



# Movement and diet of green turtles at Ningaloo

Mat Vanderklift

**Ningaloo Outlook – A partnership between BHP and CSIRO**

[www.csiro.au](http://www.csiro.au)

*Ningaloo Outlook is a BHP-CSIRO Industry-Science Marine Research Partnership investing A\$5.4 million over five years to gather new knowledge on the Ningaloo reef and its important ecological values*



## Targeted research

How many are there?

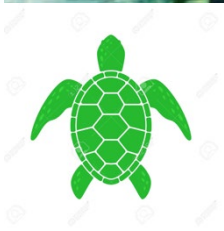
Where do they spend their time?

What food resources do they rely on?

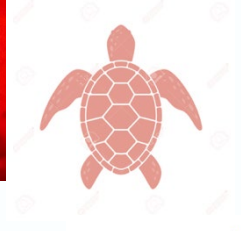


# Movement : satellite tagging

**Day : rodeo**  
**n=24**

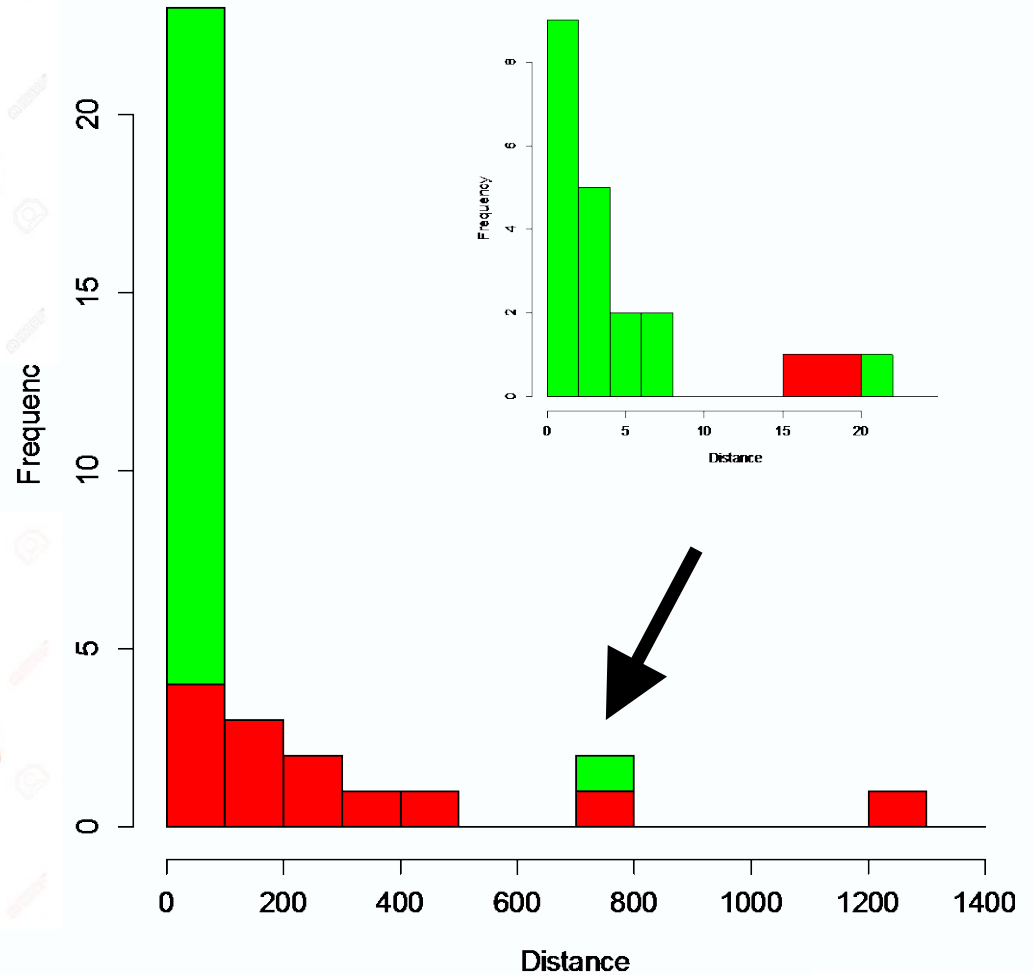
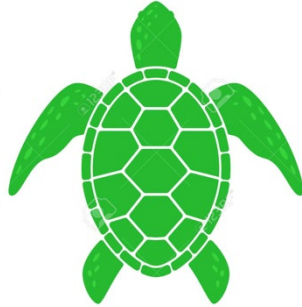


