (considering the Matterhorn is 4,478m).

Sonar infers an exact process, but the truth about water (aquatic veridical) is that it distorts, particularly visually. Sonar readings are affected by the weather and by water temperature, pressure and salinity. Deep places are thus increasingly more difficult. Even though high frequency sonar produces more data, low frequency sonar is more successful at depth, so multibeam sonar is used².

Bathymetry converts sonar to an approximate, continuous image from the strip of surveyed sea landscape directly under the vessel, colour coded for depth³. Time was critical to the mapping, "the apposition of time in undersea landscapes". The sonar recordings required steady forward movement, continuing even overnight. Multi beam sonar supplied different perspectives, passing over

varied terrain from different angles. Only as a vessel moves can sonar 'see' in 3D.

The journey of the *Falkor* in the surface weather, corresponded to the story that was being written about the surfaces underneath. This is the narrative Kannar-Lichtenberger wrestled with, examining the apposition of time in undersea landscapes.

The artist engaged with the technology and the science each day, to grasp what time was revealing. Given the visual renditions of the sonar through the bathymetry programme, she responded immediately with early morning hour long sketches expanding on that bare narrative. This was an appropriate adaptation from drawing 'From the Bow' 6-7am on other voyages. The computer images can be seen in the video, *Unviewable Lands*.

It is only with Kannar-Lichtenberger's creativity that an imaginative translation emerges. The fully engaged artist's mind interprets the data in a rich and varied way. An enhanced narrative blossoms before us like an historical novel. With the beauty and intrigue of this

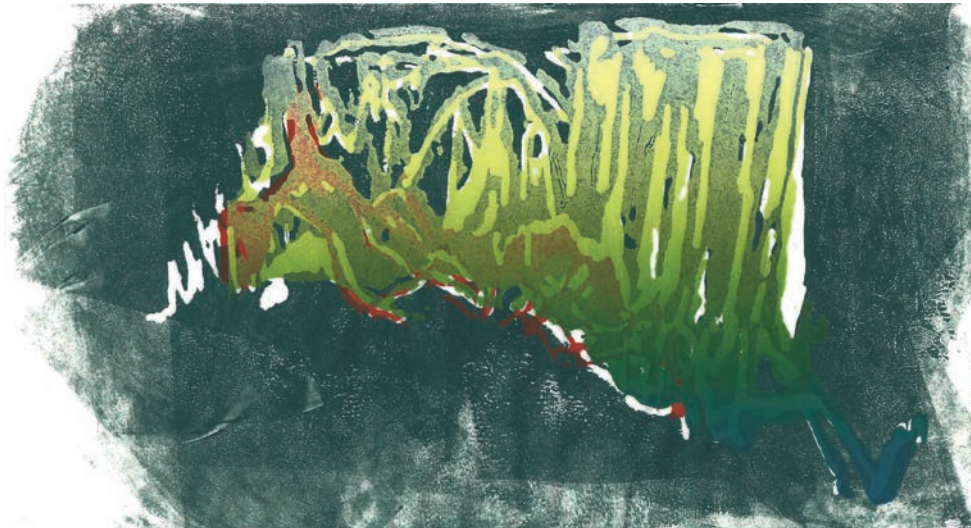
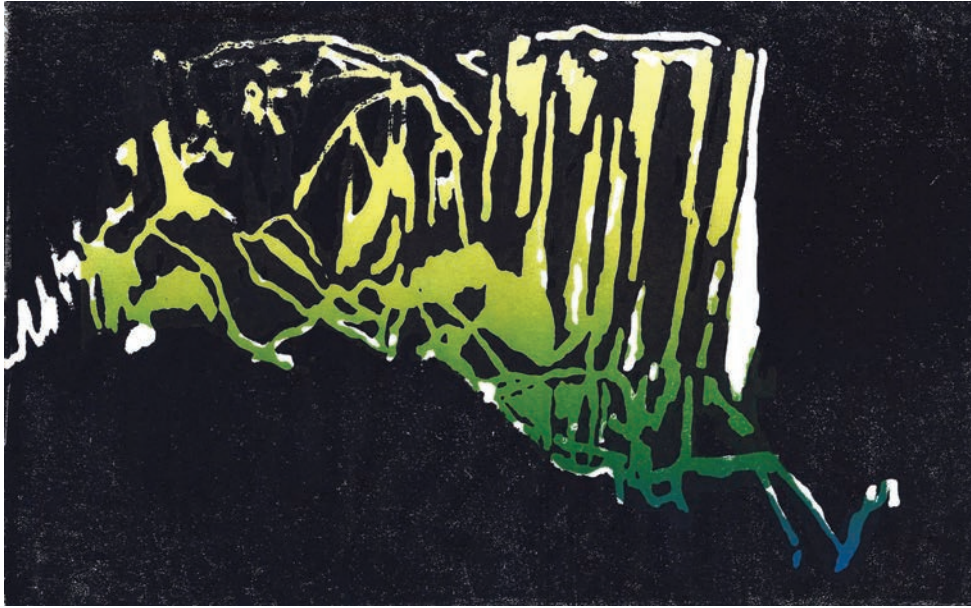
Patterns of the Falkor II, 2022

Medium: acrylic on canson paper

Size: 76 x 56 cm.

