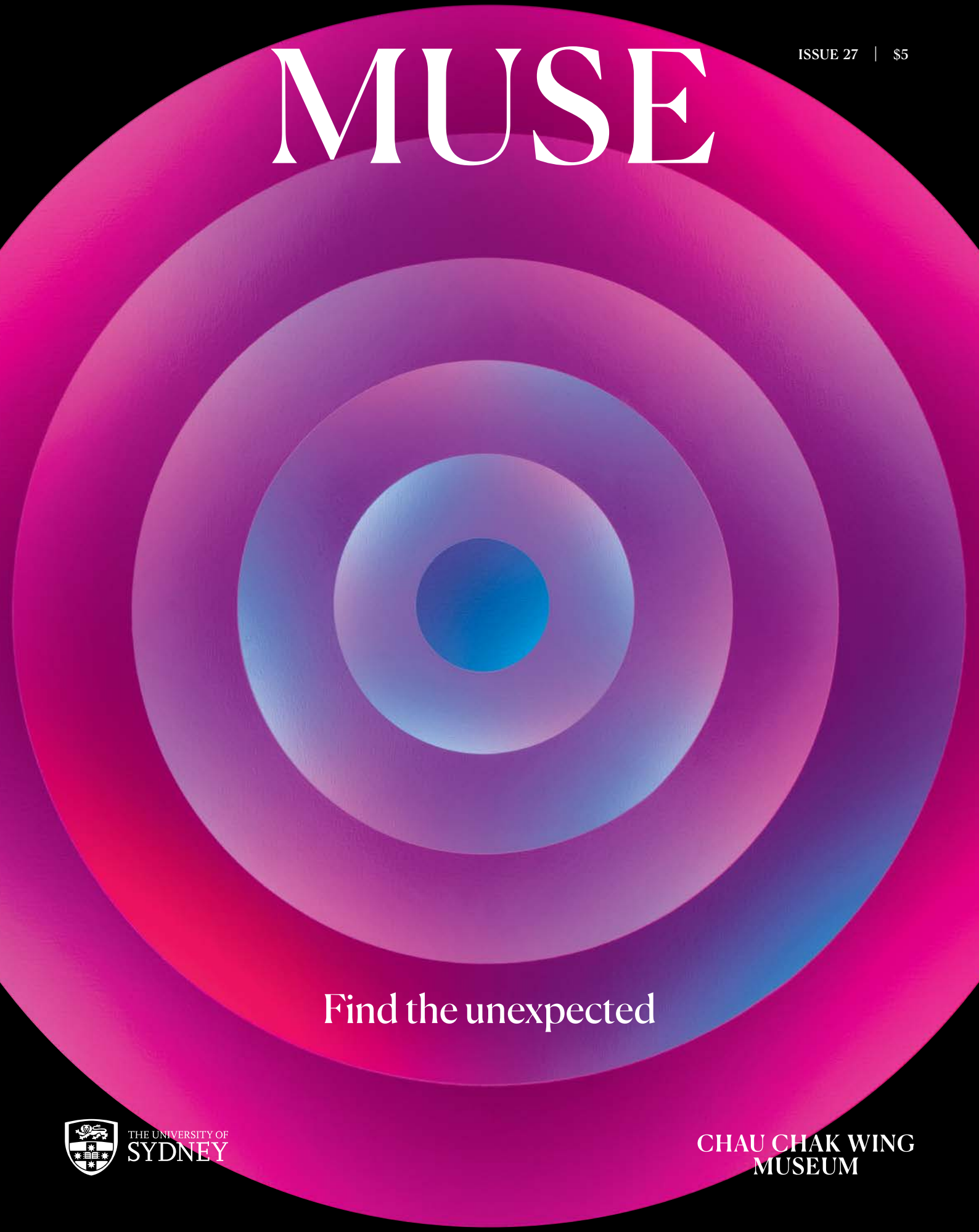
MUSE

ISSUE 27 | $5



Find the unexpected

THE UNIVERSITY OF SYDNEY

CHAU CHAK WING MUSEUM

Chau Chak Wing Museum
+61 2 9351 2812
ccwm.info@sydney.edu.au
sydney.edu.au/museum

Corner of University Avenue
and Parramatta Road,
opposite the Quadrangle and Fisher Library
Camperdown Campus
The University of Sydney

The Chau Chak Wing Museum
is named after principal donor
Dr Chau Chak Wing, Chinese-Australian
businessman and philanthropist.

The Chau Chak Wing Museum comprises:
- Nicholson Collection: antiquities and archaeology
- Macleay Collections: natural history, ethnography, historic photography and science
- University Art Collection

Education programs
School programs including tours
and workshops will run in alignment
with NSW government advice.
See sydney.edu.au/museum/education
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Editor: Luke Parker
Publishing coordinator: Renae Coles
Creative direction: Katie Sorrenson
Graphic design: Fábio Dias

Produced by the University of Sydney,
August 2021

This issue contains names and images of people who have died. We acknowledge that, for some people and communities, these may cause distress and sadness. Where possible, cultural permission to publish has been sought.

Cover images
Gregorio Vardanega
Cercles chromatiques (Chromatic circles)
1966–67 (details)
synthetic polymer paint
on wood, lightbulbs,
electrical fixtures,
synthetic polymer sheet
Power Collection, PW1967.27

ISSN 1449-0420
ABN 15 211 513 464
CRICOS 00026A

A MESSAGE FROM OUR DIRECTOR

THE CHAU CHAK WING MUSEUM opened in November 2020 and visitor feedback has been overwhelmingly positive; this includes the Museum winning several awards from the Australian Museums and Galleries Association (AMaGA) earlier this year.

As we go to print however, the Museum, like all cultural institutions in Sydney, is closed due to the Covid-19 pandemic.

But our planning continues apace as we map out the next couple of years' exhibition changeovers and audience programs.

The exhibition *Gululu dhuwala djalkiri*, winner of Best Indigenous Project will be available to visit for a few weeks, whenever we are able to reopen, in the Ian Potter Gallery. After that, we will present *Light & Darkness*, a major exhibition of works drawn largely from the University's Power Collection of international art. These kinetic, op and pop art works explore luminosity, colour, movement, race and politics across the 1960s, 1970s and 1980s. The exhibition is accompanied by a comprehensive and beautifully illustrated book published by Power Publications.

The broad themes of light and darkness frame this issue of *Muse*, and we delve into the nature of light and it's opposite, how they are measured, and how they are used. That is the unique opportunity that the breadth of our collections and subjects presents – being able to interrogate an idea or subject in multiple ways, voices, and understandings, through the Museum's collections.

In this issue, find out why moths are night insects and why butterflies evolved to be brightly coloured. Hear stories about eclipses and learn about the impact object-based-learning is having on our students.

We introduce a new exhibition of Pacific photography drawn from the Macleay historic photography collection and brought to life with songs, poems, and voices of Pacific Islander communities.

We also highlight the important contribution our donors made in 2020 providing much needed support to our programs and care of collections in what was a momentous year with the opening of the new Museum. A huge thank you to all those generous individuals who supported us.

DAVID ELLIS, Director
Chau Chak Wing Museum

In this issue

What's on

NEW EXHIBITIONS

SARAH GOFFMAN: APPLIED ARTS

OPENING LATE 2021

Applied Arts is an immersive deep dive into the interdisciplinary art practice of Sarah Goffman. Intricate and playful, Goffman transforms recycled plastics into artworks referencing larger cultural histories. For her exhibition in the Penelope Gallery, Goffman has taken inspiration from the Museum's collections, applying her detailed eye and wit to turn utilitarian vessels into objet d'art. By transforming and elevating waste, Goffman's work invites us to think about consumerism in new and interesting ways.

Sarah Goffman
Perforated bottles AD 2021
PET, acrylic paint, LED lightbox

PACIFIC VIEWS

OPENING LATE 2021

Stunning historical photographs of Papua New Guinea, Fiji, Tonga, Nauru and the Federated States of Micronesia are brought to life through the contemporary voices, songs and poetry of Pacific peoples. The images selected for this exhibition date back to the 1870s and reveal views of fragile, flourishing and diverse ecosystems nurtured by Pacific Islander peoples during a time of colonisation. Full of promise and purpose, these views are joined with Pacific Islander voices of our own time. The resonating voices and songs of Pacific peoples connect contemporary culture to the histories captured in these photographs.

Above: *Poinciana regis* c. 1935
Macleay Collections, HP2008.1.141

Visit sydney.edu.au/museum or follow us on Instagram, Twitter and Facebook @ccwm_sydney

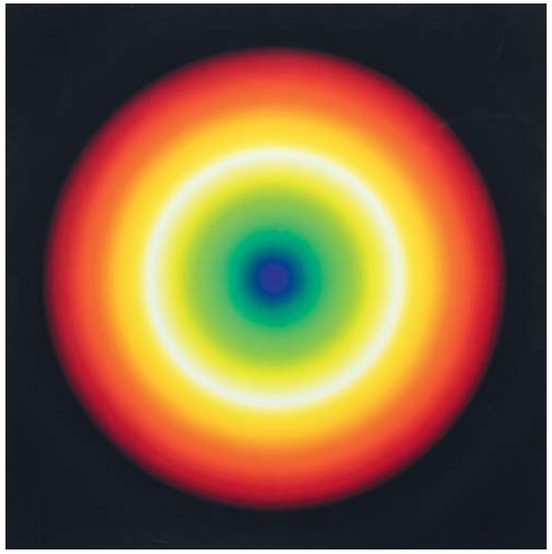
NEW EXHIBITIONS

LIGHT & DARKNESS

OPENING LATE 2021

This major exhibition unites 70 artworks from the University of Sydney's extensive Power Collection of international contemporary art. Exploring the nexus between the presence and absence of light, artists working across three decades of late modernism consider luminosity, movement and politics. Featured artists include op artists Bridget Riley and Peter Sedgley, conceptual artists Joseph Beuys and On Kawara, and painters from Australia and New Zealand, Peter Tyndall, Jenny Watson and Colin McCahon. A stunning publication featuring new writing by leading experts accompanies the exhibition.

Below: Peter Sedgley *Chromosphere* 1967
polyvinyl acetate emulsion paint on linen canvas, dichroic lamps with timer and dimming units
Power Collection, PW1967.22



ONGOING

Below: Marble head of the Emperor Claudius (AD 41–54), reworked as a head of the Emperor Titus (AD 79–81), Nicholson Collection, NM64.325

LEVEL 1

Coastline
Exploring the space where land meets sea with over 40 artists from the University Art Collection.

Auspicious: motifs in Chinese art
Discover how auspiciousness permeates Chinese culture and daily life.

