Carolyn Cardinet

MICROBEPLASTICA

CULTURE AT WORK

THE STAR

Photo: Sherryl Ryan

ARTIST STATEMENT

My art practice explores human consciousness and relationships regarding single-use plastic consumerism and wastes' impact on our environment and waterways. Plastic contributes to polluting oceans, impacts sea creatures, sea birds and enters our food chain. My mission is to create awareness, in this 60-year human legacy, with sculptural installations to mirror this global problem.

– Carolyn Cardinet, 2017

Photos, this page and front cover: Lea Kannar-Lichtenberger

MICROBEPLASTICA

This exhibition in the Anthropocene era is a look into the crossover of science as fact and art practice as representation. This journey was implemented to discover the lasting impact of plastic consumerism on our ecosystem and how our own environment can adapt. My interest is in understanding what we are faced with and what is at the forefront of scientific research regarding the possibility of a plastic-eating bacterium that could assist in solving the urgent pollution issues of plastic litter in our waterways.

For this residency, the research focus was to target single-use packaging as a surface for bacteria to adhere. It led to the discovery that a study on polypropylene (PP) was already being investigated. Polypropylene, also known as PP today, is moulded or extruded into many plastic products where toughness, flexibility, heat resistance and lightweight is required. I followed leading researchers at RMIT University on a journey to their micro world.

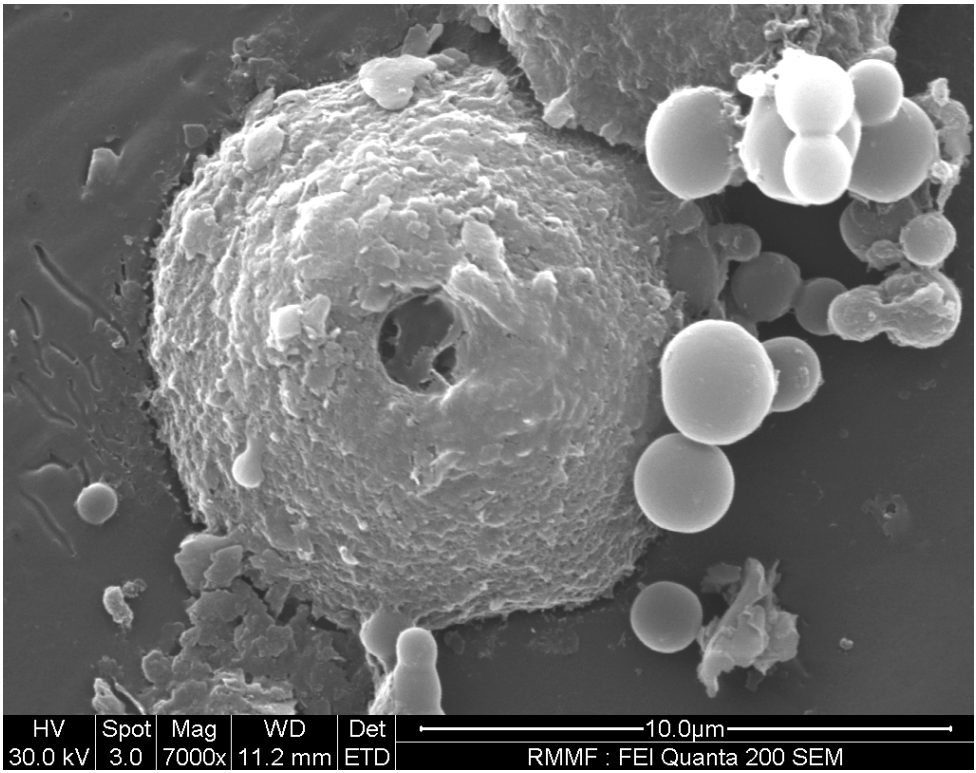
To conduct this specific experiment, the humble plastic take-away food container was part of a progressive specific time study under water. Six days were chosen over a period of three months to remove and visualise the sample's bacterial progress underwater.

Working with this particular research team I was able to enter the microscope lab at RMIT University to view several samples of bacteria colonizing plastic. Plastic surfaces, exposed in fresh water or salt water, were put through the Scanning Electronic Microscope (SEM). SEM is a very large microscope that allowed us to peruse 1cm plastic samples and enlarge their surface 6000 times or more and to observe the resulting images on large screens. As an artist this was visually engaging and exciting. Directly from this scanning device we retrieved each plastic sample's progressive development over time as photographs.

Other plastic polypropylene (PP) samples of the same nature were placed in seawater under the Westgate Bridge, for the same progressive timeline.

For MICROBEPLASTICA the aim was to concentrate my research on the fresh water samples. An excursion was made to the idyllic setting of Dights falls, where the river's native fish migrate annually from the estuary upstream to freshwater to breed and where salt water from the sea meets the fresh water of the Yarra River. On this field trip, I was able to video and record natures' sound in situ, which resulted in a collaborative piece with artist Sarah Joy Mitchell, who designed a sound piece to carry the text written to accompany and complement this installation.

The experience, made possible by the Culture at Work Art Science residency program, has prompted future collaboration in communicating further progress made towards locating the existence of an underwater plastic-eating bacterium.



SCIENTIST STATEMENT

Fantastic Plastic has transformed and significantly benefited our global society over the last sixty years. However, research from across the world over the last decade has revealed country-size oceanic plastic garbage patches, millions of pieces of plastic on uninhabited Pacific islands and major environmental impacts upon our aquatic and marine life, as discarded and waste plastics flood into our aquatic environments. Notably most of this plastic is now present in small fragments (microplastics) of a few millimetres in size or smaller, which can readily enter the aquatic food chain.