¹ <https://www.ga.gov.au/scientific-topics/marine/survey-techniques/bathymetry> Accessed August 5, 2023

² Ibid. ³ https://neo.gsfc.nasa.gov/view.php?datasetId=GEBCO_BATHY Accessed August 5, 2023



Above: *Time Amplified II*, 2021
 Medium: solarplates a 'la poupée on
 Japanese rice paper – Unique State prints
 Size: 16 x 24 cm

Top: *Time Amplified III*, 2021
 Medium: solarplates a 'la poupée on
 Japanese rice paper – Unique State prints
 Size: 16 x 24 cm

expanding body of work, the artist has sought to bring the public along on her journey on the RV *Falkor*, so that the scientists' revelations come to enlighten many more.

Not 'All At Sea'

This is not Kannar-Lichtenberger's first collaboration with an ocean-going research vessel; artist-at-sea programmes place artists in scientific vessels to enrich both the research and the artist. It is helpful that any artist coming on the *Falkor* has an interest in technology⁴, otherwise sites/sights may remain unseen.

This artist's baggage contained diverse art materials. Envisaging a potential drawing of the ship's rocking, she went on board with a 1.2 x 10m long scroll of delicate Japanese paper to be gradually fed under a drawing pendulum on a 3m bungee cord. She progressed the scroll 17cm every 12 hours, creating a dynamic mechanical drawing with graphite, charcoal and pencil: *A Storm to End*, mapping the journey of the RV *Falkor*.

It is quite an achievement to have created this huge artwork (the fine paper needed repair at one point) in the midst of ship-life. But Kannar-Lichtenberger had grown up with boats and her early choices for training and work were science and technology. So wedding her art skills and mindset to science was a natural fit. She has investigated through her art the detrimental effects of tourism, increasing the melting of the Arctic and the Antarctic and ocean currents spreading consumerism's plastic rubbish.

The artist responded to shipboard life, such as the regular deployment of the Magnetometer (see *Moments with Magi II*)⁵. Magnetic resonance reveals rock strata age, deep geological time. The *Falkor* aimed to map in the zone between continental plates, ancient strata belonging to a recently named, submerged continent, Zealandia, whose only high points are New Zealand and New Caledonia⁶.

In this, time was at the forefront once again, time enough to sink a continent. The *Time Amplified* series of prints were made using solarplates, light sensitive polymer coated steel plates. These had paint drawings on them, then the unprotected areas were exposed to the sun to harden the polymer, the remainder washed off ready to print. This was very time sensitive; correct exposure times in the tropics with no air pollution required numerous experiments.

Each unique print was made by carefully applying all colours with a soft pad (a 'la poupée) for each single impression. This was printmaking without dangerous chemicals so it could all be done at sea.

Responding at times in an abstracted free flowing style, the works are all still based in the onboard experience. For example, the painting, *Patterns of the Falkor*, traces the route the ship was taking, back and forth sometimes, to cover more uncharted areas.

⁴ <https://schmidtocean.org/apply/artist-residency-program/> Accessed August 5, 2023

⁵ ... "approximately 2500 square kilometres of magnetic data was collected" <https://stories.uq.edu.au/news/2021/mapping-the-hidden-eighth-continent-zealandia/index.html> Accessed August 9, 2023

⁶ <https://stories.uq.edu.au/news/2021/mapping-the-hidden-eighth-continent-zealandia/index.html> Accessed August 9, 2023



Moments with Magi II, 2021 (video still)
 Medium: Pinhole timelapse video of magnetometer deployment.
 Runtime: 01:29 sec

Sights Unseen

Where bathymetry brings onboard a rudimentary image of the unseen depths, far greater detail is added by Kannar-Lichtenberger's drawing skillset and capacity to imagine; note especially the *Sights Unseen* and *Coral Sea* series.

Further, in these works the visualisation of computer data became literal; in blue pencil on black paper, the hand drawn code symbols delineate the landscape. Using raw sonar code cleverly reminds exhibition visitors of the intermediary technology which has allowed us all, to 'see' these sights unseen.

Veits Height Unseen was unseen and unknown; this landform was first discovered on that exploratory 2021 voyage.

You 'Can't Unsee' Something

Throughout this exhibition, Kannar-Lichtenberger takes us on her journey of discovery, which was the *RV Falkor's* task to reveal more from the trough between the Australian continental plate and the Zealandia continental plate. The data collected will help inform future management of the Coral Sea Marine Park⁷.

More details are available for the surface of the moon or Mars than our world's oceans⁸. Every day another strip of sea floor is added to the world map, another possession of human knowledge, but still always just a 'drop in the ocean' of what

is yet unknown. The grand goal of the mapping is to always share the findings open source, so every research vessel aids the cause of knowledge⁹. Consequently, this is readily available to extractive companies in their search for more resources. Human knowledge is open to misuse.