Ancient cultures of the Middle East
Encounter some of the earliest cities, forms of writing, and religions in human history.

Crossroads: Ancient Cyprus
With artists working across clay, stone and metal, explore how Cyprus became a cultural powerhouse of antiquity.

Natural selections: animal worlds
Some of the most intriguing bird, mammal, fish and shell specimens from the Macleay Collections.

Probosciger aterrimus (Gmelin, 1788) *peuntu* (Gudang language, Queensland), palm cockatoo, Macleay Collections, NHB.1637.a

LEVEL 2

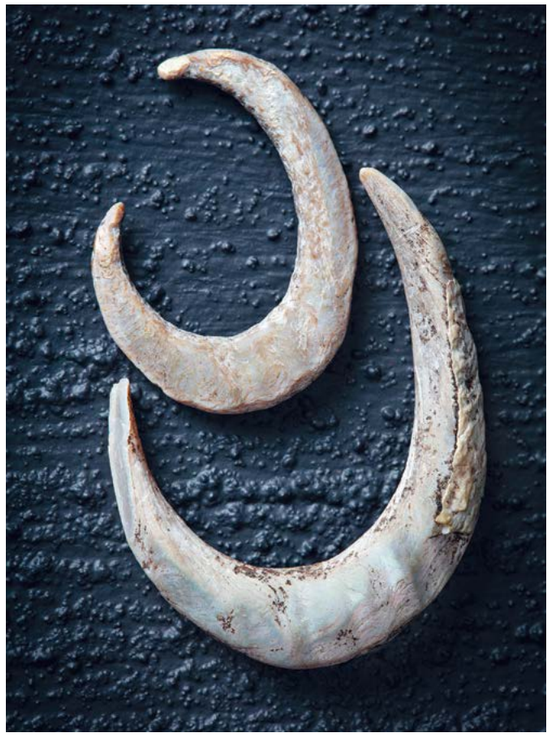
Roman Spectres
Discover the vibrant Roman world through ghostly remnants recorded in stone. The sculptures, ceramics and intricate mosaics are now headless figures, hollow-eyed faces, or fragments encrusted with the earth or sea that swallowed them millennia ago.

Impressions of Greece
Ancient Greek artefacts meet the landscapes of modern Greece, photographed by classicist and curator William J Woodhouse at the turn of the 20th century.

The Egyptian Galleries: *The Mummy Room* and *Pharaonic Obsessions*
From 19th century Egyptomania, to cutting-edge science revealing new ideas about life in ancient Egypt, these two exhibitions explore our fascination with the land of the Pharaohs.

What's on

ONGOING



AMBASSADORS
ALL FLOORS

Ambassadors is our ongoing display of First Nations culture and heritage. Throughout the Museum, you will meet 'ambassadors' from eight regions of Aboriginal Australia. Each has been curated within and informed by Aboriginal knowledge frameworks.

The objects can be understood as ancestors, and the collections as consultation tools.

Above: *Bera* (fishooks), Eora Peoples, Sydney, Macleay Collections, ET2014.1871, ET2014.1872

Below: The Cambitoglou Amphora, Athens, Greece, 510 BC, Nicholson Collection, NM2018.136

LEVEL 2

Animal Gods
Classics meets classification: ancient Greek epics retold using natural specimens. Discover how early taxonomists drew on Classical myths and legends for inspiration.

Mediterranean Identities: across the wine-dark sea
Wonders from the Nicholson Collection explore the ancient cultures that thrived on these shores.

Above: *Stater* (coin) depicting an amphora and the letters Π O, Torone, Greece, 480–465 BC, Nicholson Collection, NM2003.2

LEVEL 3

Object/Art/Specimen
An introduction to our diverse collections through six evocative themes. Antiquities, artworks, scientific objects and cultural materials are united to create thought-provoking opportunities to understand the world.

Above: Skull and lower jaw, *Thylacinus cynocephalus* (Harris, 1808), thylacine, Tasmanian tiger, Macleay Collections, NHM.1000

LEVEL 4

The Human Calculator
Artworks by JW Power, an Australian artist whose geometry-inspired paintings saw him join the avant-garde scene in 1930s Paris.

Instrumental: collections from science
Instruments from the history of optics and light.

Newton's disc, 1900–50, Macleay Collections, SC2017.149

Behind the scenes

Registration Officer Aggie Lu affixing magnetic strips to dust covers, to be deployed in the Macleay Collections' 'wet store', a collection area that holds specimens preserved in liquids.

One of our dedicated volunteers, Katt Johns, works on an audit of the bird specimens from the Macleay Collections.

Conservator, Silvia Da Rocha, cleaning a portrait of Professor Alice Tay, painted by Jenny Sands, before it goes on loan to the Art Gallery of New South Wales for the *Archie 100: A Century of the Archibald Prize* exhibition.

EARLIER THIS YEAR we welcomed our new Museum Conservator to the Chau Chak Wing Museum team. Joining us from the National Museum of Ireland, Silvia Da Rocha has come home to Sydney to care for our collections. Specialising in the conservation of natural history specimens, Silvia's experiences as an object conservator have seen her work on diverse collection items ranging from archaeology to fashion.

Macleay curator, Rebecca Conway and Dr Josh Stenberg, Department of Chinese Studies, at the hand-over of two *wayang potehi* (glove puppets) from the Fu He An Temple Troupe, Gudo, Java, Indonesia.

Student Conservator Camilla Norman assists Conservator Silvia Da Rocha measure a new acquisition, an 1896 Cox X-ray tube, one of the earliest examples of its type.

As well as documenting our public spaces, our photographer David James has also been working behind the scenes shooting the new storage spaces.

Student Conservator Camilla Norman repairing an Athenian horse from the Nicholson Collection

LIGHT & DARKNESS

Late modernism and the Power Collection

The major new exhibition in our Ian Potter Gallery tracks art movements from the 1960s to the 1980s, via highlights from the Power Collection.

ANN STEPHEN

Why must we paint darkness? We have the most complete darkness when we shut our eyes, we do not need to wait for night; night is only relative, we can run before it, and stay always in brightness ... But to praise brightness alone seems to me to be insufficient. I go to darkness itself, I pierce it with light, I make it transparent, I take its terror from it, I turn it into a volume of power with the breath of life ...
— Otto Piene, *Paths to Paradise*, 1961

THE EXHIBITION *Light & Darkness* is drawn from the Power Collection, a major legacy of the artist-benefactor, Dr John Wardell (JW) Power, a medical graduate from the University of Sydney. His great bequest challenged the University "to bring the people of Australia in more direct touch with the latest art developments in other countries," and created the Fine Arts Department and the Power Institute. The collection was launched in the late 1960s, however only now does it have a permanent home at the Chau Chak Wing Museum. The Power Collection appears like a time-capsule, "buried" when acquisitions ceased in 1989, following the formation of the Museum of Contemporary Art.

The exhibition takes its cue from the 'light works' that were a major feature of the early Power acquisitions, tracing a thematic of light and darkness. Several key works by Australian artists have been included, drawn from the University's other collections. The three decades that the exhibition spans – from 1960 to 1990 – marks the rise and fall of the Cold War and the end of the short twentieth century. Looking at late modernist art today is to recover the memory of a futurist dream of being-new.

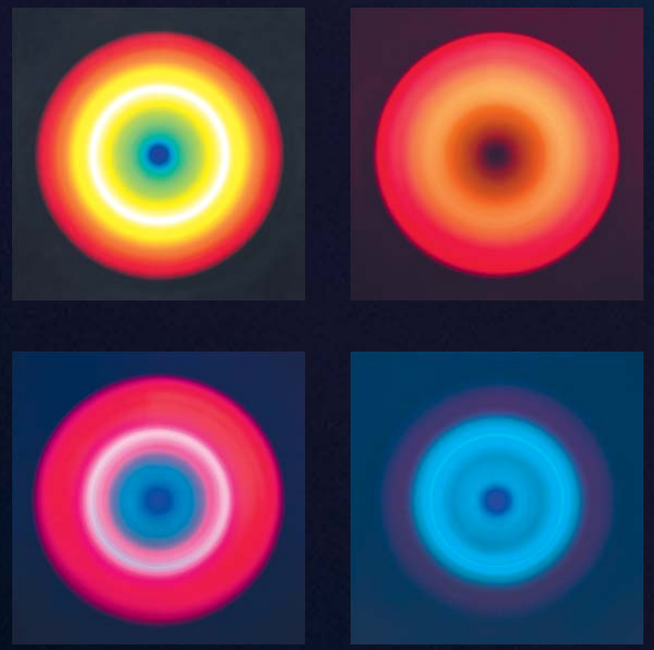
People at the time thought, and some people still seem to think, that they were paintings having to do with optical experiment … really they were an attempt to say something about stabilities and instabilities, certainties and uncertainties.

— **Bridget Riley, 1988**

The 1960s

Jean Tinguely
Bascule no 1: Sisyphus (See-saw no 1: Sisyphus) 1965
synthetic polymer paint on metal, electric motor and rubber belt
Power Collection, PW1967.25

IN 1968, the inaugural Power exhibition of luminal and kinetic artworks was installed in a darkened environment within Harry Seidler's new Australia Square in Sydney. The international Op and Pop art had been selected by the first Power curator, Gordon Thomson in 1967. It had a Western European orientation, focused on British, German and Italian neo-avant-gardes, in addition to the Paris-based group GRAV. Highlights included paintings by Bridget Riley and Peter Sedgley. The following year, Power acquisitions were made by Bernard Smith who had arrived in Venice as the Giardini's exhibition gardens were closed by students protesting about the "Biennale of capitalists". The influential Swedish museum director, Pontus Hulten subsequently reflected: "There was a general sense of hope that the future could happen only via the necessary destruction of the past."



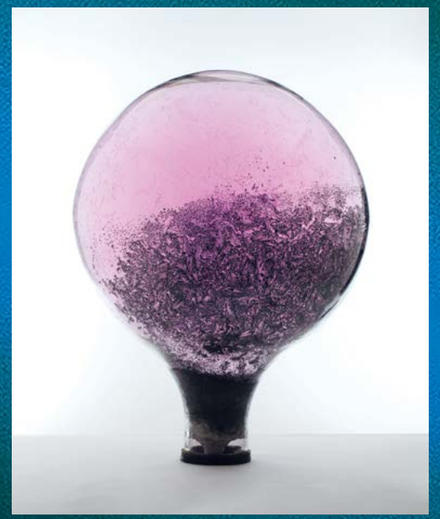
Right (details) and pages 8–12 (composite): Peter Sedgley
Chromosphere 1967
polyvinyl acetate emulsion paint on linen canvas, dichroic lamps with timer and dimming units
Power Collection, PW1967.22

If this world can provide us with aesthetic spectacles like the Empire State Building and TV relays from Mars, then is there any need for an art form restricted to similar macroscopic manoeuvres? … Once one understands that art is not in objects but in the completeness of the artist's concept of art, then the other functions can be eradicated and art can become more wholly art.

