

***Some Memory Prevails***

Tintin Wulia 2019

Sculpture with *Papilio ulysses*, silver insect pin, split-shot sinker, nylon monofilament, fragment of acrylic mirror geodesic polyhedron, transparent dome

37 x 40 cm

IMAGES OF THE WORK



















## PRELIMINARY EXEGESIS AND RESEARCH NOTES

*Some Memory Prevails* is a material contemplation of the fragmented reality of inherited (traumatic) memory that are transferred intergenerationally in marginalised/migrating communities. In my family, stories are inherited intergenerationally, but these stories can only be inherited in fragments and never fully (see also Wulia, 2008).

The butterfly in the work, *Papilio ulysses*, is a species that is distributed in what we currently know as the territories of Australia, Papua New Guinea and Indonesia – contemporary bordered geopolitical establishments that sit together on the same Sahul continental shelf. In Indonesia, a *ulysses* species is also found in Buru island (Joicey & Talbot, 1921, p. 512), one of the biggest isolated exile/labour camps for political prisoners during Indonesia's New Order government. In Queensland, *Papilio ulysses* is also an icon for tourism. It is a swallowtail butterfly, known for their larger-scale wingspans and low flapping frequencies that allow them to migrate a longer distance (Hu et al, 2009).

The *ulysses* butterfly specimen in the work – with its wings professionally spread – is pinned with a silver insect pin, as it would in a natural history collection, but here the pin is attached with a sinker onto a transparent monofilament to suspend the specimen upside down. This scientifically unusual method of display shows the *ulysses*'s verso side, which offers a completely different look than the characteristic blue wings this swallowtail species is known for. Underneath the suspended specimen, a fragment of a geodesic polyhedron made of plane mirror parts reflects the recto side of the insect. This reflection reveals the stunning iridescent blue wings, fragmented and reflected on the multi-angled plane mirrors. On close inspection, it is almost impossible to see the work in details without getting one's fragmented image reflected by the mirrors. The image of the audience and the surrounding environment thus become parts of the work as they are captured, and reflected, by the mirrors.

The work began as a reflection on Blackiston, Silva & Weiss's 2008 experiment on memory retention through Lepidopteran metamorphosis, where they expose caterpillars of *Manduca sexta*, or Tobacco hornworm moth, to an electric shock associated with a certain odor. This creates a sort of "traumatic" condition that "trains" the larvae in their fifth instar to acquire aversion towards the associated odor. The research showed that this memory is carried over through metamorphosis, as the adult Tobacco hornworm moth still retains the odor aversion. The results of the research challenged the previously held theory that a Lepidoptera's central nervous system is completely dissolved during metamorphosis before being reorganised for adulthood. The mass media then popularised this experiment by putting in centrestage a different suborder of Lepidoptera insects, viz the butterfly, perhaps because the butterfly might entice the public's poetic imagination more than the moth would.

I only learned about this research in 2018. It appealed strongly to me because since I started working with the mosquitoes as an icon of mobility and bordercrossing in 2008, I also began reflecting on the different stages of a mosquito metamorphosis. I compare these stages of metamorphosis with geopolitical territories defined by borders, and the border itself with death, which separates life from the unknown after. One of the metaphorical questions in this context is whether a mosquito remembers its life as a pupa that lives underwater (see also Wulia, 2015).

My Smithsonian fellowship advisor at the Walter Reed Biosystematics Unit, Dr Yvonne Linton, noted that an experiment similar to Weiss's would be difficult to apply with mosquitoes because of the extremely different living environments of the instars (e.g. the pupa and larva lives in water while an adult mosquito would die if submerged). This makes it sound as though transitions between the instars in mosquito is more similar to death than to other insects' metamorphoses as they usually do not involve an extreme change of habitat. This is also why in the first stage of my Smithsonian fellowship I decided to focus on mosquitoes failing to emerge at the transitions of their instars. I have recorded some specimens – all of which are currently stored in the WRBU for the second stage of my fellowship – and aim to find ways to display a these specimens, much smaller compared to a butterfly, in a visual art setting.

During my research process for this work, I also learned about another breakthrough experiment on biological inheritance of fear conditioning in mammals. Dias & Ressler's 2014 experiment demonstrated that the frequently observed phenomenon of trauma inheritance can happen through epigenetics (and not through *in utero* learning, i.e. while the mother is pregnant), where expressions of the DNA is changed rapidly (while permanent changes, or mutation, to the genome usually happen slowly over many generations). This epigenetic inheritance is familiar to me in terms of mosquitoes' adaptability and survival (e.g. Oppold et al, 2015), but it

is curious to me that the discussion on mammals and inherited trauma dwells on inheritance of diseases (in other words, mortality) instead of survivability (see also Wulia, 2009).

### ***Acknowledgments***

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Images in this document are courtesy of Milani Gallery/Charlie Hillhouse.

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