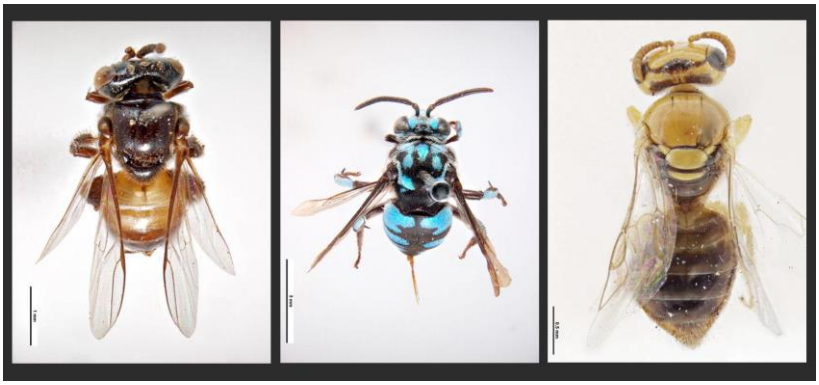
**THE EXTINCTION POKER MACHINE: B MOVIE** **MIKE LEGGETT 2017**



**The Extinction Poker Machine's generative system halts the flight of the bees on each of the screens successively, but randomly. A pause, before they take to flight again. Interaction with the system enables the participant to launch a new set of chance alignments. Inevitably the generative system will align all three images to make a match, proposing possible extinction. Or alternatively, conservation?**

The image of death is defined by stillness. The photograph confers this without difficulty, but implies complexity. Is this the image of an insect frozen in flight by brief exposure, held in the eternal time of the daily round, gathering nectar and pollen? Or is it a specimen from an entomology lab, an invertebrate researcher's specimen, pinned with a lance of steel to a polystyrene block? Attentive examination of the image confirms the latter.

The question arises; though the image is unique, what of the impaled creature? When did it live? Does its kind still exist? Is this the only record of an insect now extinct?

Collecting bees that are native to Australia began at the end of the 18th Century. Amongst the hundreds of specimens that Joseph Banks collected were a blue-banded bee, a resin bee, a carpenter bee and a wasp-mimic bee, animals still quite common today. Several entomologists added to knowledge of the genus into the 20th Century until the scattered evidence of some 1500 native bee species were gathered together in the Museum Victoria administered PaDIL (1) collection in the 2000s.

The images of the bee specimens are the trail left through the work of the scientific community, a residue from measurement and observation seeking to distinguish and separate one part of the observable world from another, one creature from the next, one plant from another. The word 'species' comes from the Latin root of *specere*, "to see." The diversity of this tiny part of the animal kingdom is delivered to our eyes and described with distinctions sometimes so slight that pursuit of a truth can only be achieved through the lens of a microscope or camera. The entomologists and other biologists today delve deeper using the analysis of DNA, dividing further and further.

Their work is important, as tracking the fortunes of the native bees (and wasps) is central to human survival. As pollinators they are responsible for the fruiting and thus continuation of plants in the bush and jungle, plants which for the most part are yet to be fully appreciated for what they can contribute to our well-being. Pollinators are essential for the production of commercial farming crops necessary for our survival. It has been estimated that more than 35% of agricultural food production depends on insect pollination (2, 3, 4). The honey bee species (*Apis mellifera*), introduced to Australia by the colonisers, is central to this purpose, but constantly threatened by a dozen different diseases in many parts of the world.

More recently insecticides designed to tackle crop pests have been shown to threaten not only domesticated bees but also wild bees (5). In addition, the loss of habitat in Australia and an overall reduction of biodiversity are leading to a situation where native bees can no longer compensate for the loss of honey bee pollinators and habitat suitable for native bees is becoming increasingly isolated from the crops requiring pollination. Furthermore, feral honey bees, escapees from poorly managed bee hives, are occupying sites in the bush and thereby excluding colonies of the stingless bee, or 'sugarbag' (of the tribe Meliponini such as *Tetragonula carbonaria*).

Destruction of bushland areas likewise, threatens the Australian native bees very survival. Of the estimated 2000 species in five families, most are still to be described in detail by entomologists. The majority of the bees live a solitary existence, laying eggs in plants and plant debris or in the ground, with the young left with food to develop and emerge independently later. Some females will cooperate by sharing the same egg-laying space; males meanwhile will be defending territory and be mating with the females.

Some of the specimens in the PaDIL collection are over 200 years old; some of the images are grotesque, conveying the idea that death comes as a series of agonies, like the tortures and executions seen in medieval woodcuts and engravings. Like the contorted cadavers in the catacombs of Palermo, the specimens serve to send a warning into the contemporary era.

The interactive installation, *The Extinction Poker Machine: B Movie*, proposes to animate this warning. A selection from the online collection of 206 digital images is reanimated in apparent flights of the long dead, across three contemporary electronic screens. The three vertical screens are fed by a generative system, not a model from biology, but one based on the integers favoured by computers. The 'pokies' are a contemporary manifestation of this principle; fruit-machines, 'slots' or one-armed bandits are earlier mechanical versions. A gambling machine promising riches to players but brings only wins to its owner. Biodiversity is the physical world's generative system - weigh the settings too far in one direction, through the removal of bush habitat for instance and the effect on species including our own, can be catastrophic.

**Notes**

1. PaDIL is an initiative of the Australian Government's Department of Agriculture, in collaboration with Museum Victoria, Plant Health Australia, the Department of Agriculture and Food Western Australia and the Plant Biosecurity Cooperative Research Centre. http://www.padil.gov.au/about


2. Wild Pollinators Enhance Fruit Set of Crops Regardless of Honey Bee Abundance Lucas A. Garibaldi et al. Science 29 Mar 2013: http://science.sciencemag.org/content/339/6127/1608

3. The future of pollinators for Australian agriculture. Saul A. Cunningham, Frances FitzGibbon and Tim A. Heard. CSIRO Australian Journal of Agricultural Research 53(8) 893 – 900 (2002) http://www.publish.csiro.au/cp/AR01186

4. Landscape effects on crop pollination services: are there general patterns?
Taylor H. Ricketts, James Regetz, Ingolf Steffan-Dewenter, Saul A. Cunningham, Claire Kremen, Anne Bogdanski, Barbara Gemmill-Herren, Sarah S. Greenleaf, Alexandra M. Klein, Margaret M. Mayfield, Lora A. Morandin, Alfred Ochieng', Blande F. Viana. Ecology Letters V11 #5 (2008) http://onlinelibrary.wiley.com/doi/10.1111/j.1461-0248.2008.01157.x/full

5. Neonicotinoid Pesticide Reduces Bumble Bee Colony Growth and Queen Production. Penelope R. Whitehorn, Stephanie O'Connor, Felix L. Wackers, Dave Goulson, Science 20 Apr 2012: Vol. 336, Issue 6079, pp. 351-352. http://science.sciencemag.org/content/336/6079/351

Western Australian Museum Entomology Factsheets › Native Bees
http://museum.wa.gov.au/research/collections/terrestrial-zoology/entomology-insect-collection/entomology-factsheets/native-bees