— **Ian Burn, *Conceptual art as art*, 1970**

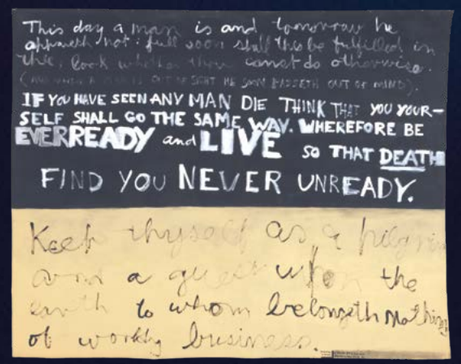
The 1970s

AS THE utopian dreams of the 1960s collapsed, many artists turned to language in search of dialogue or a more collaborative space in which to work. At a time when so-called 'International' art came to be seen in terms of the ascendancy of New York, the newly appointed Power curator Elwyn Lynn included America on his biennial acquisition trips. Through the 1970s he selected late modernist painting alongside neo-Dada collage, assemblages, and multiples like Joseph Beuys' *Filzanzug (Felt Suit)* edition which he described as more a "hair-shirt masquerading as a felt suit."



Alan Sonfist
Crytalline enclosure 1970
iodine crystals, para-dichlorobenzene crystals, gasses, silicone, glass
Power Collection, PW1970.39

Joseph Beuys
Filzanzug (Felt suit) 1970
felt, cotton, ink on synthetic fabric, metal safety pins
edition by Galerie Rene Block, Berlin
Power Collection, PW1972.5



Colin McCahon
This day a man is … 1970
synthetic polymer paint on canvas
Power Collection, PW1985.4

Painting under the impact of Post-Modernism, pluralism, the perennial 'death of painting', the distrust and sometimes downright contempt of painting ... its association with '80s excess, etc. There was a lot for a young artist to worry about.

— **Steig Persson, 2019**

The 1980s

Ulay/Marina Abramovic
Saturday 1987
colour Polaroids
Power Collection, PW1988.1

IN THE 1980s, melancholic post-modernists took on the cloak of darkness whether to symbolise the endgame of modernism or to signal once again the possibility of an iconic monochrome. This new generation, with many women artists prominent, drew upon a sophisticated mix of theory, whether psychoanalytic or photo-media critique. Outside the gallery system at the University of Sydney's Tin Sheds, a dark, femo-punk anti-aesthetic informed posters, which were amongst the final acquisitions of the Power Collection.

In 1983, the University announced a "joint curatorship" for the Power Collection with the appointment of Bernice Murphy together with Leon Paroissien. Under their tutelage the collection assumed a strong regional character which included Australian, and in particular Aboriginal and Maori art. The decision to shift the Power Collection off-campus, as the basis for a new Museum of Contemporary Art (MCA) at Circular Quay was announced in November 1984 and the final Power acquisitions were made in 1989.

The Power Collection is part of a wider endeavour inspired and made possible by JW Power's vision. The exhibition includes a range of documents, scrapbooks and posters which bear witness to the intellectual ferment and excitement that Power's gift made possible, including the Power lectures that continue to this day at the Power Institute and the teaching and research in Art History and theory that have trained many curators, thinkers and artists.

Dr Ann Stephen is Senior Curator, University Art Collection, Chau Chak Wing Museum

Ralph Hotere
Black window: towards Aramoana c.1983
synthetic polymer paint on wood, hessian, brass
Power Collection, PW1984.11

New publication

Accompanying the exhibition is a major new book, *Light & Darkness: Late Modernism and the JW Power Collection*, co-published by the University of Sydney's Power Publications and the Chau Chak Wing Museum. Edited by Senior Curator Dr Ann Stephen, the book features essays from prominent art historians and curators on every work included in the exhibition, including an illuminating introduction.

RRP $50
Available from the Chau Chak Wing Museum store, and online at www.powerpublications.com.au

KATRINA LIBERIOU

Sarah Goffman: Applied Arts

Perforated bottles AD 2021
PET, acrylic paint, LED light box

An interview with the artist on her new exhibition in the Penelope Gallery, an installation of museum replicas handcrafted from waste materials.

Black and Whites 2019–21
PET and other plastics, hot glue, enamel paint, acrylics, Posca marker

Sometimes I begin with the object I want to copy, then I have to find or make the suitable form it can be transcribed upon. But other times, I find the material and it will designate its format.

— **Sarah Goffman**

We invited you to create an exhibition in response to the University's collections. What were you most drawn to? Did anything surprise you?
SARAH: So many objects! It would take me a lifetime to choose favourites. I was delighted by the gold *dinar* [coin, of Hisham ibn Abd al-Malik, Umayyad Caliphate, AD 741–742]. The decorative *riji* (pearl shell) works by the Yawuru, Karajarri, Bardi-Djawi and Worrorra peoples [inscribed and filled with ochre from the La Grange area, Kimberley region, Western Australia c.1930] are amazing. I'd never put two and two together: the usage of shells as currency (from the sea), and gold as currency (from the earth) and how distorted contemporary monetary culture seems in relation.

I love the juxtaposition of old and new objects and art. Piranesi prints! Fiona Pardington's photographs! The giant silver epergne in *Coastline*. Ancient Greek objects, which I've never had any attraction to previously, engendered a fresh enthusiasm. Having visited Greece in the past I'd felt that 'I'd seen one pot, I'd seen them all', however this has changed through my studies at the Chau Chak Wing Museum where I've learnt to look at the paintings and appreciate them altogether differently.

Can you tell me about your exhibition *Sarah Goffman: Applied Arts*?
S: My response to the collection is many and varied. The term 'applied arts' means arts that apply design and decoration to everyday and essentially practical objects, so I have taken this definition literally in some instances. Taking artistic license (the best license in the whole world) I attempt to reproduce artefacts using thrown away objects and single-use plastics designated for recycling. Initially I was attracted to works from the Silk Road cartel but have found hundreds of other pieces that pique my interest. This exhibition catalogues some of these responses, from the pieces I've seen in storage piled up, willy-nilly in their storage bags or containers on standard shelves, to the carefully curated and considered magnificent displays on show.

I've stayed with my motive to make what I'm attracted to, so basically the exhibition features pieces (or copies of pieces) that I wish I owned. There is a large variety of works I've made. Each visit has added more enthusiasm for another category and frankly it's a bit overwhelming.

Can you talk a little about your interest in the orientalist objects of the Silk Road and your interplay with plastic?
S: I've long been a lover of Orientalism and the journey of objects along the Silk Road fascinates me. The sharing of designs for commodities and its significance is essentially aesthetic for me. Our contemporary society's situation of convenient plastics leading to environmental disaster takes on a whole new polemic. I try to use this contemporary medium as it is so abundant and dangerous. The ethics of waste in relation to my work are constantly being considered. A lot of plastics are manufactured in China, and the term 'plastic arts' is used to describe three-dimensional art so I thought it would be humourous to name my work after this, as it is made of plastic.

I recently saw the work *Seamless* (1999/2018) by American artist Sarah Sze who talks about "marking time though objects" which resonated with me when thinking about your practice, would you agree?
S: Absolutely! Each piece exists as a calendar. I may not recall anything about 2005 except when I read the lines on my CV. Art is a diary of my time on earth. French curator and critic Nicholas Bourriaud writes that "I am supposed to be what I read, what I listen to, what I look at". It connects to French philosopher, anthropologist and sociologist Bruno Latour's observation that "I am what I am attached to".

Can you talk about your process, how you go about changing a discarded utilitarian object? Is there a moment for you when its transcendence is complete?
S: Sometimes I begin with the object I want to copy, then I have to find or make the suitable form it can be transcribed upon. But other times, I find the material and it will designate its format. Finding the right container or material is a large part of the process and then cleaning it and taking it back to its initial design sometimes takes longer than the actual decorative process! There's a fantastic moment when I'm in the studio where a piece I'm working on suddenly takes on the decorative elements and is transformed. It's quite magic actually, and is often when colour has been applied. Often it isn't until I install the work within vitrines that I can say it is 'complete'.

Bibelots 2020
found badges, metallic tape, enamel paint and marker, plastic bags

Can you talk about your previous exhibitions where you have incorporated museum collections? What was the response?
S: In 2005, I made a version of the Art Gallery of New South Wales' Scholars table. I was so in love with it; it was the first time I made a direct and as accurate as possible rendition of something I adored. Except I'd heard that in the early days of the gallery the roof leaked terribly and the water would run down the walls, so I got a fish tank and installed the works in it, immersed in water. The works were mainly plastics, so I was highlighting their immiscibility in water.

In 2017 I made an exhibition, *I am a 3-D Printer* at Wollongong Art Gallery responding to their Mann-Tatlow (donated Asian art) collection, installed in the showcases the 'real' works are typically housed in. Taking the entire space, I got to realise a large simulation of what was traditionally exhibited there. The response seemed good; I remember someone telling me they'd been there while a father showed his child, but didn't understand that what they were seeing were not the actual objects but copies of them. This made me feel really good, not that I'd tricked them, but my objects were good enough to simulate the real!

Sarah Goffman: Applied Arts *is the second project in the Penelope Gallery, the Chau Chak Wing Museum's dedicated contemporary art project space.*

Katrina Liberiou is Assistant Curator, University Art Collection, Chau Chak Wing Museum

[Total solar eclipse, 1922]
unknown photographer
and location,
Geology Department
Lantern Slide Collection,
Macleay Collections,
HP90.28.5844

JAN BRAZIER

The total solar eclipse of 1922

Almost a century ago, scientists used an eclipse to try to prove one of Einstein's key theories.

IN 1922, the eyes of the scientific world were on Australia as the location where Einstein's 1915 general theory of relativity could be proved.

Einstein's theory predicted that light from stars would bend when passing near the sun's gravitational field. The way to test this theory was to photograph and measure the position of stars close to the sun, which could only be done during a total solar eclipse (where the moon obscures the sun). A British 1919 total eclipse expedition had produced results that supported Einstein's theory, but additional confirmation was required.

The next opportunity came on 21 September 1922, when a total solar eclipse tracked across the Australian continent from near Broome, across the centre, to the northern coast of New South Wales. Local and international eclipse expeditions were mounted to test the 'Einstein effect', and to study the phenomenon of a total eclipse.