**Night : beach**  
**n=13**

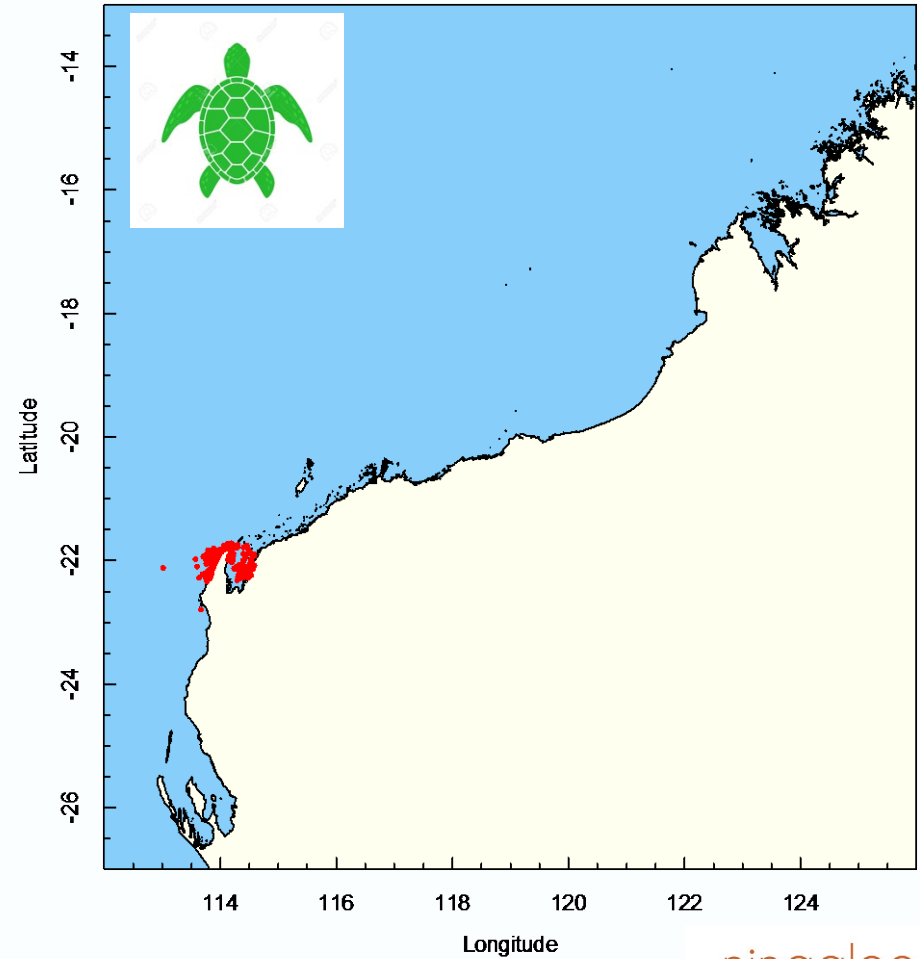
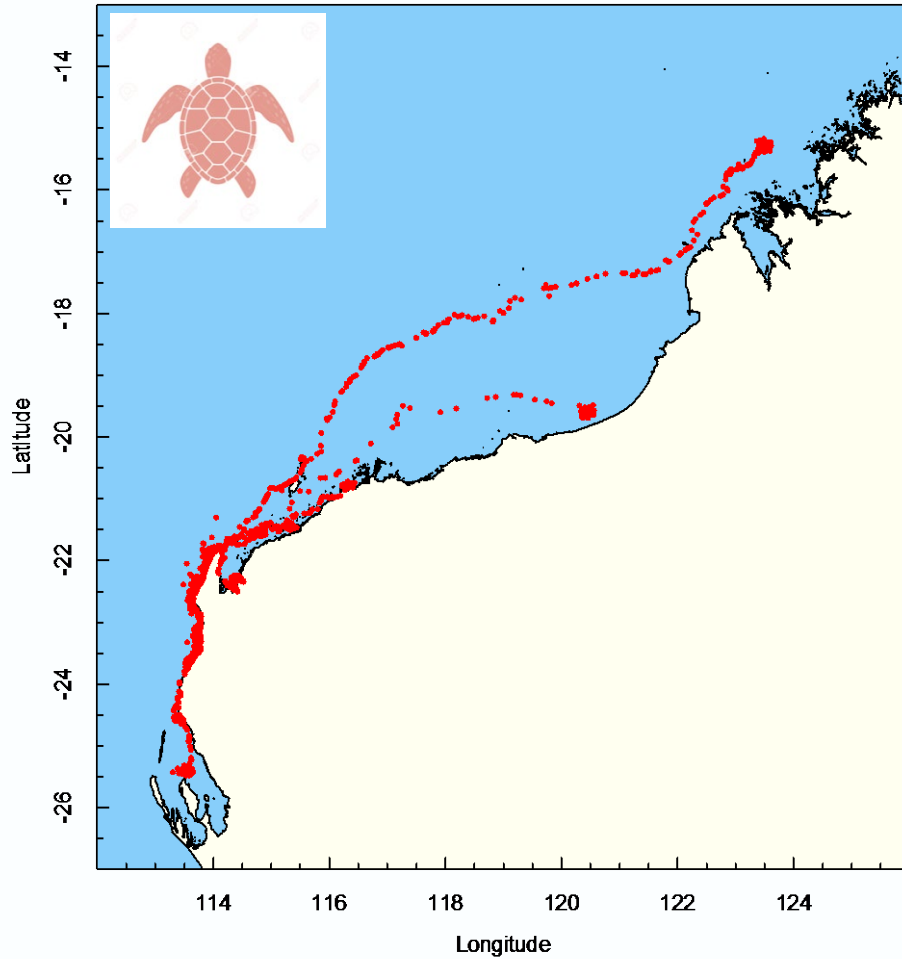


