## SCIENCE



# A zoonotic twist

Using lithography and installation work, Nicola Hooper explores the complex relationships between humans, animals and disease.

A lithographic print is unlike any other... what better way is there to visually explore the nuances of Zoonotic pathogens than using lithographic tusche-as it mirrors disease under a microscope. – Nicola Hooper

Few things are more provocative to the imagination than zoonoses (zoonosis, singular)— infections or infectious diseases that can be transferred from animal hosts to humans. Toxoplasmosis, bubonic plague, certain types of encaphalitis and, of course, COVID-19 are just a few of the more infamous examples. Such pathogens might be the basis for far-fetched expressions in the horror genre in cinema and literature, but many of the same animals that are predisposed to being zoonotic hosts have, paradoxically, also historically been vital to human health through medical advancement. Many of these animals are considered vermin and are demonised in the cultural imagination, where anthropomorphism attributes moral and ethical characteristics to human–animal relations and interactions.

When COVID arrived at the end of 2019, it brought zoonotic viruses and pandemics front and centre in our lives. Although we want to move on and put this nasty chapter behind us, my work explores, in a quirky lithographic light, those animal viruses that cross over to humans. Since 2014, when I began doctoral studies at Griffith University's Queensland College of Art (QCA), I have been using lithography to consider the human fear of animal hosts and their role in spreading diseases. While lithography is a method that has links to publishing and storytelling, it is also a medium with a matrix that has evolved like a virus from stone to aluminium plate to polyester plate; now, combined with digital techniques, it mirrors the constantly evolving journeys of many zoonotic pathogens, including COVID-19.

The studio work created for the *Zoonoses–A Visual Narrative* thesis research also led to the current touring exhibition *ZOONOSES*, which consists of two-dimensional traditional hand-coloured lithographic prints, combined lithographic/digital wallpapers, three-dimensional sculptures, artist books and animation. The exhibition aims to create and utilise paper, or works on paper,

Tusche on aluminium plate at Griffith University QCA Print Studio. to discuss life's fragility. Parallels and comparisons are drawn between paper and the human body—its skin, fragility and vulnerability to pathogens, and propensity to recover from disease.

I have long felt a great sense of affiliation to animals, not only our domestic pets but also many others, such as pigs, after benefitting from porcine insulin as a young girl diagnosed with type one diabetes. Growing up, I had been fearful of several animals associated with diseases, such as rats and bats. After some thought, I considered that demonised animals such as rats hold an essential role in society, and a certain duality, where they can spread disease but also have a role in bettering human health through their assistance in developing vaccines.

Animals play a significant role in human health and well-being as companions and as surrogates in laboratory studies that enhance medical knowledge. Conversely, up to seventy per cent of all new human diseases have their genesis within animal hosts.<sup>1</sup> These hosts play an ongoing role in maintaining diseases in nature, with some, frighteningly, having the potential to be pandemic. Ironically our COVID-19 pandemic came after I completed my doctorate researching this topic. Science and disease are important subjects for contemporary art. Visually representing disease through art assists in humanising scientific concepts, making them comprehensible and more accessible to public audiences. As Dr Johanna Kieniewicz, curator of the British Library exhibition Beautiful Science: Picturing Data, Inspiring Insight, has noted: 'Art helps us to think about big issues, such as climate change and genetic modification, that are rooted in science. Moreover, in the era of 'big data' where scientists analyse billions of events thrown up by natural or social phenomena, one of the only ways of understanding it is through visualisation.'2

ZOONOSES employs visual narratives to convey zoonotic stories, many of which are based on factual incidences of zoonoses. Others use existing fairy tales retold with a zoonotic twist. I do this using rhymes and fairy tale iconology while incorporating a drawing style which celebrates that used in natural history and children's book illustrations. Some of the narratives I illustrate are augmented by elements such as combining citronella with printing ink to create mosquito-repellent works. I also create installations by integrating fabricated zoonotic wallpaper as a background for my framed two-dimensional works and my large lithographic insect

hosts. My small artist books, containing created rhymes, accompany the large pieces acting as didactics.