An international party led by the Lick Observatory (California) set up camp at Wallal, in Western Australia, 300km south of Broome. Ten tons of telescopes and equipment were dropped off by sea and taken to the site by donkey train. In central Australia, at Cordillo Downs sheep station, the Adelaide Observatory group established their viewing camp. Pack camels transported the equipment 640km from the nearest rail siding.

Goondiwindi in Queensland was the location for the parties from the Melbourne Observatory, the Sydney Observatory and the University of Sydney. Free transport of equipment was provided by the New South Wales and Queensland governments. The university group set up its store and workshop at the back of an empty shop, with the other parties at the Goondiwindi recreation ground. Rehearsals were carried out so that everyone knew what they had to do during the three and a half minutes of totality.

The Sydney Observatory group under Professor William E Cooke, Government Astronomer (and professor of astronomy at the University of Sydney) was to test for the 'Einstein effect' which it attempted to do using its massive star camera. The results were disappointing, too poor to measure the required deflection. The group also photographed, using a photoheliograph, the sun's corona, the outer atmosphere only visible during a total eclipse, seen as a glow of light around the sun's disk. Cooke later said they were severely handicapped by their antiquated equipment.

The Melbourne Observatory group was privately sponsored by businessman Russell Grimwade, who travelled with the party and took photographs of the camp. With equipment issues, the expedition failed to take any precise photographs.

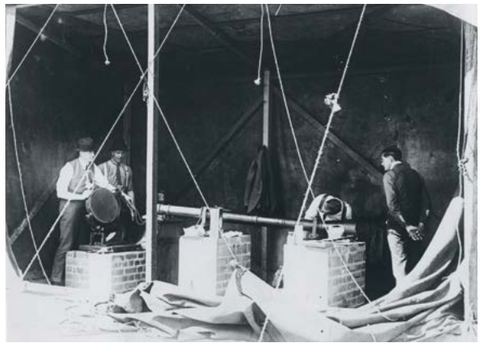
The University of Sydney party of physicists, astronomers and a mathematician, was led by acting professor of physics, Oscar Vonwiller. Its work was to photograph the sun's corona and the 'flash spectrum', to obtain a spectrum of the corona and to measure its light intensity.

The University had taken its Cecil Darley telescope which, placed horizontally with light fed by a coelostat, served as a camera, with a further two cameras fixed to its mounting. Photographs were obtained, but no Einstein effect observations made. The work with two spectroscopes gave unsatisfactory results, with problems with settings and lack of preparation time.

None of the local expeditions were able to procure precision images. It was the Lick Observatory team at Wallal in Western Australia, with its experience in eclipse work and better equipment, who successfully made the observations that confirmed Einstein's theory.

Vonwiller reported to the University of Sydney Senate in October 1922 that "Generally I think that the results obtained will justify the expedition's existence. I feel now that we undertook too much in view of the shortness of time of preparation." He thought it was good experience, however, for the future.

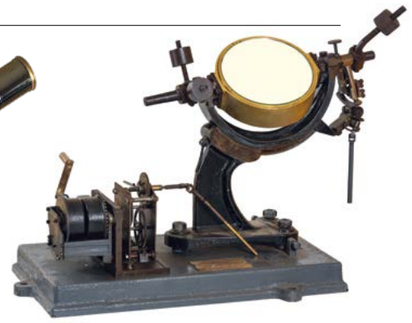
Jan Brazier is Curator, History, Macleay Collections, Chau Chak Wing Museum



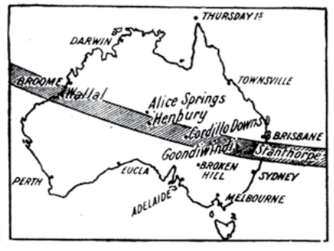
The Melbourne Observatory party checking their heliostat and telescope in preparation for photographing the total solar eclipse of 1922 at Goondiwindi, Queensland, copy print, Roy Allen Photography Album, School of Physics, The University of Sydney

The solar eclipse camera and camels, Cordillo Downs, 1922, Geology Department Lantern Slide Collection, Macleay Collections, HP90.28.6156

Cecil Darley, NSW engineer-in-chief for harbours and rivers (1889–95) donated the telescope to the University in 1901. It is now on display in the Physics Building foyer.



Coelostat, transferred from the School of Physics, Macleay Collections, SC2017.253
Coelostats reflect light from the sun into a fixed telescope, using a flat mirror turned by a motor. This instrument was made by the Sydney Technical College for use in photographing the 1922 eclipse at Goondiwindi.



'Path of Moon's Shadow'
Argus, 22 September 1922

CANDACE RICHARDS

LIGHT MY FIRE

Red figure bell *krater* (mixing bowl) featuring a Maenad and a Satyr at night, attributed to the Dijon Painter, Apulia, Italy 380–365 BC, Nicholson Collection, NM46.3

While the torch relay that precedes the Olympic Games is a modern invention, fire torches blazed throughout many rituals of the ancient Hellenic world.

ONE OF the most well-known aspects of the modern Olympic Games is the continent-crossing torch relay. It starts at the ancient site of Olympia in Greece, moves across borders and oceans and finally delivers the sacred flame to the hosting country. Perhaps less well known is that the relay is a modern invention, not part of the Ancient Olympic tradition. Based on the idea of the hearth of the Temple of Hera of Olympia being alight for the duration of the competition, it was added in 1936 to bring the 'Olympic flame' to the host city, Berlin. Even though this development was part of the Nazis' widespread misappropriation of ancient symbolism to legitimise themselves and their ideologies, it was adopted in subsequent years as part of the Games' opening festivities.

While the Olympic torch relay might be a modern invention, torches were used as part of civic and religious life in antiquity. Torch races, where individuals or relay teams were required to transport a flame, were popular in Classical Athens and were held in other Greek city-states such as Corinth, but interestingly not Olympia. The races were called *lampadedromia* or *lampas* and were part of religious festivals that honoured specific deities including Prometheus, who is said to have given fire to humanity, and Hephaistos (right), the god of fire and blacksmiths.

The Panathenaea was a city-wide festival held every year in Athens, with a Greater Athens games held in conjunction every 4 years. The festivities included a city-wide procession, immortalised in the sculptural frieze of the Parthenon, a variety of competitions from athletics to poetry and a torch relay. The winning tribe was rewarded with an ox, and individual competitors received a *hydria* (jug) worth 30 drachmai – a laudable sum.

The most unusual torch race in Greek antiquity was held in honour of the Thracian goddess Bendis. Often

Red figure lidded *pyxis* (cosmetics pot) featuring the head of Hephaistos, attributed to the Darius Painter, Athens, Greece, 350–325 BC, Nicholson Collection, NM97.188

Plaster cast of a votive relief dedicated to Bendis, original made Athens, Greece 530–525 BC, Nicholson Collection, NM2008.38

associated with the hunting Goddess Artemis, Bendis was the first foreign deity to be worshipped in Athens. Her cult, established by the late 5th century BC, was based at the port of Piraeus where her temple and altar were built. Her festival, the Bendieia, was one of the most significant for the state of Athens. Historical accounts note that the income from the sale of hides was the third largest across the Greek city states, amounting in 343 BC to 457 drachmai. Some scholars suggest it even incorporated a *hecatomb* – the sacrifice of 100 oxen at the goddess' altar.

One of the primary events of the Bendieia was the torch race on horseback, unlike any other relay. The most significant source for information about this event comes from Plato's work, *The Republic*. Socrates, having watched the procession of the inaugural Bendieia, went to leave, remarking that there was nothing left to see. Adeimantus (Plato's brother) exclaimed "Do you mean to say that you haven't heard that there is to be a torchlight race this evening on horseback in honour of the Goddess?" Socrates replied "On horseback? That is a new idea. Will they carry torches and pass them along to one another as they race with the horses, or how do you mean?" "That's the way of it."

Archaeological evidence also shows the structure of the race and the number of competitors involved. The Nicholson Collection's plaster cast of a relief sculpture in the British Museum (opposite) depicts a team of torch-racers approaching the larger-than-life goddess who wears her trademark Phrygian cap, animal skin cloak and long boots. The first two men are bearded and wear *himatia* (wrapped cloaks). The rest are naked (but with headbands) and beardless, indicating their youthfulness. Scholars had previously suggested that the bearded men could be the sponsors or trainers of the naked athletes. However, recent research by Nicholas Sekunda proposes that the two figures were commanders of the Athenian cavalry, or the tribal regiment of the cavalry the team were from. The first man holds a torch, a long thick staff with a handguard. The scene is significant as it confirms Plato's account of the Bendieia torch relay race.

Torches appear elsewhere in Hellenic art, although they look very different to those held by athletes. Vase painters often used torches to show the action of a scene occurring at night, or in an other-worldly space. These torches do not have handguards and are often much longer than their counterparts used in competitions. Scenes such as the one on a bell *krater* by the Dijon Painter from Apulia (page 19) show long torches, held in both hands by a Maenad running towards an altar, made by tying together bundles of sticks. The torches have horizontal bands along the shafts which indicate ties. A similar bundled torch is carried over the shoulder of an actor dressed as a *komast* (drunken reveller) on an *oinochoe* by the Compiègne Painter (above).

Differences in torches are significant as they tell us about the different ways in which light and flame were used in the ancient Hellenic world. Torches with handguards were specifically designed for races, whereas the festival and civic use of torches was a very different affair.

Candace Richards is Assistant Curator, Nicholson Collection, Chau Chak Wing Museum

Gnathian ware *oinochoe* (wine jug), attributed to the Compiègne Painter, Apulia, Italy, 350–340 BC, Nicholson Collection, NM54.6

Casting light in *Pacific Views*

STEVEN GAGAU & JUDE PHILP

Lantern slide, Kīlauea Volcano, Hawai'i, early-mid 20th century, Macleay Collections, HP2008.1.142

The upcoming exhibition in our photography gallery explores the Pacific in new light, through historic photographs, and the voices and songs of Pacific peoples.

PACIFIC VIEWS reveals the fragile, flourishing, and diverse ecosystems nurtured by Pacific Islanders during a time of colonisation and missionisation. Music and language are central to Indigenous Pacific peoples' identity so it was essential to us that visitors to the exhibition could hear from Pacific Islanders through audio recordings, oration and poetry. These resonating voices and songs of Pacific peoples connect contemporary culture to the histories captured in the photographic images.

When we first worked to locate Pacific landscape images in the historic photography collection for the exhibition, we expected only images of sepia, greys, and whites. This was true of the photographic prints and albums, but there were also images we found that transported us to a brightly colourful world through black and white images that had been individually hand coloured. These images were lantern slides, made for an old form of image projection.