# Distance : satellite tagging

0.4 – 21.2 km



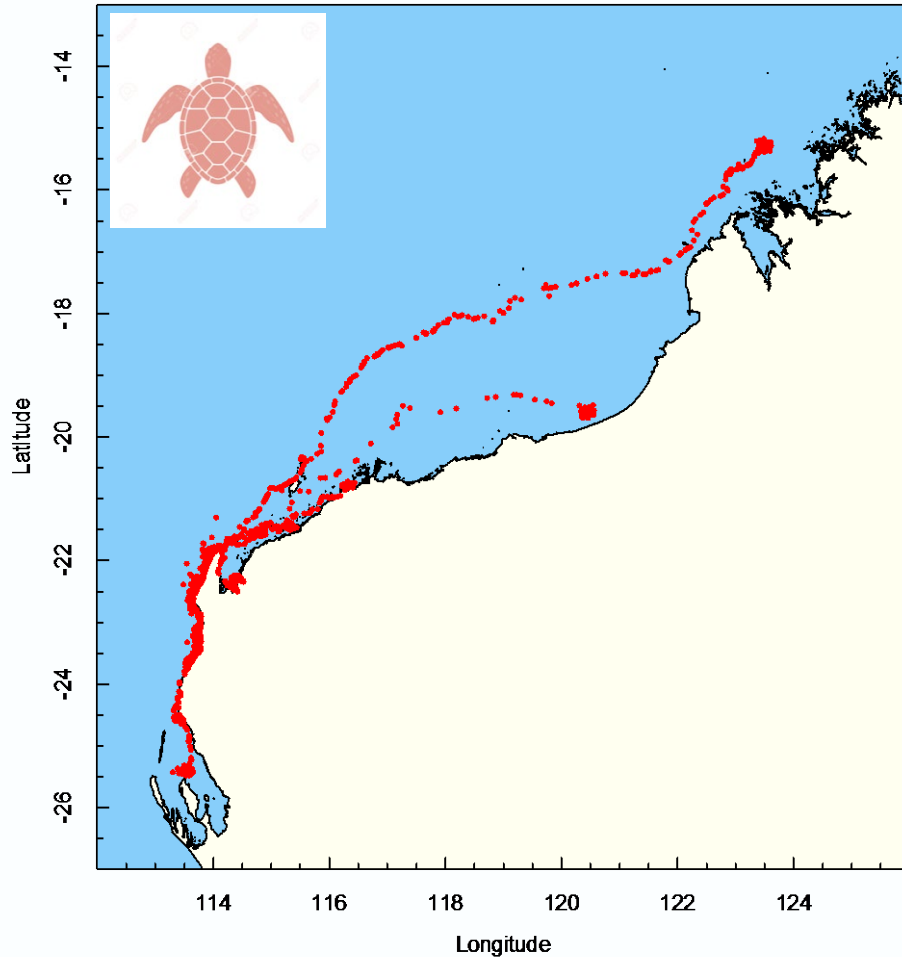
# Movement : satellite tagging