With her interest in science and technology as a young person, Kannar-Lichtenberger herself was attracted to working for the oil industry, living not far from an oil refinery. But in more recent decades, she is horrified by the pollution from burning fossil fuels, the sooty glaciers melting and the rising sea levels. She abhors this degradation of wild places, where plastic litter from oil accumulates at all depths in the ocean. She worries that even the fascinating research aboard the *Falkor* could be making matters worse for the world.

There is a saying, that you 'can't unsee' something; placed in the public domain who will ultimately benefit from this new knowledge? Is it just part of our consumer acquisitiveness, crossing things off our list; things to know, places to go?

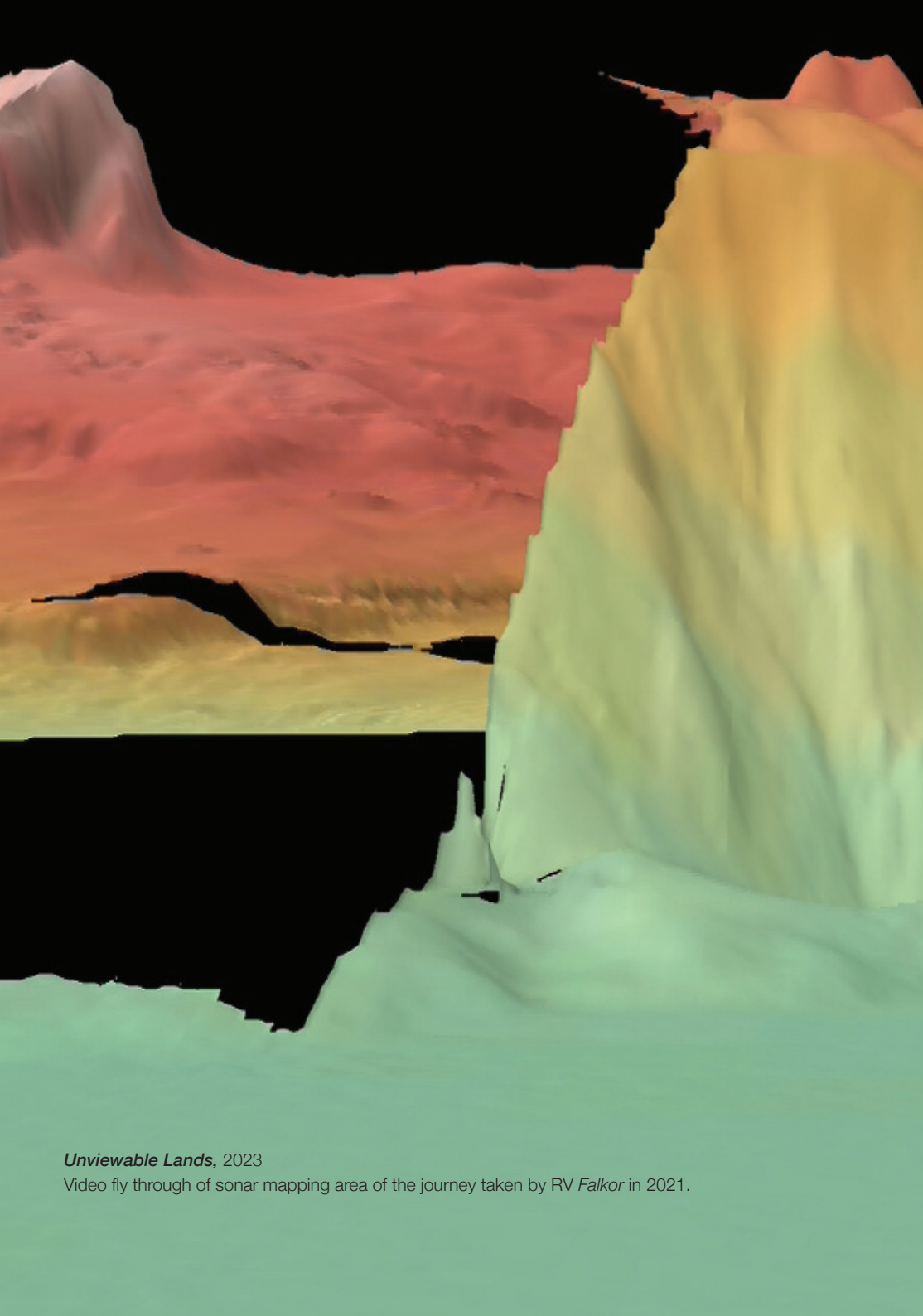


Dr Dell Walker is an environmental installation artist, sculptor, writer, and is currently exhibition manager at Articulate Project Space, Sydney. She completed her PhD at Sydney College of the Arts, University of Sydney in 2020.