Lantern slides are made from two pieces of glass, one with the photographic positive, the other a protective glass 'cover', which were sandwiched together for use in a projector. Images were shown by casting light through the glass slide and enlargement lenses onto a wall or sheet. This technology was originally developed for hand-drawn images but quickly converted for photographic projections from the 1850s.

Immensely popular, lantern slide shows were part of popular entertainment, travelogue-style documentaries, and education. It was through lantern slides that many Pacific peoples were introduced to the Europeans' places of origin, their biblical stories, and humour. Pioneer anthropologist Alfred Haddon used lantern slides in his visits to Torres Strait and New Guinea, writing: "When a group of children were thrown on the screen, I asked if any of them were there present and I got a lad and a lass to come before the screen and stand by the side of their portraits taken 10 years before [1888]. There was a photographic interlude and I gave another lantern show of ... decorative art and native animals."

At the same time, students at the University of Sydney were learning about foreign places in the same way, with slides showing geographic and geological features, everyday life, buildings and places of prestige. It is these images employed for University students from the 1870s through to the 1970s that are used in *Pacific Views*.

Many visitors will see in the images parts of their own family histories, as these images directly connect with colonial administration, missionary endeavour, tourism and economic opportunity. Sensational events of the past were captured, such as the 1937 volcanic eruptions of Kalamanagunan, on the emerging colonial centre of Rabaul, pictured long before Kalamanagunan changed the view physically and personally.

Captured too are images pregnant with future events – such as the opening image of the exhibition, a peaceful coconut tree against the bright moon at Pearl Harbour. This place is now synonymous with North American involvement in the Pacific campaigns of World War Two.

This sense of future is the pathway visitors are welcomed to follow in *Pacific Views* through photographic prints, albums and reproduced images, accompanied by the voices of poets from across the region. Through QR code links, visitors can listen to songs, thanks to a partnership with PARADISEC, the international sound archive based at the Conservatorium of Music.

Pacific Views brings to life the historic landscape images, voices, songs and poetry of Pacific peoples, evoking emotional and exciting rediscoveries of the past, and capturing contemporary perspectives on history and culture.

Pacific Views, *co-curated by Steven Gagau and Jude Philp, will open in late 2021.*

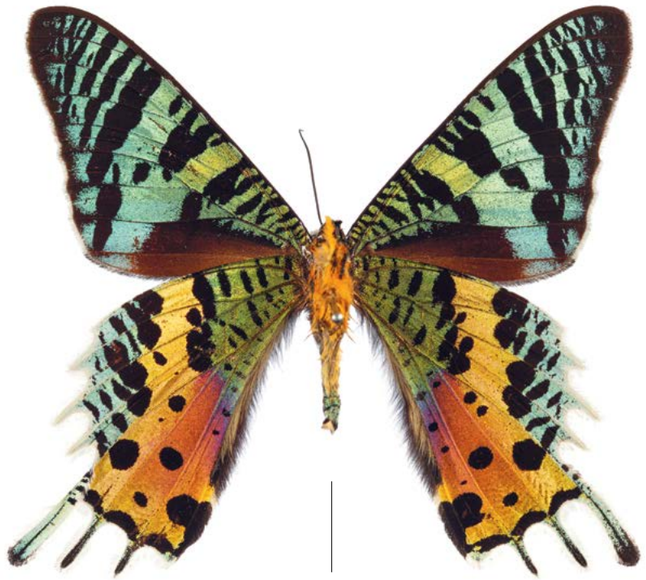
Steven Gagau is a Research Support staff member at PARADISEC at the Conservatorium of Music, University of Sydney. Dr Jude Philp is Senior Curator, Macleay Collections, Chau Chak Wing Museum.

From top:

Lantern slide, Royal Palm Avenue, Hawai'i, early-mid 20th century, Macleay Collections, HP2008.1.132

Lantern slide, *Poinciana regis*, unknown Pacific location, early-mid 20th century, Macleay Collections, HP2008.1.141

Pearl Harbor c.1930, O'ahu, Hawai'i, lantern slide, Macleay Collections, HP90.28.2640



MATT HUAN

FLIGHT BY LIGHT & NIGHT

How did moths and butterflies adapt to life in the presence and absence of light?

EVOLUTIONARY BIOLOGISTS believe that around 100 million years ago, the earliest butterflies evolved from moths. This was driven by opportunities to capitalise on a new food source: nectar from flowering plants, which first emerged 30 million years earlier. In switching to a diurnal lifestyle (being active in the day), major adaptations to butterfly eyes were the enhanced perception of colour and resolution. Ultraviolet (UV) vision helps them detect 'nectar guides' on flowers as well as UV markings on some species' wings for conspecific recognition. Unsurprisingly, their brilliant colours evolved as a response to mate attraction, where females prefer males bearing brighter or more exaggerated colours. This in turn makes butterflies our most beloved of all insects.

Madagascar Sunset Moth

Chrysiridia rhipheus
Lamberton Collection, Macleay Collections

Not all moths are active at night. Many day-flying species have colours that can rival or even surpass those of butterflies. This moth is arguably considered as the most colourful insect in the world. Dru Drury, the eminent entomologist, thought it was a butterfly when he first described it in 1773.

Bright Oakblue Butterfly

Arhopala meander
Macleay Collections, NHEN.61859

The iridescent violet of the Bright Oakblue is due to the arrangement of photonic crystals on its wing scales, rather than from pigments. This is a form of 'structural coloration'. Such bright colours evolved due to sexual selection, where females prefer males bearing brighter or more exaggerated colours.

Granny's Cloak Moth

Speiredonia spectans
Macleay Collections, NHEN.63153

With its super-sensitive ultrasonic hearing, this moth can detect and avoid different species of microbats that hunt by echolocation using different sound wavelengths.

The collective noun for a group of moths is an eclipse – evoking a sense of mystery, darkness and gloom. They are often considered as the dull counterparts to butterflies, though not without good reason. When they are active at night (nocturnal), visual perception is drastically reduced. Resources that would have gone into colour development are better used to improve survivability: thick furry bodies that conserve heat, heightened sensitivity of their other senses, and the development of superposition eyes. With these, moths can see images up to 1000 times brighter than butterfly eyes, though with lower resolution. This enables them to detect dim, faraway light from the moon and stars which they use as compasses to find their way via a sophisticated system of celestial navigation.

Matt Huan is Collections Officer, Macleay Collections, Chau Chak Wing Museum

Glasswing Phantom Butterfly

Haetera macleannania
Lamberton Collection, Macleay Collections

The counterpart to day-flying moths, some butterflies are active only during sunrise, sunset and twilight hours – a behaviour that is termed as 'crepuscular'. This is one such species, with transparent wings that render the butterfly almost invisible to many predators. It also has an anti-reflective coating of wax over its wing surfaces to minimize glare.

Seeing in Colour

KELSEY
MCMORROW

A recent scientific instrument acquisition reveals how tests for colour blindness were developed in the late 19th century.

AMONG THE scientific instruments of the Macleay Collections is this dome-shaped, black-painted lantern – a recent acquisition from the University's Discipline of Physiology. A clue as to its use and significance is provided by an engraved copper plate on the base, reading 'Edridge Green Colour Perception Lantern'.

Frederick William Edridge-Green (1862–1953) was an English physician. He earned his Doctor of Medicine in 1889 and was awarded a gold medal for his thesis on colour vision and colour blindness. Colour vision deficiency had become a subject of increasing interest in the 19th century following a rise in transportation accidents. Researchers theorised certain incidents could be explained by colour-blind workers misinterpreting coloured signal lights. When Swedish physiologist Frithiof Holmgren developed a test for colour blindness in the 1870s (requiring examinees to match coloured samples of wool), it quickly became a standard examination for employees and recruits in the railway and shipping industries.

Edridge-Green's thesis and subsequent publications strongly criticised the use of the Holmgren Wool Test. In a series of experiments, he found a number of 'dangerously' colour-blind people were still able to pass the test. Further, he argued, to best determine a worker's capacity to safely perform a job, colour-blindness tests should better represent what employees were expected to do in the field. As a result, he recommended an alternative test of his own design – the Edridge-Green Colour Perception Lantern.

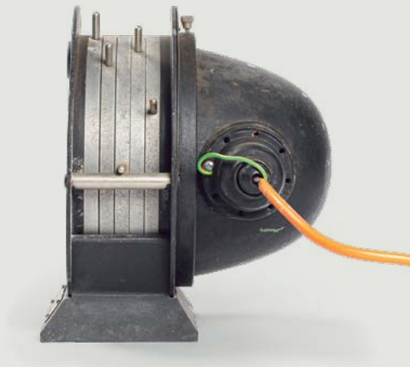
Edridge-Green first described his lantern test in 1891. The updated version seen here was likely made after 1920. It is fitted with an electric lamp and features five rotatable discs, each with an operating handle. The discs are variously fitted with coloured filters, used to represent the signal lights encountered by railway and ship workers; clear, ground and ribbed glass filters, simulate weather conditions like rain, fog, and clear skies; and differently sized apertures imitate how signal lights would appear from a distance. A scale on the reverse indicates which options have been selected. To successfully pass the test, candidates had to accurately name each coloured light produced alone, and in combination with the modifying glass filters and apertures.

Edridge-Green's work attracted much attention, but his criticisms of the widely accepted Holmgren Wool Test surrounded him with controversy. His research and Colour Perception Lantern were both rejected, even after he was made a member of the International Code of Signals committee in 1892. That same year, after being presented Edridge-Green's work, The Royal Society voted to continue recommending the Holmgren test for assessing ship and railway workers.

Despite these setbacks, Edridge-Green continued to campaign for the acceptance of his lantern test and over the years, professional opinion gradually shifted. Researchers began validating Edridge-Green's work and also noted faults with the Holmgren test. Finally, in 1915, the Board of Trade chose to cease use of the Holmgren test and instead adopted a lantern test based on Edridge-Green's design. The Royal Navy and the railways soon followed suit and in 1936, he was awarded the Thomas Gray Memorial Prize for his invention.

Edridge-Green maintained an interest in colour vision throughout his lifetime and regularly visited the manufacturing facilities of his Colour Perception Lantern right up until his death in 1953. His obituary in *The Lancet* (25 April 1953, p.856) described him as "... the inventor of the first efficient test for colour-blindness". Today, several transport industries still utilise lantern tests for colour blindness.

Kelsey McMorrow is Curatorial Assistant, Macleay Collections, Chau Chak Wing Museum



Edridge-Green Colour Perception Lantern, 20th century, manufacturer unknown, transferred from the School of Medical Sciences, Discipline of Physiology, Macleay Collections, SC2021.16

Shifting attitudes in the nuclear age are illuminated through objects in our collections.

No Nukes!