The ZOONOSES touring exhibition travels to twelve venues, the walls at each of the venues are adorned with the four zoonotic wallpapers and painted. This acts as a backdrop for the large insect host sculptures, traditional 2D lithographic works, paper sculptures and artist books that sit on repurposed furniture. My large insect hosts, originally created on paper, have been refabricated to endure three years of touring. They are suspended and hang much like marionette puppets. Each one was drawn as lithographs in pieces. They were restricted in size because of the aluminium plate. These were printed on paper, hand-coloured, scanned at high resolution, printed again 30 per cent larger onto black neoprene painted white and assembled. The biting fly and the mosquito also have wings, once again drawn via the lithographic process, printed onto acrylic and connected to the neoprene body via interscrews. The arsenic wallpapers of

#### (below)

# Nicola Hooper, Concerning Cats and Toxoplasmosis Artist Book,

2021, hand-coloured lithographic and digital print artist book, 21.5 x 21.5 x 2.5cm, edition of 2.







### (above)

#### Nicola Hooper, The Giant Fleas

2017, digital print of handcoloured lithograph on rubber, fishing line and suspension springs, 130 x 140 x 2.5cm each. Hung over Ode to Morris Zoonotic Wallpaper, 2017, digital print of hand-coloured lithograph, size variable.

#### (left)

#### Nicola Hooper, James the Rat King Diptych,

2016, hand-coloured lithograph, 115 x 15 x 5cm; James the Rat King Pop-Up Book, 2019, hand-lithographic artist book, 13.5 x 35.5 x 3cm (folded), 30cm diameter. Hung over Ode to Morris Zoonotic Wallpaper, 2017 digital print of handcoloured lithograph, size variable. the Victorian era inspire the wallpapers, filled with zoonotic narrative. They have been created similarly, drawn onto plate or stone, printed on paper, hand-coloured, high-resolution scan, step-and-repeat digitally and supplied as a digital file to be printed onto adhesive, reusable wallpaper. The accompanying merchandise was also created using the digital files of the lithographic prints and transferred to fabric.

ZOONOSES aims to provide an understanding of zoonotic diseases by using visual methods to explore complex aspects of human-animal relationships. I investigate the role of animals, insects, and parasites as the originators and spreaders of disease concerning toxoplasmosis, the bubonic plague, West Nile virus, Ross River fever, Murray River encephalitis, Japanese encephalitis,



tularaemia/rabbit fever, and giardia. This research also endeavours to bring attention to these animal hosts to give a more balanced and considered opinion of their role in our world.

#### Lithography

I adore the meditative quality of lithographic drawing, the prints' graphical nature, and the process's challenges. Lithography has long been associated with storytelling and publishing; however, I am most drawn to the allure of the tusche, almost taking on the appearance of disease under a microscope. I challenge some traditions by combining hand drawing on plate and stone with digital graphic design skills. In doing this, I have created wallpapers, large sculptures, artist books, collaborative animation and more traditional 2D works. The science of lithography can be perceived to have parallel traits with zoonoses, particularly in a visual manner. For example, the reticulated patterns that emerge while liquid tusche dries up on the stone/plate mirror macro images of disease under a microscope. Association to the replication of a virus in the body and the replication aspect of the printing process is also a consideration of my work, being an element not only of the production of the lithographic prints but also of the step-and-repeat patterns of my wallpapers. My connection to this process was borne out of the irregularities of working with tusche, water or solvents that can bring many unplanned and organic aspects to the drawing process. Within my prints, tusche often engulfs my drawings, representing diseaseconsuming animal hosts.

#### **Fairy Tales**

While exploring fairy tale myths and rhymes, my zoonotic installations have tried to inform and stir viewers' curiosity. I do this by using aesthetics associated with the Victorian era. For example, I reference items of curiosity, natural history, fairy tales and gothic literature from a time when these elements were commonplace.<sup>3</sup> The Victorian period also saw significant breakthroughs in the natural sciences, which led to a better understanding of animal hosts' roles in spreading disease.<sup>4</sup>

The way that animal hosts were portrayed in the cultural landscape of the time was also a catalyst for the demonisation of these creatures, creating perceptions that remain deep-rooted in the common psyche today.<sup>5</sup> In my work, I juxtapose Victorian aesthetics with metaphors for modern-day zoonoses, which I have created by combining modern digital techniques such as 3D printing and the traditional drawing mode of lithography.