⁷ <https://schmidtocean.org/cruise/sea-floor-to-seabirds/> Accessed August 10, 2023

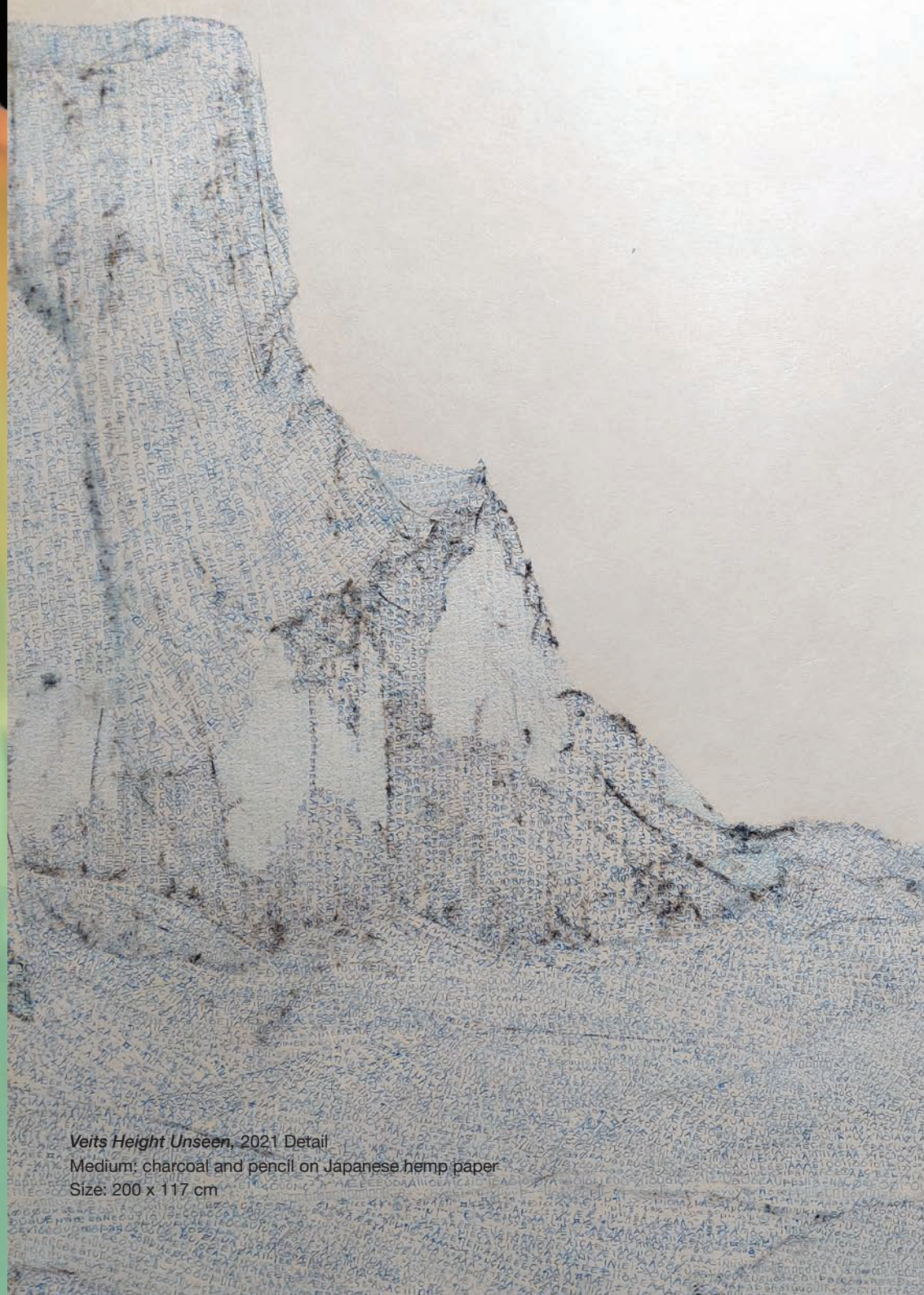
⁸ NASA oceanographer Dr. Gene Feldman, "We have better maps of the surface of Mars and the moon than we do of the bottom of the ocean" www.saildrone.com/news/know-more-other-planets-than-earths-oceans Accessed August 10, 2023

⁹ "After 28 days, *Falkor* offered 37,000 square kilometres of data to the Seabed 2030 project". <https://stories.uq.edu.au/news/2021/mapping-the-hidden-eighth-continent-zealandia/index.html> Accessed August 9, 2023