CHRIS JONES

THE FLASH of an atomic explosion emits enormous amounts of thermal radiation as visible, infrared, and ultraviolet light. An initial reaction of awe was soon replaced by horror and concern. The shifting attitude and growing opposition throughout the 20th century to nuclear weapons and power generation is reflected in objects in our collection.

In the 24 September 1945 issue of *LIFE* magazine, William L Lawrence, science reporter for the New York Times, provided a witness account of the atomic bomb being dropped on Nagasaki, Japan on 9 August 1945: "Out of the belly of The Great Artiste a black object went downward ... Despite the fact that it was broad daylight in our cabin, all of us became aware of a giant flash that broke through the dark barrier of our arc-welder's lenses."

The same *LIFE* magazine article included photographs taken by *LIFE*'s photographer FW Goro of the results of the first atomic bomb in New Mexico (code named Trinity), detonated on 16 July 1945. The intense heat of the blast melted the desert sand 60 miles from the town of Alamogordo, resulting in a half-mile incrustation of sea-green glass – a new mineral called trinitite.

Goro's photograph of the "weird shapes of crude glass" makes a striking image, and was used by the University of Sydney Chemistry Department to create a lantern slide. This slide, and others in the collection depicting the results of an atomic explosion, were used for teaching.

The *LIFE* article expressed awe and curiosity at the power of an atomic bomb, at the same time questioning Japanese claims of ongoing effects of radiation caused by the explosion. However, after Operation Crossroads, the name given to atomic bomb tests at Bikini Atoll in 1946, the dangers of radioactive fallout became clear – the atoll became uninhabitable.

Although anti-nuclear protests started as early as 1946, after the Daigo Fukuryū Maru (Lucky Dragon 5) incident where a Japanese fishing boat crew were contaminated by the nuclear fallout from a test at Bikini Atoll on 1 March 1954, protests started to gain momentum. The incident, that caused the fishermen suffering and death, was widely reported in newspapers around the world, including Australia.

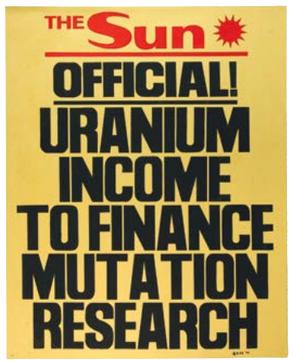
In 1954, Professor Harry Messel established the Nuclear Research Foundation at the University, now known as the Physics Foundation. Its purpose was to raise funds to develop and support research within the School of Physics. One of the floats in the Commemoration Day procession in May that year featured students demonstrating against Messel's plans. Their banner read "Atomic age/ misguided Messels".

Uranium, a fuel for nuclear power plants, was discovered in Australia as early as 1906, and was being mined and exported by 1954. Large deposits of uranium discovered in 1969 increased the scale of mining activity. Uranium mining became the focus of protests in the mid-1970s. While in opposition, the Australian Labor Party passed a motion at their 1977 National Conference in favour of an indefinite moratorium on uranium mining. The Earthworks poster collective produced a poster protesting uranium mining in the same year. The artists, Chips Mackinolty and Colin Little, parody *The Sun* newspaper to highlight concerns about the use and effects of uranium.

Nuclear testing in the Pacific started in 1946, by the United States, at Bikini Atoll in the Marshall Islands. Between 1966 and 1996, France conducted 193 atmospheric and underground nuclear tests at Moruroa and Fangataufa atolls in French Polynesia. The Nuclear Free and Independent Pacific (NFIP) group grew out of the first regional Nuclear Free Pacific Conference in Fiji in 1975. The NFIP brought together two strands of political activism: opposition to nuclear weapons (and the nuclear industry generally) and opposition to colonialism. Several posters in the collection promote the message of the NFIP. One example is a poster by the Melbourne based collective Redletter Press. Designed by Wendy Black in 1983 the poster uses the three languages of Vanuatu (Bislama, French and English) and images from Gauguin paintings of Tahitian women. The NFIP 1983 conference was held in Vanuatu.

The Chau Chak Wing Museum collections document a long history of resistance to nuclear weapons and nuclear power generation. They provide a useful window on political and social movements illustrating the thoughts of those that were horrified by the power of nuclear technology. Although plans for a nuclear power plant in Australia have been halted several times, uranium is still mined and exported to this day.

Chris Jones is Collections Manager, Chau Chak Wing Museum



Clockwise from opposite bottom left:

Chips Mackinolty and Colin Little, *Official! Uranium Income to Finance* Mutation Research, 1977, University Art Collection, UA2014.405

Max Dupain, *Commemoration Day procession*, May 1954, University Art Collection, UA1996.49

FW Goro, *Close-up of crater's surface after the atomic explosion*, July 1945, Macleay Collections, HP84.23.719

Wendy Black, *Nuklia Fri Pasifik*, 1983, University Art Collection, UA2014.706

Pam Debenham, *No nukes/ no tests*, 1984, University Art Collection, UA1990.44

Shedding light on a tiny oil lamp from Lachish in the Middle East.

Lamplight

SUSAN WRIGLEY

Saucer lamp, Late Bronze Age c.1200 BC, Fosse Temple III, Lachish Nicholson Collection, NM52.126

WE ARE often asked by the school students visiting the Museum as part of our education program about our favourite artefacts in the collection. My answer always includes the clay oil lamps from around the Mediterranean, with their sooty nozzles so evocative of their past use.

This saucer lamp was found during the 1932–38 excavations of the so-called Fosse Temple at Tell ed-Duweir and dated by the excavators to the Late Bronze Age. The site was a fortified city near Jerusalem, destroyed and rebuilt a number of times from the Middle Bronze Age through to the Iron Age. The sponsors of the excavation hoped to prove that Tell ed-Duweir was the site of the Biblical city of Lachish, and to link the destruction levels with events recorded in the Bible as well as on triumphal reliefs carved on the walls of Sennacherib's palace at Nineveh (now in the British Museum). Unfortunately, the excavations of the 1930s came to an end when the director of the project, JL Starkey, was murdered on the road between the site and Jerusalem. Veronica Seton Williams, a pioneering Australian archaeologist, recorded the effect on the team in her memoirs: "without Starkey's drive, energy and enthusiasm all hope of clearing the great mound vanished." Excavations at the site resumed in the 1960s and then the 1970s, with sponsors including the Australian Institute of Archaeology, and continue today.

This lamp is wheel-made of unslipped reddish clay with some fine limestone inclusions, and has a rounded base scraped smooth. It has a sharply pinched nozzle to hold a linen or woollen wick out of the saucer filled with olive oil which would have burned with a bright clear flame. Lamps have been found at Lachish in temples, tombs and houses, but the expense of fuelling the several lamps required to light even a small room must have made their use something of a luxury. The collection of lamps piled in a niche next to the altar in the Fosse Temple, near where this lamp was found, suggests their importance as part of cultic ritual. Also of interest is their use at Lachish and across the southern Levant as part of Late Bronze Age votive deposits, when a lamp was buried under a floor nestled between a pair of bowls, the top bowl upturned to serve as a cover. Our sooty little clay lamp, like so many of the artefacts in the collection, lets us see something about the people who used it – and about those who found it again.

Susan Wrigley is an archaeologist and an Education Officer, Chau Chak Wing Museum

Infrared Reflectography can be used to reveal hidden details and designs.

Long wavelengths

THÉRÈSE HARRISON

Tapa barkcloth
Macleay Collections, ET86.3.2
top: visible light image
bottom: IRR image revealing tapa design details
photographs by Thérèse Harrison, Sydney Analytical and David James, CCWM

TAKING ADVANTAGE of a revolution in scientific technology, a formal collaboration between the Chau Chak Wing Museum (CCWM) and Sydney Analytical, one of the University of Sydney's Core Research Facilities, began in 2018.

Advances in the portability, sensitivity and affordability of scientific instrumentation, used to probe questions of materiality, craftsmanship and provenance in cultural heritage artefacts and museum collection materials, has driven investigations out of dedicated analytical laboratories and into gallery conservation labs and public spaces.

One such area of advancement is in Infrared Reflectography (IRR). The technique is commonly used to look through layers of paint and reveal underdrawings that can sometimes reveal changes in an artist's composition, hidden marks and signatures, and other clues that may support the authentication or provenance of a work of art. This is possible because longer infrared wavelengths of light can transmit through paint layers comprised of mineral pigment particles suspended in an organic binding material. Beyond the paint layer, a sketch or drawn line may be perceived because dark, carbon-rich materials absorb infrared light whereas lighter surrounding areas, such as a white painting ground, reflect infrared light. This contrast, when imaged, can bring new details of the making of an artwork to light.

While the technique has been around for nearly a century, recent improvements in digital camera technology have enabled affordable and accessible opportunities to noninvasively experiment with collection materials and to test the potential of a technique historically aimed at old master paintings.

Collaborative efforts have been turned on Pacific barkcloth objects with startling effect. The organic paint or coating material that provides a rich red-brown colour to the tapa appears transparent to infrared wavelengths, and the drawing material below appears in stark contrast to the natural fibre substrate. The resulting images beautifully illustrate details of the repeated geometric designs and clarify points of draughtsmanship that lend a new view into production methods and design.

Thérèse Harrison is Professional Officer, Museums Analyses, Sydney Analytical

The chance to handle museum objects brings study to life for students across University disciplines.

RENAE COLES

Museum as classroom

Above: Anatomy students studying mounted human foot bones (ET89.8.23), practice observation, analysis and communication skills in a new context

Left: A history student presents her interpretation of British and modern European history through art (UA1865.5)

Dalyell Scholars discover creative ways to connect artefacts, specimens and instruments from across the Chau Chak Wing Museum collections.

WHEN SIR CHARLES NICHOLSON created Australia's first university museum, it was his vision that it would allow students to develop a material understanding of history and culture through getting up-close to artefacts and artworks. As the University's collections grew, the scope for hands-on learning broadened to include more diverse cultures and disciplines. The Chau Chak Wing Museum was designed to take this to the next level, with three purpose-built teaching spaces and a new, wide-reaching program.