Our marine and aquatic wildlife is now significantly threatened and impacted by ingestion and entanglement of plastic, and by the transport of persistent organic pollutants that adsorb onto microplastics into animal tissues. Very recently, plastic has been shown to be rapidly colonised by a rich assortment of diverse microbes, including bacteria, algae, diatoms, ciliates and small zooplankton, to form a complex biofilm, whose wider ecological roles are still being dissected.

Carolyn's *Microbeplastica* provides a window into this hidden microscopic microbial world as she portrays the amazing transformations that occur on a simple plastic surface once it enters a major urban river, modelling the attachment and growth of diverse and beautiful microbes to create a new habitat called the 'plastisphere'. Carolyn's beautiful artwork is inspired by our research at RMIT University, employing electron microscope imagery of plastic surfaces recovered from the Yarra River, Melbourne over a three month plastic exposure experiment, to allow the microscopic world of the aquatic plastisphere to be revealed.

— **Mark Osborn**

Professor of Microbiology, RMIT

CURATOR STATEMENT

MICROBEPLASTICA is a conceptual art project that explores the devastating impacts of human-made substances on the natural world and complicates our understanding of everyday materials through a transformative process that renders them unfamiliar and ambiguous. This project evolved through a series of conversations and experiments conducted by scientists at RMIT.

Defying gravity, the work consists of six prism-like objects braced in gold and delicately suspended from above. The beauty of these objects is only defied once we discover that they house a microscopic world of bacterium, rebelling against our desire to touch or get too close. This tension highlights the intensity of society's toxic relationship to the production of man-made materials and the often-unseen methods of dealing with waste.

The space is inscribed by a soundtrack of running water hitting the ground and a voice dictating the contaminated process of plastic decomposition in the ocean and waterways. A reminder that we are in a particularly vulnerable cycle of consumption, disposal and suffocation. This exhibition is underscored by notions of precariousness: objects transform between states of permanence and impermanence as living organisms ferment and mutate. Here, fragility collapses into resilience as the boundaries between potential and failure are woven, highlighting the continuing limitations of material, energy and time.

– Elyse Goldfinch, 2017

CAROLYN CARDINET

EDUCATION

2012 MFA (Master of Fine Art) RMIT
2006 TAA Cert IV
2005 Honours, Monash University
2004 BFA (Bachelor of Fine Art) VCA
2001 Diploma of Visual Art (Painting) VUT
1983 Diplôme de Graphisme, ESAM Paris

RESIDENCIES

2017 Art Science, Culture at Work, Sydney
2016 *Can Serrat*, Barcelona, Spain
2015 Block Studios, YYS, Fitzroy
2014 Artsbox mcc, Footscray
2009 Summer Academy, Venice, Italy

SOLO EXHIBITIONS

2017 *Microbeplastica*, Accelerator, Sydney
Glacier, Cube 37 Artspace, Frankston
2016 *Organic Plastic*, Unicorn Lane, Ballarat
2015 *White Trash*, Town hall Gallery, St Kilda
2014 *Même Famille*, Ranfurlie Gallery Korowa
2013 *Mémoire de Vie*, Alliance Française
Regurgitate, The Library Artspace
2012 *Found & Forgotten*, First Site Gallery
2009 *I AM*, Level 17 Artspace
2008 *Mnemonics*, Nexus Modern Art Gallery
2007 *Musing*, Nexus Modern Art Gallery
Mnemosyne, Kozminsky Art Gallery
2006 *Mindful*, Blue Door Gallery, Park St
Mindless, Angela Robarts-Bird Gallery

ART FAIRS

2013 Art Stage 2013, Art Fair, Singapore
2012 India Art Fair 2012, New Delhi, India
2007 Art Melbourne 07, Royal Exhibition bldg
2006 Art Sydney 06, Sydney, NSW
Art Melbourne 06, Royal Exhibition bldg

ART PRIZES – Finalist

2016 Sculpture at Scenic World, Katoomba
Lorne Sculpture Biennial, Lorne
2015 The Yering Station Sculpture Prize
Gertrude Street Projection Festival
The North Sydney Art Prize, Waverton
2014 The Noosa Art Prize, Noosa
The Bayside Library Art Prize, Beaumaris
The Wildlife Art @ Discovery, Canberra
2010 The Archangel Art Prize, St Michael's
2009 The Border Art Prize, Gold Coast
The Archangel Art Prize, St Michael's

PUBLIC ART & FESTIVALS

2017 Bastille Day 2017, North Melbourne
Castlemaine State Festival, VIC
French Film Festival, St Kilda
2016 *Immerse*, Knox City, VIC
Gertrude Street Projection Festival
Castlemaine State Festival, VIC
2015 White Night, PS50, Melbourne
Curio Artspace, MC2 Square, VIC
WindowSpace, Beeac, Victoria
The ARTrium, Sandringham Council
Yarra Link Project, Toorak, Melbourne
2014 Monument to Footscray, Library

SELECTED GROUP EXHIBITIONS

2017 *Creatures of the Bay*, Gasworks
2016 CSA Exhibition, Yarra Sculpture Gallery
Bonanza 2016, Yarra Sculpture Gallery
2015 RMIT 700's Art Festival, University Library
TrashLation, Melbourne University
All Things Nice, Trocadero, Melbourne
2013 *Creative SustAinability*, St Kilda Town Hall
2012 *Brave New World*, Toyota Sculpture
Artland, RMIT University, Moreland

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exhibition dates	exhibition launch & public talk	gallery hours
Sun 11–Sat 17 Jun 2017	**Thu 15 Jun 6–8pm**	**11am – 4pm daily**