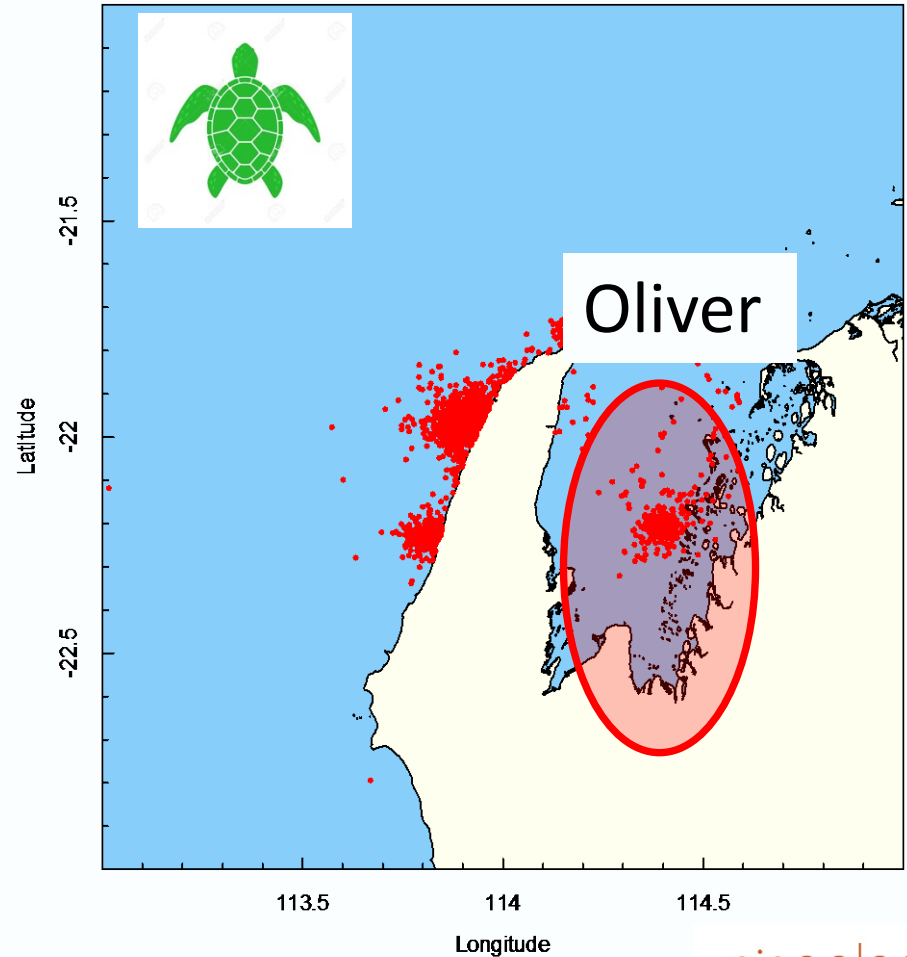


# Movement : satellite tagging

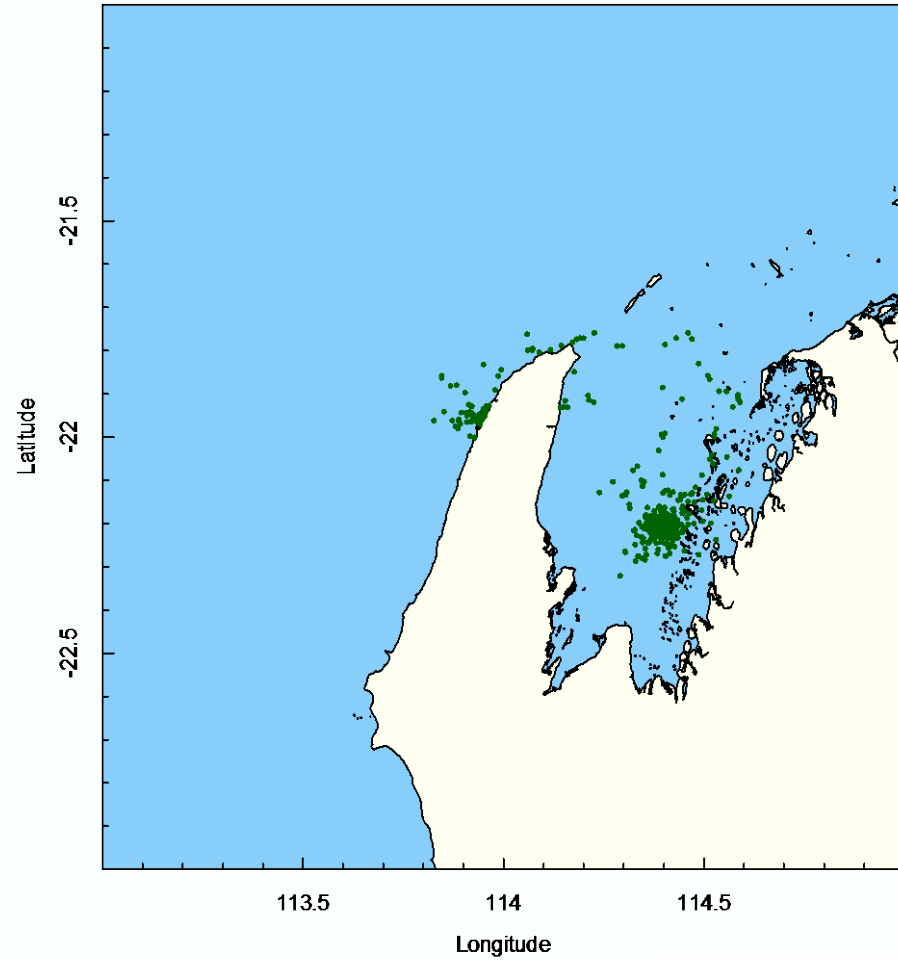
7 of 13 left