Unviewable Lands, 2023

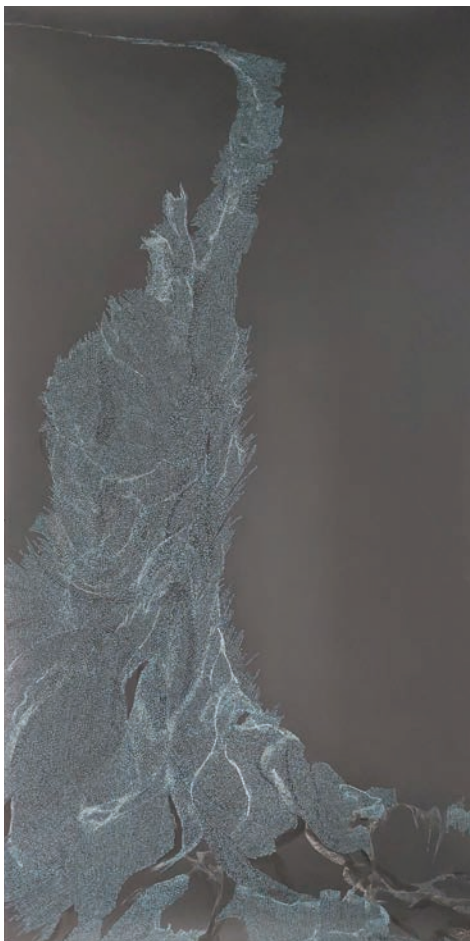
Video fly through of sonar mapping area of the journey taken by RV *Falkor* in 2021.



Veits Height Unseen, 2021 Detail

Medium: charcoal and pencil on Japanese hemp paper

Size: 200 x 117 cm



EXHIBITION STATEMENT

by **Lea Kannar-Lichtenberger**

Aquatic Veridical is an exhibition that surveys Lea Kannar-Lichtenberger's 2021 journey as an 'artist at sea' onboard a research vessel (RV). Lea explores time, deep time and the truth about our oceans through various media to examine the underwater landscape, the technology that exposes it, and our human impact on this hidden environment.

Lea joined the Schmidt Ocean Institute's, RV *Falkor*, as scientists mapped the ocean floor from Brisbane north into the Coral Sea Marine Park. They used multibeam sonar and bathymetry technology, coupled with its onboard computers, to translate this complex sonar code into recognisable open-source illustrations.

Spaces once hidden by time are now exposed by technology that assists us to examine the role of humans in preserving these lands below the waves.

The central images in this exhibition reformat this cutting-edge technology. Lea takes the viewer on a journey into the unseeable through these computer visualisations. Across various narratives, including drawings by hand and mechanical, painting, print media, video, sound and photography, Lea's time as the 'artist at sea' interprets these unseen and unknown underwater landscapes.

This exhibition is a testament to the artists' role in making science and technology more accessible to everyone.

Above: ***Sights Unseen IV – Off the Continental Shelf***, 2022

Medium: blue pencil and pastel on black Arches paper. Size: 100 x 200 cm

Top right:

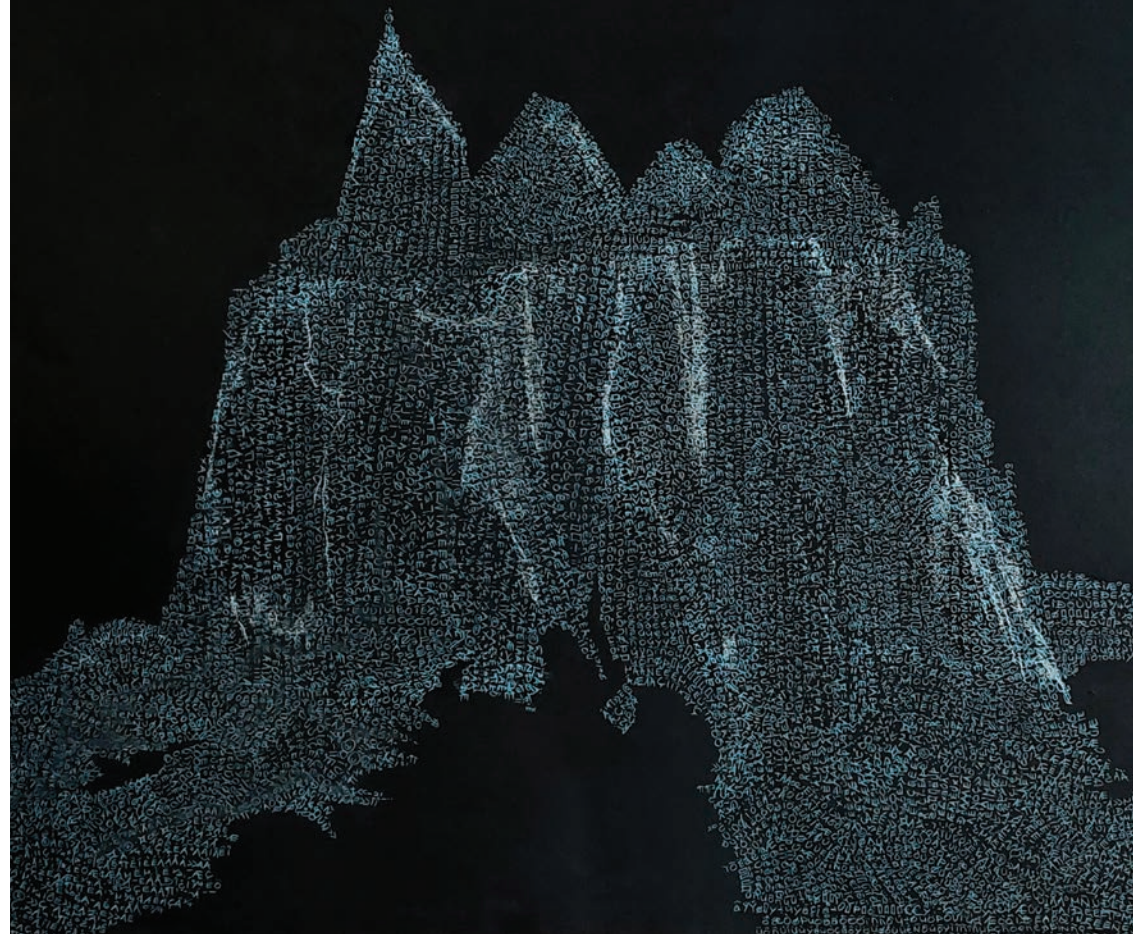
Sights Unseen I – Cassowary Reef, 2022

Medium: blue pencil and pastel on black Arches paper. Size: 76 x 58 cm

Bottom right:

Coral Sea IV – Selfridge Rise, 2023

Medium: blue pencil and pastel on black Arches paper. Size: 33 x 45 cm



ARTIST BIOGRAPHY



I am an environmental artist exploring the connections surrounding human impact on islands and isolated environments. My aim is to look beyond the travel guide rhetoric by examining through immersive residencies. As an artist/traveller/observer I create artworks and installations exploring the impact of the Anthropocene and consumerism on a utopian destination.

Completing a Master of Contemporary Art in 2013 and a research Master of Fine Art in 2015 at Sydney College of the Arts – University of Sydney, Australia. These degrees compelled me to embrace numerous visual media and verbal presentation skills, which guide my current creative narrative. Throughout my career, I have attended various residencies; however, the two residency's of 2013 and 2014 at SVA (School of Visual Arts) in Manhattan were revolutionary in expanding the connection between science and art in my practice.

My research methodology embraces the ethnographic model as the artist/traveller/observer, giving my research an undeniably

Above: Lea Kannar-Lichtenberger on board the RV *Falkor* (image by Tara Jonnell)

unique and authentic vision. My writing has been published in peer-reviewed journals and a book; I have been invited to deliver formal lectures and over 23 papers at conferences both in Australia and around the globe. I was recently invited to speak at the 'Royal Society (of Science) of NSW'; I give interviews and podcasts about my research on oceans and tourism, hoping to initiate the discussion about humanity's impact on isolated and fragile environments. I hope to 'change just one persons mind' that could drive a tsunami of change in how we, as travel consumers, participate.

I have exhibited my environmentally based artworks as an 'artist at large' in various group exhibitions nationally, such as the Heysen Landscape Prize, The Waterhouse Natural History Prize, SWELL Sculpture, Sculpture by the Sea, Wyndham Prize, The Alice Prize, Nth Qld Ceramic Biennale and Nth Sydney Art Prize. Selected for group exhibitions internationally; Ancestral Echoes: A Decade of Bio Art SVA New York and the Nautilus Oceans Exhibition at the Explorers Club New York, among others.

This year, 2023, I have solo exhibitions in NSW (Chrissie Cotter Gallery) and Victoria (Bowery Gallery) showcasing my 2017 research in Antarctica, along with this exhibition, where I showcase my time as the SOI 'artist at sea' resident at Montsalvat in Victoria.

Right: **From the Bow IV – the Coral Sea**, 2021
Medium: 30 Graphite drawings on Derwent Paper
Size: 13 x 30 cm each



CURRICULUM VITÆ

CV of Lea Kannar-Lichtenberger Born Sydney Australia 1964

TRAINING & EXPERIENCE

- 2020 to current, Board member, Culture at Work – (Art/Science collaborative foundation)
- 2019 Climate Reality Leadership Training; AI Gore Sponsored – Brisbane NSW
- 2014 – Jan 2016
Master of Fine Art – SCA Sydney College of the Arts (Sydney University) Major Sculpture, ceramics and Installation (with additional research in Botany, Marine Biology and Sound Art.)
- 2013 Master of Studio Art – SCA Sydney College of the Arts (Sydney University). Major Printmedia and Ceramics

AWARDS & GRANTS

- 2022 Winner – Open Award the Greenway Art Prize NSW
- 2014 PRSS Sydney University Research Grant – for travel to research in the Galapagos Islands
- 2012 Phyllis Arnot Print Prize – Hornsby College NSW