ZOONOSES explores animal host case studies and associated studio responses. These include the 1907 outbreak of bubonic plague in Brisbane; an outbreak of tularaemia in the United States in 2007; outbreaks of West Nile virus, Ross River fever and COVID-19. These epidemics/pandemics form the basis for visual narratives explored in an understated and considered manner to enhance the understanding of zoonoses and zoonotic hosts and reduce social anxiety around complex, frightening, scientific, zoonotic concepts.

Using the subversive within this process is essential to my work; I do this using fairy tale iconology to discuss darker subject matter in a manner utilised by this genre for centuries. I use fairy tales, myths, and rhymes to present aspects of zoonoses because they can express concepts of fear of disease, and the realities of such, in a euphonic way, allowing readers to engage positively with what would otherwise be frightening subject matter.

As Marguerite Johnson writes: 'Fairy tales are excellent narratives with which to think through a range of human experiences: joy, disbelief, disappointment, fear, envy, disaster, greed, devastation, lust and grief (just to name a few). They provide forms of expression to shed light not only on our own lives but on the lives beyond our own. And contrary to the impression that fairy tales always end happily ever after, this is not the case-therein lies much of their power.'6

**ZOONOSES** is at Grafton Regional Gallery NSW (until 25 June), Manning Regional Art Gallery NSW (14 July-26 August), Bayside Gallery VIC (2 September-22 October), Devonport **Regional Gallery TAS (24 November** 2023-6 January 2024), South Coast Regional Art Centre, Goolwa SA (17 February-28 April 2024), Hurstville Museum and Gallery, NSW (4 May-28 July 2024), Gosford Regional Gallery, NSW (9 November 2024-2 February 2025) and Warwick Art Gallery, QLD (27 February-12 April 2025). It is presented by Logan Art Gallery, Logan City Council, in partnership with Museums & Galleries Queensland, and assisted by the Australian Government's Visions of Australia program, Arts Queensland and Haymes Paint.

#### Notes

- 1. Love, Stephen, Zoonoses Animal Diseases Transmissible to Humans, Sydney, Animal Biosecurity and Welfare, NSW DPI (July 2017) https://www.dpi.nsw.gov.au/\_data/assets/ pdf\_file/0011/334001/Zoonoses-animal-diseases-that-mayaffect-humans.pdf
- Kieniewicz, Johanna, The Art v Science Debate, Evening 2. Standard, 2013, 402-03, https://www.standard.co.uk/comment/ comment/the-art-v-science-debate-your-views-8619504.html
- UK Essays, Victorian England and Natural History (November 3. 2018), https://www.ukessays.com/essays/environmental-studies/victorian-england-natural-history-9847.php?vref=1.
- Butler, Thomas, Plague history: Yersin's discovery of the 4. causative bacterium in 1894 enabled, in the subsequent century, scientific progress in understanding the disease and the development of treatment and vaccines, Clinical Microbiology and Infection, Volume 20, Issue 3, (March 2014): 202-09.
- 5. Malamud, Randy, An Introduction to Animals and Visual Culture, The Palgrave Macmillan Ethics Series, ed. Priscilla N. Cohn and Andrew Linzey (New York: Macmillan Publishers Limited, 2012), 49.
- 6. Johnson, Marguerite, Friday essay: why grown-ups still need fairy tales, The Conversation, 24 November 2017, https:// theconversation.com/friday-essay-why-grown-ups-still-needfairy-tales-87078

Nicola Hooper is a Brisbane/ Logan-based printmaker and educator who lives and works on the land of the Yuggera people. She completed her Doctorate of Visual Art in 2019.



(below L-R) Nicola Hooper, Ode to Morris Zoonotic Wallpaper,

2017, digital print of handcoloured lithograph, size variable

#### Nicola Hooper, Sing-a-song-of-Sixpence,

2018, hand-coloured lithographs on Arches, mulberry and washi paper with fimo and thread, 26 x 45 x 30 cm edition of 2.

#### Nicola Hooper, Love Potion,

2019. hand-coloured lithograph, 80 x 63 cm, edition of 6; Methodology, 2019, handcoloured lithographs, paper cut and stitched together with red thread, 78.5 x 21.2 x 10.2 cm, edition of 3; Lady Wilde's Toxoplasmosis Wallpaper, 2019, digital print of hand-coloured lithograph, size variable.