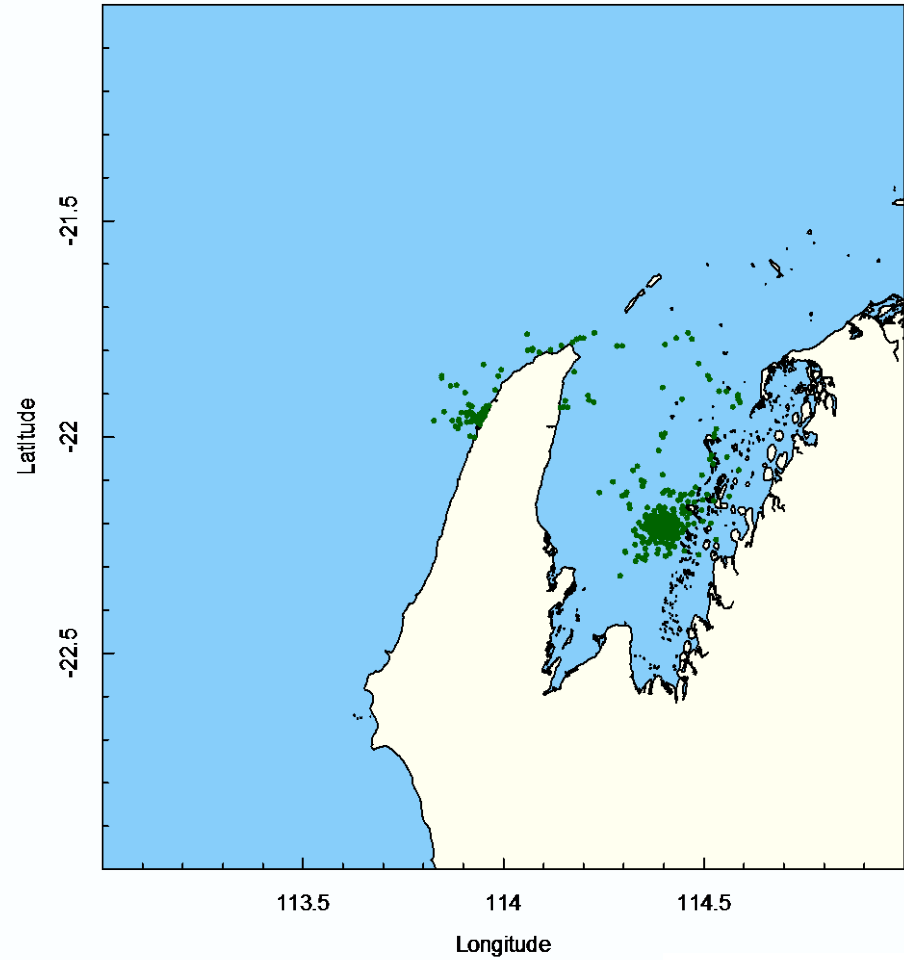
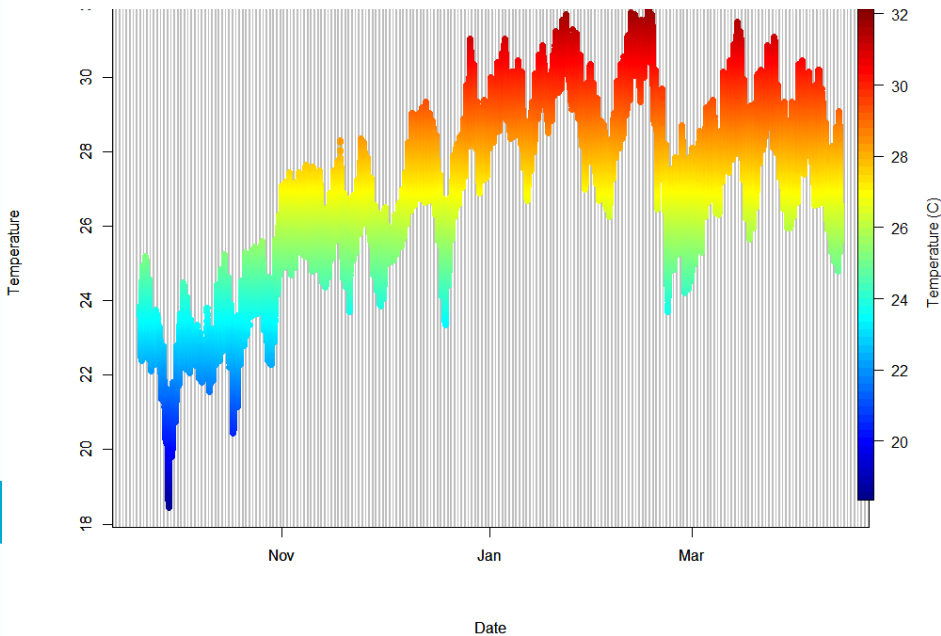
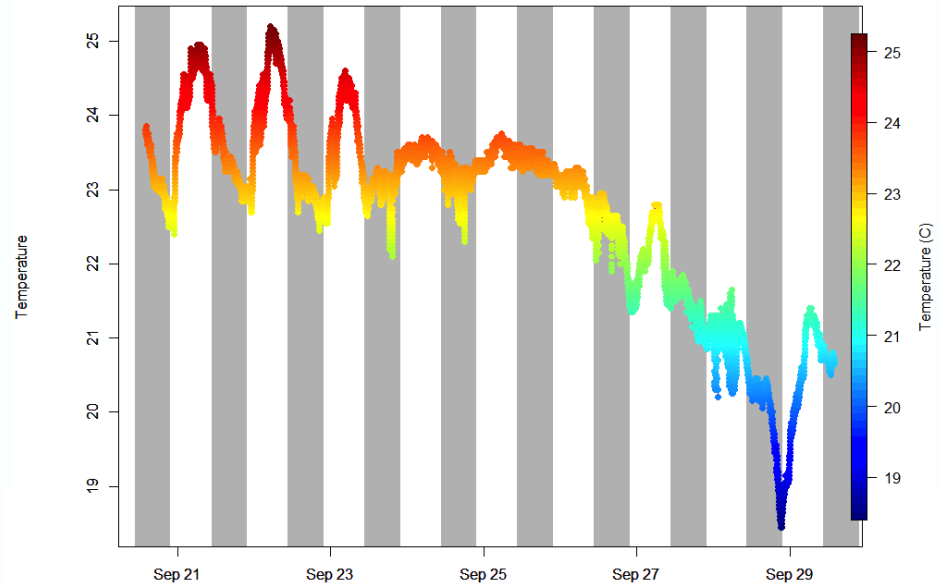
0 of 21 left