EXHIBITIONS SOLO

- 2023 *Antarctica: All to Lose* – Bowery Gallery St Albans Victoria Apr 20 to Jun 8
Absence of Line – ArtEst Gallery Hill St Leichhardt Mar 3 to 27
- 2022 *Beyond the Bucket List* – NRCG (Northern Rivers Community Gallery) May 4 to Jun 26
- 2021 *Beyond Sight: into the microscopic world of plants* – Ironbark Gallery NSW Feb 19 to Apr 18
- 2019 *This Ain't No Mirage* – Project Space Gallery QCA (Queensland College of Arts) Brisbane – Feb 8 to Mar 2
- 2018 *Distorted Truths* – Spectrum Project Space Edith Cowan University WA – May 17 to Jun 1

SELECTED & GROUP EXHIBITIONS – INTERNATIONAL

- 2022 Ancestral Echoes: a decade of Bio Art – SVA N.Y.
Nautilus Ocean Exhibition – Explorers Club New York
- 2020 Craft Nouveau Exhibition – Blue Line Arts – California

SELECTED & GROUP EXHIBITIONS – AUSTRALIA

- 2023 The Burnie Print Prize – Burnie Tas
- 2022 Heysen Art Prize – Hahndorf Academy SA
Greenway Art Prize – Leichhardt NSW
SIG: Sculpture in the Garden – Mudgee NSW
SWELL Sculpture Prize – Qld
North Qld Ceramic Award (biennale) Qld
Sydney Contemporary – SPM works on paper
Wyndham Art Prize – Vic
Ravenswood Women's Art Prize – NSW
The Alice Art Prize
North Sydney Art Prize – NSW
- 2021 Blacktown Art Prize – NSW
Northern Beaches Art Prize – NSW
Sydney Printmakers 60th Anniversary Exh – NSW
- 2020 Blacktown Art Prize – NSW
The Mission to Seafarers Art Prize – Victoria
Sculpture in the Garden – Mudgee NSW
Sculptures by the Sea – Cottesloe WA
- 2019 Sculptures in the Garden – Mudgee NSW
Sculptures by the Sea – Bondi NSW
North Sydney Art Prize NSW
- 2017 Culture at Work – Open day, April 29

RESIDENCIES, RESEARCH & COLLABORATIONS

- 2021 Artist at Sea – SOI (Schmidt Ocean Institute)
RV *Falkor*; multibeam mapping of the Coral Sea Marine Park and northern Tasman Sea Great Barrier Reef Australia. Feb 6 to Mar 6

PUBLICATIONS

Paper Publications

- 2020 The March of Time: thawing, tourism, and toxins impacting the Pacific. *Using the Visual and Performing Arts to Encourage Pro-Environmental Behaviour*. Cambridge Press, Chapter 15 p236-53
- 2018 Beyond the Verbiage: Consumerism through tourism and its manifestations on islands and remote places. *Environment and Ecology Research Vol. 6(5)*, pp. 471 – 478 DOI: 10.13189/eer.2018.060507
- 2016 Anthropocene: Human Influence on Evolution and the Biosphere. University of Sydney – Master of Fine Art Research Paper

Public Lectures, Conference Papers and Presentations

- 2023 *Exploring eco-art and materiality through art practice* – VCA art + ecology group
- 2022 *More than Graphics: the use of art to engage with community on climate science* – UNSW SPREE group Nov 24
Open Lecture series U3A – *An Artists Perspective on Climate Change and an Update on Climate Change*:
Leichhardt Aug 19 and 26; Willoughby Oct 15
- 2021 *Interdisciplinary Integration Science and Art: the value of art in disseminating scientific information*. AESS (Association of Environmental Sciences and Studies) George Washington University, Washington, D.C. – June 28
INVITATION lecture at the Royal Society of NSW – *Antarctica This Ain't No Mirage: the value of art in disseminating scientific information* – Apr 7
<https://youtu.be/-NMOhUBhsC8>
SciArt Lunchbox – *Onsite observations and research by Lea Kannar-Lichtenberger* – Ship to Shore from RV *Falkor* to SciArt Initiative New York – Feb 25 <https://youtu.be/VtDmFFHLXYg>
The March of Time – RV *Falkor* Feb 18
- 2020 Sydney Science Festival, Culture at Work video presentation *An Artist Perspective on Climate Change* Aug 15
An Update on Climate Change – U3A (University of the 3rd Age) Sydney Mar 12
- 2019 Discussion Panel: *Science and Art in Conversation* – Sydney Science Festival Event Pyrmont. Aug 15
The March of Time: thawing, tourism and toxins impacting the pacific. Ecoarts Con., Uni of Wollongong May 26-28
Public Lecture *There be Dragons: human impact on unique environments*. Annandale NSW
- 2018 *Propelling the Dystopian: the bucket list desire for the authentic*. AAANZ Annual Conference RMIT Melbourne.
Public Lecture *There be Dragons: exploring contemporary consumerism on the utopian ideal*. – QCA Queensland College of Arts June 28

