

# The wider insect community as a potential reservoir of honey bee viruses

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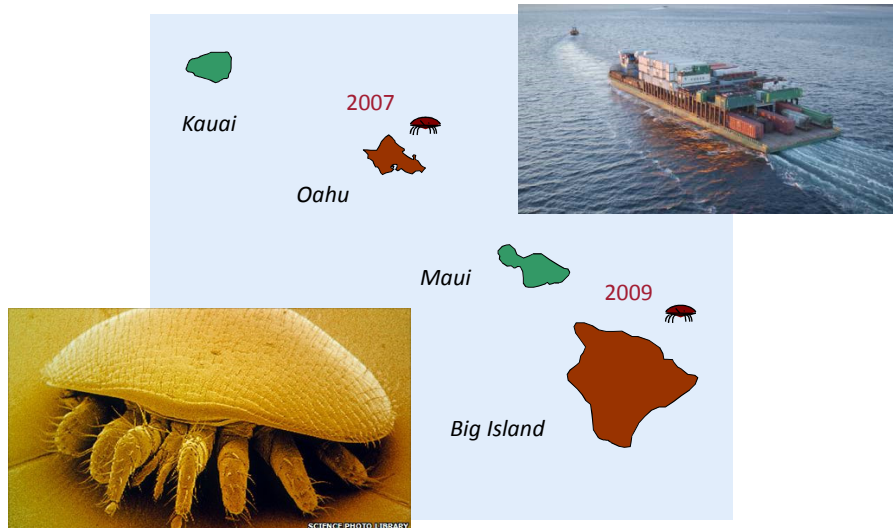
## Hawai'i



US geological survey <https://www.vox.com/2018/5/6/17323626/hawaii-volcano-eruption-2018-kilauea-big-island>

## The arrival of Varroa

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## *Varroa destructor*

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## Deformed wing virus



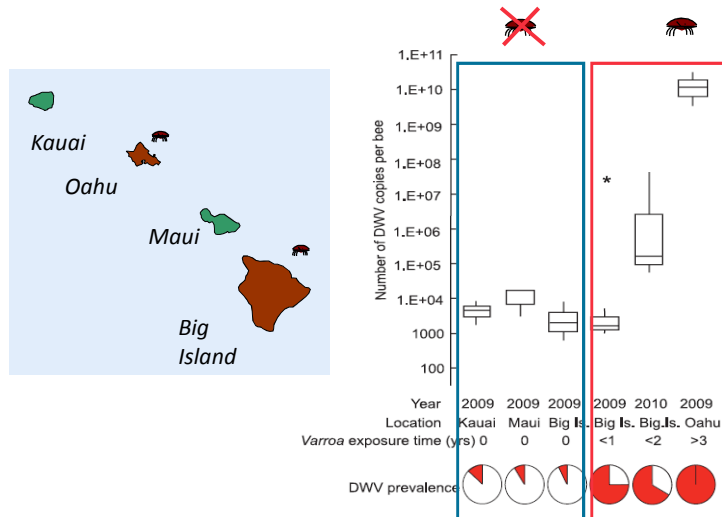
- Stunted growth
- Shrivelled wings
- Reduced longevity
- Impaired foraging ability
- Colony loss

## Deformed wing virus spread



## Deformed wing virus

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Martin *et al* 2012

## Common apiary pests

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Photo by Alex Wild

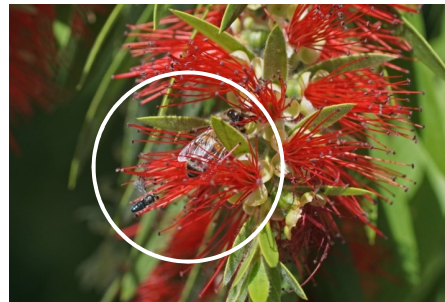


Sarefo - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=1778275> <http://bvctcr.com/wasps-of-bc/>



## The wider insect community

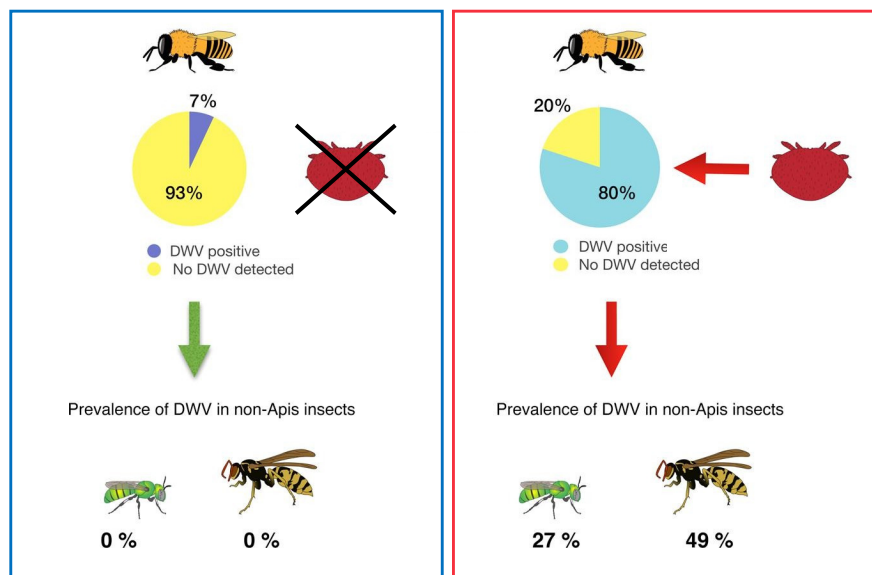
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Photos E. Villalobos

## DWV spillover

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Santamaria et al 2017

## Summary



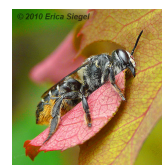
- Varroa caused DWV to rise in honey bees and led to large scale colony losses
- This in turn has led to the virus spilling over into different insect species
- Apiary pests potentially act as reservoirs of a number of bee viruses

## What does this mean for Australia?



- Management of pest management practices:

Do we need to target particular apiary pests to help Australia's honey bees and natives if/when Varroa arrives?



# Thanks

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