# Movement : Oliver



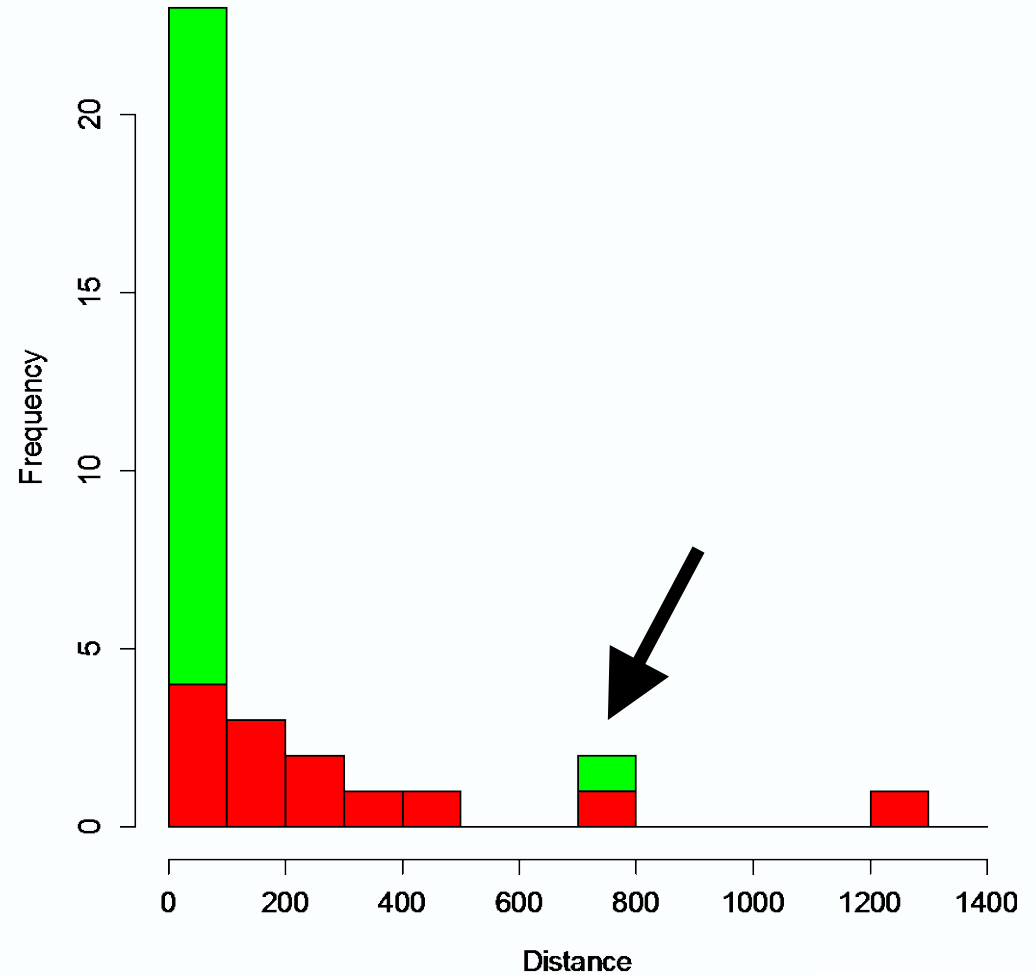
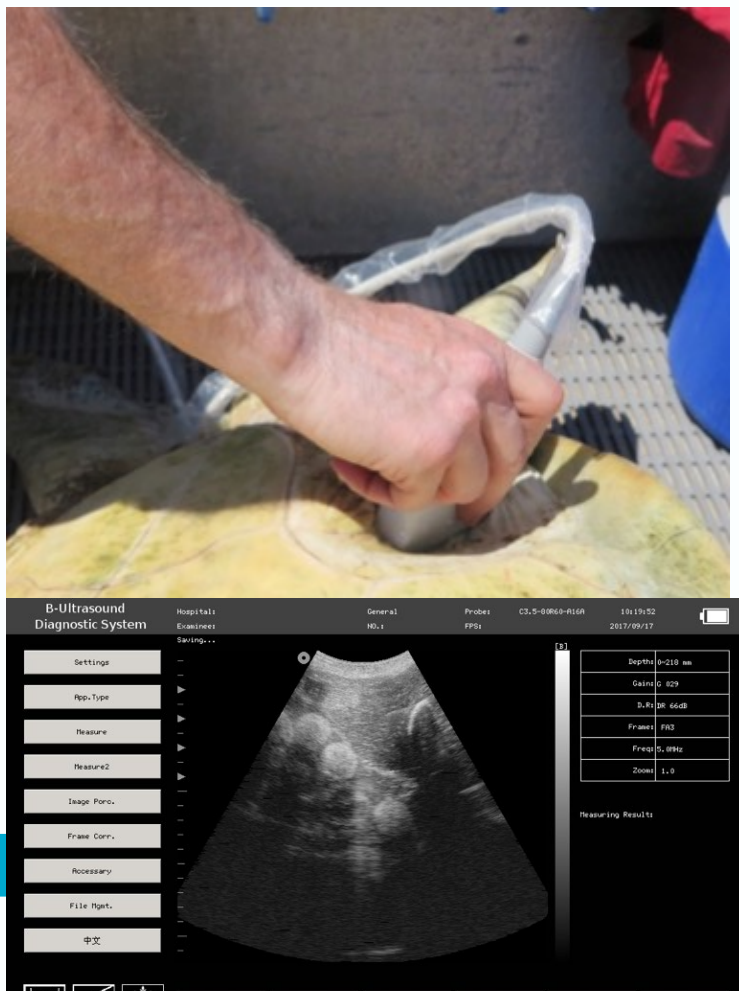
# Movement : Oliver