PUBLICATIONS GENERAL & INTERVIEWS

- 2023 Interview: Radio Marinara with Bron Burton and Cabin Boy May 28
Interview: Artist Q & A *Antarctica: All to Lose* the Bowery Gallery May 5
Exhibition Review: Art Almanac Apr 5 2023 p37
- 2022 Interview: with *Beyond the Green Line*
Interview: with Moku Art Studio
Interview: Nautilus Exhibition – *The Art of Ocean Science* by Adrienne Day Mar 15
- 2021 Artwork: 'Veits Height Unseen', *Orion Magazine* Autumn Issue, The Abominable Mystery P31
Blog: *An Artist Journey Never Ends* Schmidt Ocean Institute – Mar 12
Interview: *Change One Persons Mind* by Alex Ingle Feb 26
Blog: *An Epic Journey to Inspiration*, Schmidt Ocean Institute – Feb 12
- 2019 Artwork: *Colliding Worlds* in School of Visual Arts, NYC *Continued Magazine* – Spring 2019
- 2018 Interview: 'The Mix' ECU Radio Mount Lawley Sept 1
Interview: SciArt Center *COLLOQUIUM* by Kate Schwarting, Programs Manager
Exhibition review: *Assemble Papers: The Culture of Living Closer Together*
- 2017 Article *Exploring Tourism and Contemporary Societies' Effect on Three Utopian Ideals* – Artist and Climate Change Jun 12

BOOKS & ARTICLES – AUTHOR

- 2019 *I Kicked a Stone in Metaphor* – A collection of works by Jens Lichtenberger, Compiled by Lea Kannar-Lichtenberger Edited by Lucy Palmer ISBN 978-0-6481106-3-7

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SOLO EXHIBITION AQUATIC VERIDICAL: EXAMINING THE APPPOSITION OF TIME IN UNDERSEA LANDSCAPES. BARN GALLERY, MONTSALVAT

Exhibition List of Works

A Storm to end, mapping the journey RV Falkor,
Medium: Mechanical Drawing – Graphite, Charcoal and Pencil on Japanese Shiramine paper.

Size: 120 cm x 10 m

Patterns of the Falkor II, 2022

Medium: acrylic on Canson paper.

Size: 76 x 56 cm

Time Amplified II to VIII, 2021

Medium: solar-plates, relief & a 'la poupée on Japanese rice paper. Unique State. Size: varies

Moments with Magi II, 2021 (video still)

Medium: Pinhole timelapse video of magnetometer deployment, runtime 01:29 sec

Unviewable Lands, 2023 Video fly through of sonar mapping area of the journey taken by RV *Falkor* in 2021. Lea Kannar-Lichtenberger.

Thanks to Alysha Johnson videographer, and Thomas Speyer soundscape. Runtime: 19:00 sec

Veits Height Unseen, 2021

Medium: charcoal and pencil on Japanese hemp paper. Size: 200 x 117 cm

Sights Unseen IV – Off the Continental Shelf, 2022

Medium: blue pencil and pastel on black Arches paper. Size: 100 x 200 cm

Sights Unseen I & II, 2022

Medium: blue pencil and pastel on black Arches paper. Size: 76 x 58 cm

Coral Sea I to IV, 2023

Medium: blue pencil and pastel on black Arches paper. Size: varies

From the Bow IV – the Coral Sea, 2021

Medium: 30 Graphite drawings on Derwent Paper

Size: 13 x 30 cm each

A Nexis if Time, 2022

Medium: Acrylic, pastel and charcoal on Japanese hemp paper, Size: 80 x 40cm

Interval I to VI, 2021

Medium: 5 min Mechanical drawing on rice paper

Size: 97 x 51 cm

Chapter Fifteen – The March of Time: Thawing, Tourism, and Toxins Impacting the Pacific, 2020

Medium: Printed text translated using the Bathymetry code. Size: varies

Shrouded, 2023

Performance installation: acrylic and Sharpe on builders plastic. Size: 400 x 600 cm

Front and back interior of cover – end pages

Detail of *A Storm to end; mapping the journey RV Falkor, 2021*

Cover Detail of *Sights Unseen IV – Off the Continental Shelf, 2022*

Page 12 Photograph of Lea in her cabin onboard the RV *Falkor* taken by Tarra Jonnell

ACKNOWLEDGEMENTS

I wish to thank the Schmidt Ocean Institute, Carlie Wiener, Lisa Pereira and the crew of the RV *Falkor* without their support this work could not have been produced. Montsalvat for supporting this exhibition, Eleanor-Louise Butt and Julie Ronalds for helping with the complex installation. Finally I wish to thank my husband Jens Lichtenberger (1950-2016) for his unwavering support of my artistic journey.



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“...my examinations of ecosystems opens the viewer to the idea that nothing is in isolation and our presence in these spaces has an impact no matter how ‘eco friendly’ we may consider ourselves...”

Lea Kannar-Lichtenberger

‘The March of Time: Thawing, Tourism, and Toxins Impacting the Pacific’

Using the Visual and Performing Arts to Encourage Pro-Environmental Behaviour, 2020