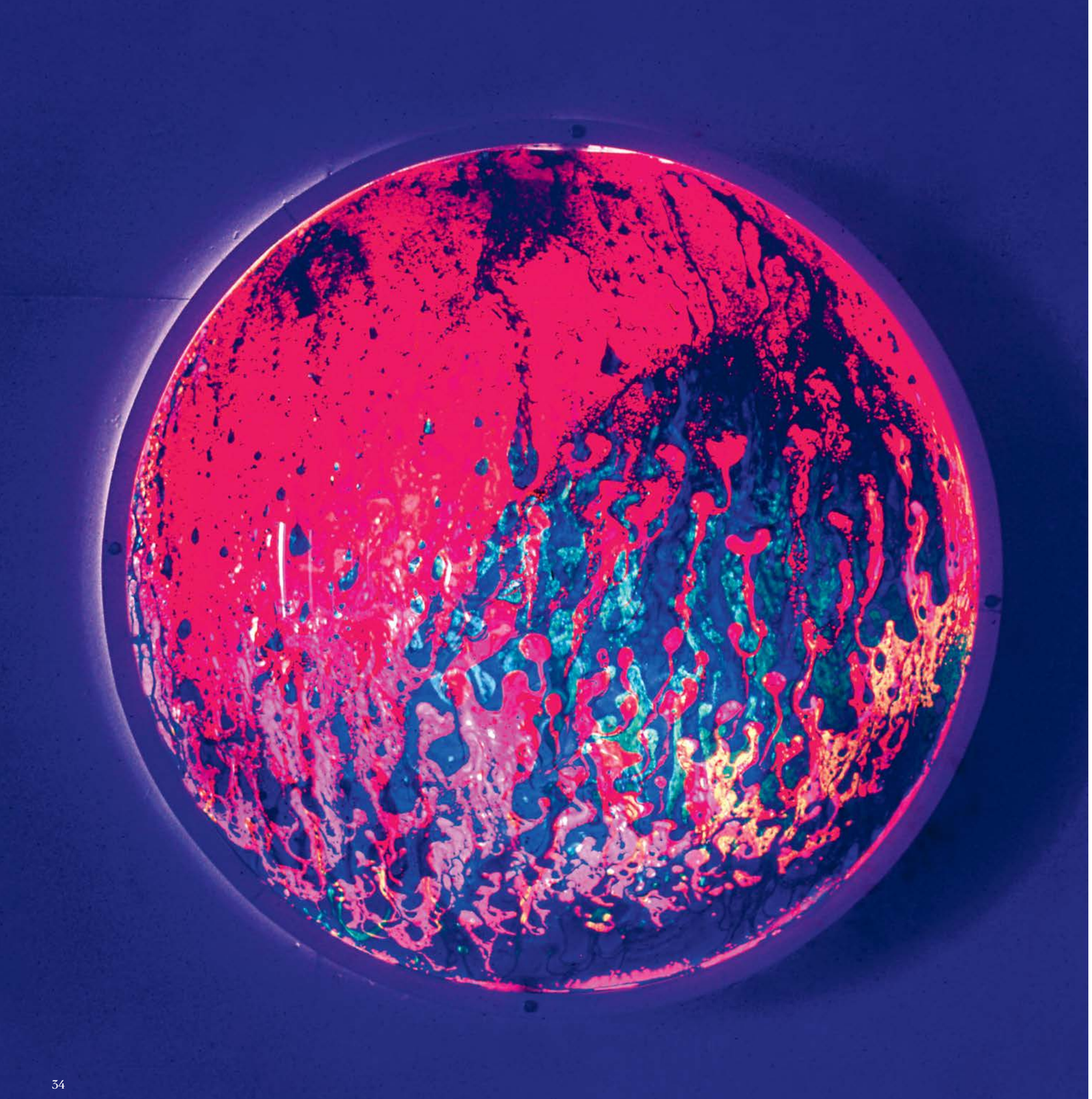
Facilitated by Academic Engagement Curators, Dr Eve Guerry and Jane Thogersen, the object-based learning program launched in semester one this year, with classes from across the entire University. Students are given hands-on access to collection items connected to their course or research topic. For example, art students went beyond looking at works; they handled and examined sculptures, prints, paintings and much more, to analyse how they were made or discover hidden notes on the back of a canvas.

A particular highlight from the first semester of this new program was a series of twelve interdisciplinary workshops for staff and students hosted in partnership with the Sydney Southeast Asia Centre (SSEAC). With the goal of activating transdisciplinary skills and perspectives, participants were presented with diverse objects and activities exploring histories, concepts and issues relating to Southeast Asia. "This collaboration with SSEAC allowed undergraduate students to engage with their peers from all across campus," Eve said, "and the transdisciplinary and multicultural perspectives provoked by the collection items were rich and enthralling."

This semester, the University of Sydney Business School introduced over 2000 postgraduate students, both online and on-site, to the Museum's collections, to explore creative and analytical mindsets. Anatomy students from the Faculty of Medicine and Health examined mummified human remains and the medical imaging technology featured in *The Mummy Room*. Most schools within the Faculty of Arts and Social Sciences worked with the Museum, with classes including languages, education, archaeology, social justice, and history, spending time in the object-based learning studios and examining the collections online. Semester two will welcome new cohorts to the Museum as the program continues to grow.

Tim Allender, Professor and Chair of History and Curriculum, Faculty of Arts and Social Sciences, said "the preparation and careful distilling of the craft of the museum was superb. Our students were full of beans after this experience and even keener to get into their respective classrooms in a few weeks' time. What more could we ask for?"

Renae Coles is Marketing Communications Officer, Chau Chak Wing Museum



Bruno Contenotte
Translumen east 1969
immiscible liquids, moulded synthetic polymer sheets, fluorescent lights and fittings, electric motor and timer, steel, synthetic polymer paint
Power Collection, PW1970.8

SILVIA DA ROCHA

A walk in the sun

Our new Conservator on why light is of such interest in her field of expertise.

TO QUOTE a well-loved poetess of pop (Cyndi Lauper):

Some boys take a beautiful girl
And hide her away from the rest of the world.
I want to be the one to walk in the sun ...

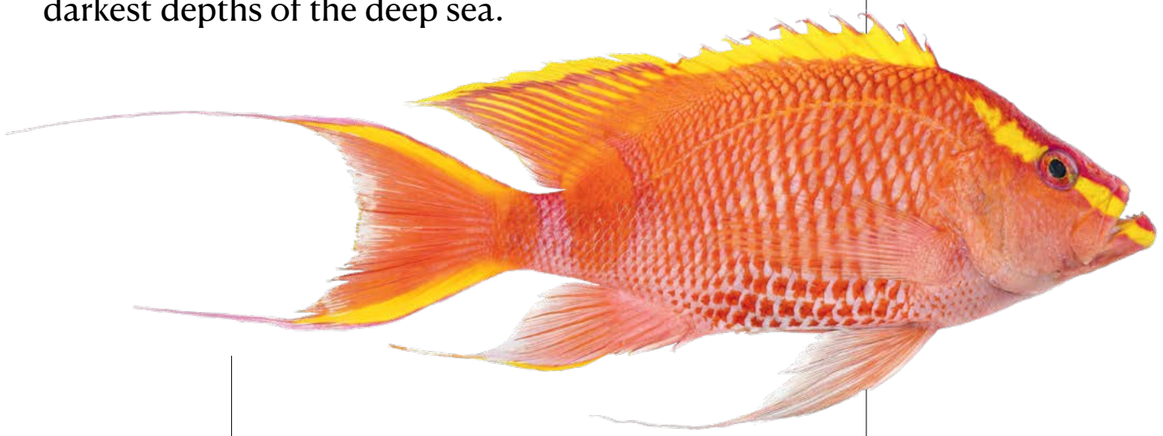
And so it is with conservators and museum objects. Conservation is principally a Material Science with a basis in chemistry, biology, and physics. We use these keystones to help us understand how objects act in certain environments, over a period of time. The end game – which we concede may be a little impossible – is to make things last forever. One important lesson we learn quickly as newborn conservators is both practical and poetic. We *save* things so that the public can continue to *see* them. But this very act of seeing encourages a process of slow irreversible, inevitable damage.

Light is a wave of energy projected from sun or lightbulbs. These waves of energy fall on and bounce off surfaces, exciting molecules. Our eyes perceive this process as visible light and colour. But this perpetual excitation of molecules is ultimately harmful to matter. The more that molecules excitedly dance under light wavelengths, the more they start to physically change. We see this change as a fading of dyes, the cracking of varnish, or the deterioration of plastic. Ultraviolet (UV) rays, which are invisible to our human eyes, are even more harmful. We try to avoid this damage by minimising direct sunlight, and making sure our bulbs don't emit UV rays. We understand that an artwork's time in the sun is finite, so we measure the light and the time it can be out, and we move them into darkness when we feel like it's time to reserve their beauty for the next generation. This is why we 'rest' objects.

In our new major exhibition *Light & Darkness*, we have many artworks that flirt with and use this tension for startling visual effect. In Bruno Contenotte's *Translumen east*, UV light's ability to cause fluorescence here creates a swirling blue,red and purple shimmering psychedelic vision, best experienced in the dark. In this case, we will allow the usually unwelcome UV light into the room to do its visual magic. When it has spent its time in the light, or in this case the blacklight, this artwork and others from the exhibition will be put back into their dark and protective crates, to await their next time in the sun.

Silvia Da Rocha is Conservator, Chau Chak Wing Museum

Some of the most brightly coloured of all fishes can be found in the darkest depths of the deep sea.



One of only four known museum specimens of *Dactylanthias aplodactylus*, a very rare but widely distributed Indo-Pacific anthiadine species. The photo is of the specimen, from Nauru, when it was freshly dead, taken by JJ Pogonoski, © CSIRO Australian National Fish Collection

TONY GILL

Tails from the Twilight Zone

COLOURS DROP out as you descend into water, beginning with low-energy, long wavelength red and ending with violet at the other end of the spectrum, eventually leading to complete darkness in the deep sea. Much of my research in recent years has been on anthiadine basslets, a group of fishes that is most diverse in reefs within the mesophotic or twilight zone, where very little visible light penetrates, and most things appear in shades of grey. These depths are beyond the range of conventional SCUBA, and mesophotic reefs are among the most poorly studied ecosystems in the world.

The research is aimed at improving our understanding of the diversity, classification and distribution of anthiadine basslets, many of which are very rare or new to science. Some of the new species have turned up on my own doorstep, off the central coast of NSW. Despite appearing grey and drab in their poorly lit natural environment, basslets are among the most brightly coloured of all fishes, variously dressed in vivid hues of red, orange, yellow and violet.

My studies are based on existing museum collections, such as specimens housed in Australia's state and national fish collections. These specimens have accumulated over the past few decades from exploratory trawl surveys around Australia. The studies seek to describe and differentiate each species and involve carefully counting and measuring structures on the specimens. One of the major challenges is in determining the live colorations of the now-brown preserved specimens. In some cases, specimens were photographed prior to preservation, but even then, the photos are often inadequate for addressing sexual and other colour variation in the species. To make things more difficult, most anthiadines are protogynous hermaphrodites, beginning life as females and later changing sex to become males. An understanding of coloration is important to allow field identification of anthiadines and other mesophotic fishes, such as when viewed from unmanned submarines (Remote Operated Vehicles or ROVs). These in turn provide critical insight into the secret lives of these hidden gems, and to our understanding of mesophotic reef ecosystems.