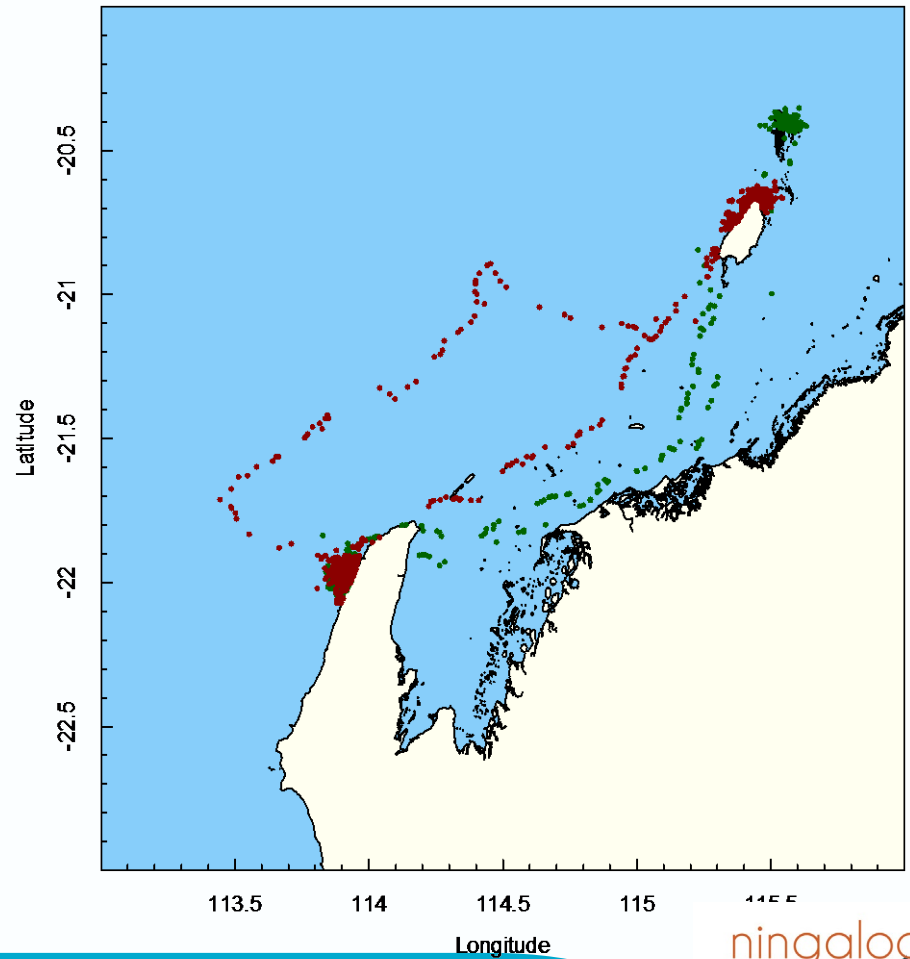
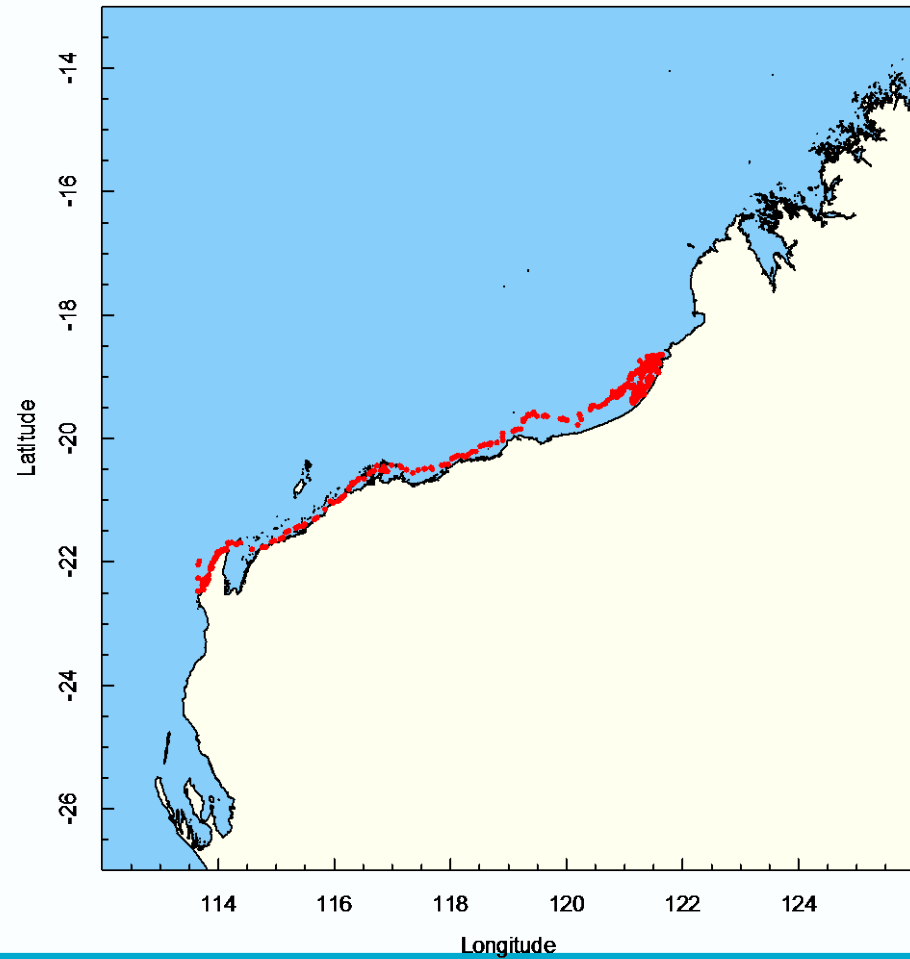