Dr Tony Gill is Natural History Curator, Macleay Collections, Chau Chak Wing Museum

Tosana niwae, an anthiadine basslet from southern Japan, Taiwan and the South China Sea. Two new closely-related species have been discovered in deep reefs off Australia, one from off Western Australia and the other from off Queensland and New South Wales. This individual, a male *T. niwae* from the Izu Peninsula, Honshu, Japan, was photographed in an aquarium by K Zeze.

A student interrogates a painting in the object-based learning studios.

Building visual literacy

The power to see more deeply thanks to a generous donation from Penelope Seidler.

GEORGE DODD

AS IMAGES begin to rival words as tools for conveying information, there is a growing need to understand what that shift means. A generous donation to the University of Sydney will allow students to improve their image literacy and researchers to understand the benefits and pitfalls of this image revolution.

While we might contemplate the meaning and effects of infamous or iconic images, what about the huge number of images that bombard us every day? What do they mean? How do they affect us? How can we know if they're truthful or misleading?

Answering these questions takes us into the field of visual literacy, a key area of interest for prominent architect, Penelope Seidler AM. "The visual is becoming more and more the way ideas are disseminated, and that needs investigation," Seidler says. To that end, Seidler has made a major donation to the University of Sydney to establish a new Visual Understanding Initiative (VUI).

It goes without saying that advertisers and media outlets craft images to convey particular information, attitudes and expectations. But visual literacy also gives a deeper understanding to the symbolism in art and allows more information to be perceived in images from disciplines like medicine, science and architecture.

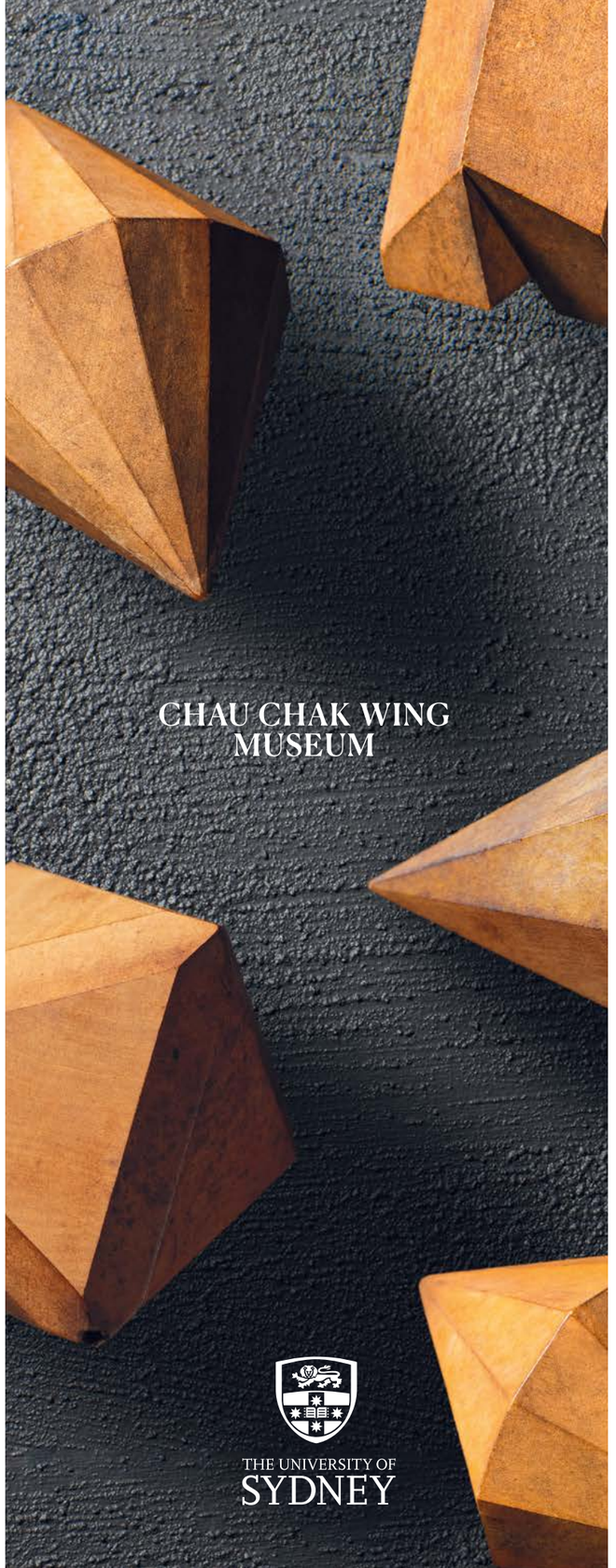
"I don't know that anything like the initiative currently exists in Australia," comments Professor Mark Ledbury, who will establish the VUI in his role as Director of the Power Institute, the University's foundation for visual art and culture. The Power Institute was established in 1962 by a bequest from JW Power who believed strongly in the power of visual artists to communicate ideas. "It's not a new thing. Visual codes have been used for tens of thousands of years to communicate," says Ledbury. "Indigenous culture particularly can teach us a lot about how knowledge can be encoded in images."

In dedicated learning spaces at the Chau Chak Wing Museum, students will be taught to interpret and analyse images in daily life. The VUI will also see researchers collaborate in multidisciplinary investigations into how images can shape society, affect health and wellbeing, and disseminate both information and fake news.

The general public will take part through podcasts featuring scholars and experts decoding widely distributed images from memes and advertisements. "Thanks to this generous gift,' says Ledbury, "we can show how the training, skills and knowledge of people in the arts apply more widely to society."

George Dodd is Alumni and Donor Content Specialist, the Advancement Portfolio, University of Sydney

To find out more about this story or to help support the Chau Chak Wing Museum, please call Holly Vale on +61 2 8627 8818 or email development.fund@sydney.edu.au



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Left: details of wooden teaching models of crystal structures, Macleay Collections, SC1991.58

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Patricia Biggers; Danny Blackman; Peter Campbell; Vanessa Cruise; Pauline Dellow; Lesley Gent OAM; Jane Harris; Rosita Hohlenberg-Gibson; Patricia Howard; Dr Monica Jackson; Alexandra Kelly; Peggy Knott; Jennie Lindbergh; Astrid Lodens; Jennifer Manton (dec); Patricia Priestley; Professor Roberta Shepherd AO; Barbra Wagner; Arthur Witten and numerous donors who wish to remain anonymous.

SPONSORS AND GRANTS

Australian Research Council (ARC) Discovery Project Grants:
Excavating MacGregor (DP150103518)
Reclaiming indigenous performance in southeast Australia, 1935-75 (DP180100938)
ARC Linkage Grant: Reconstructing museum specimen data through the pathways of global commerce (LP160101761)

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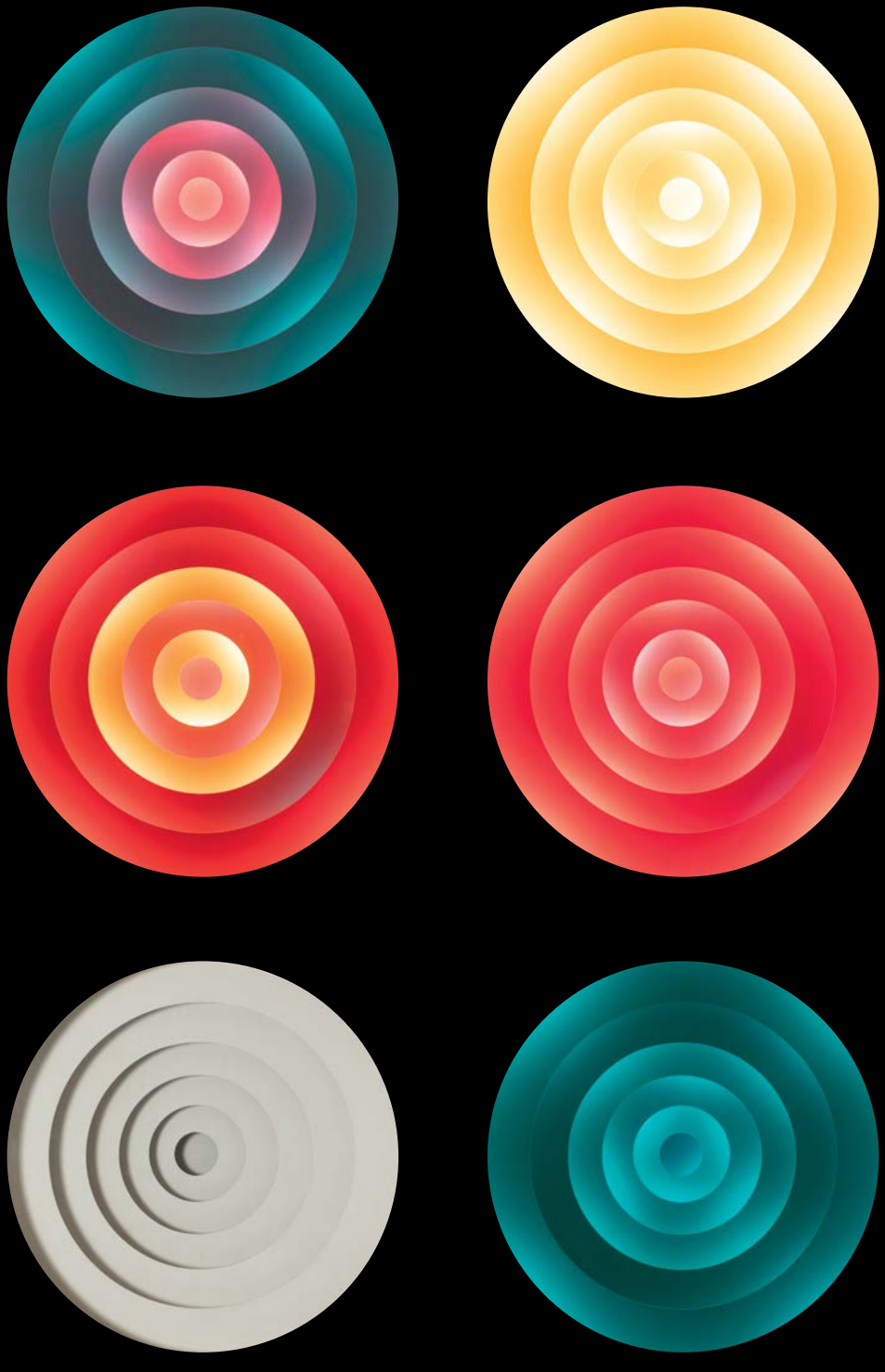

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