# Movement : where do they nest?

## Ultrasound n=3



# Movement : where do they nest?



# Diet : getting better

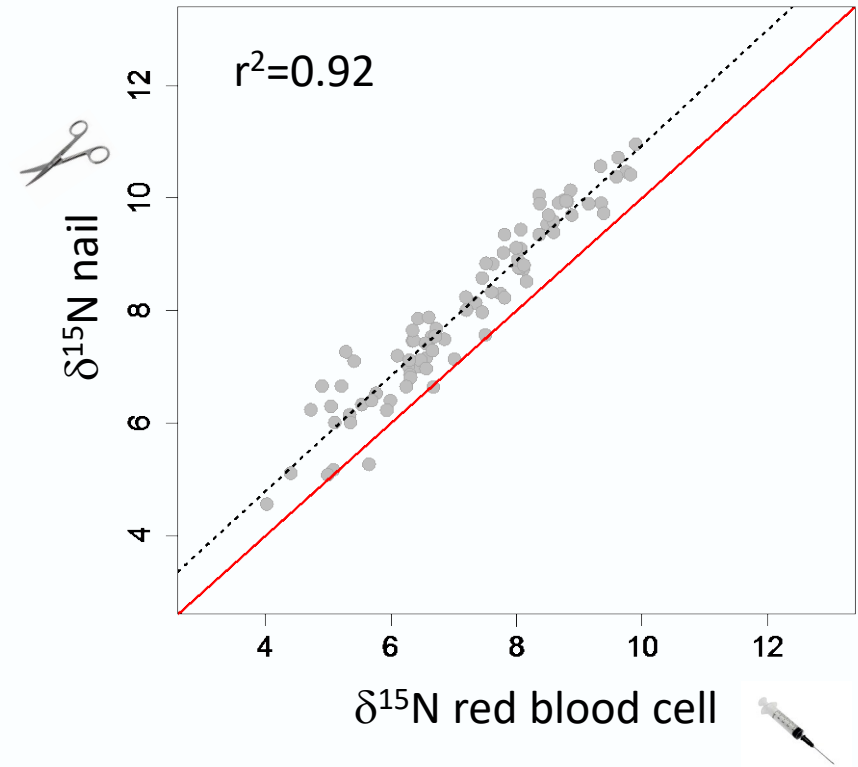
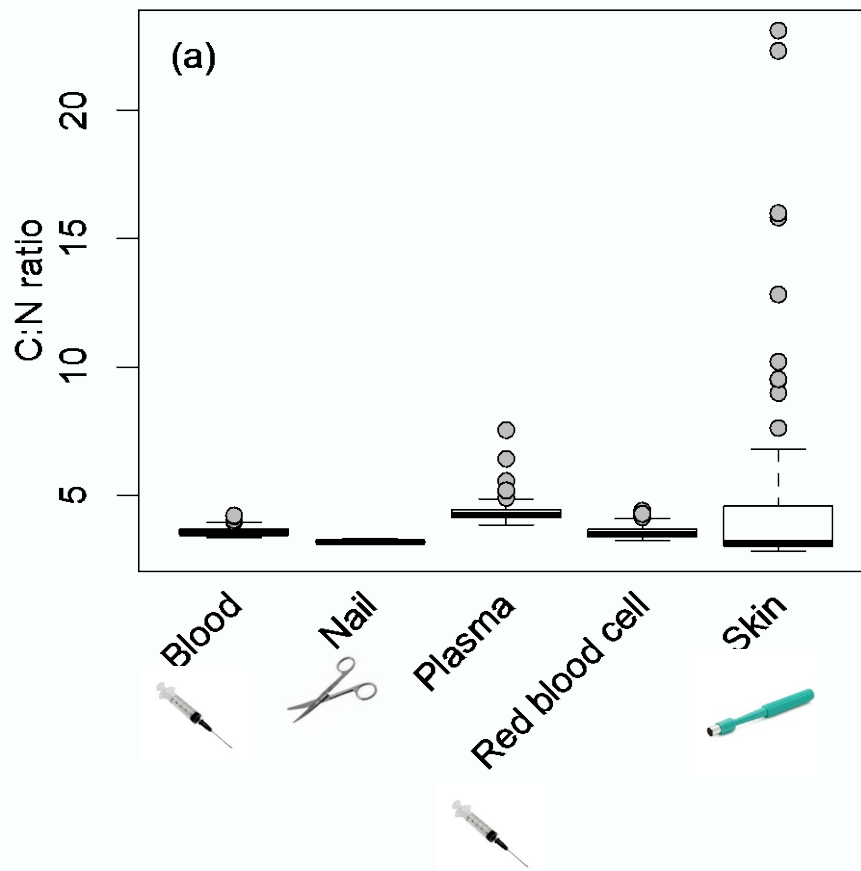


# Diet : getting better

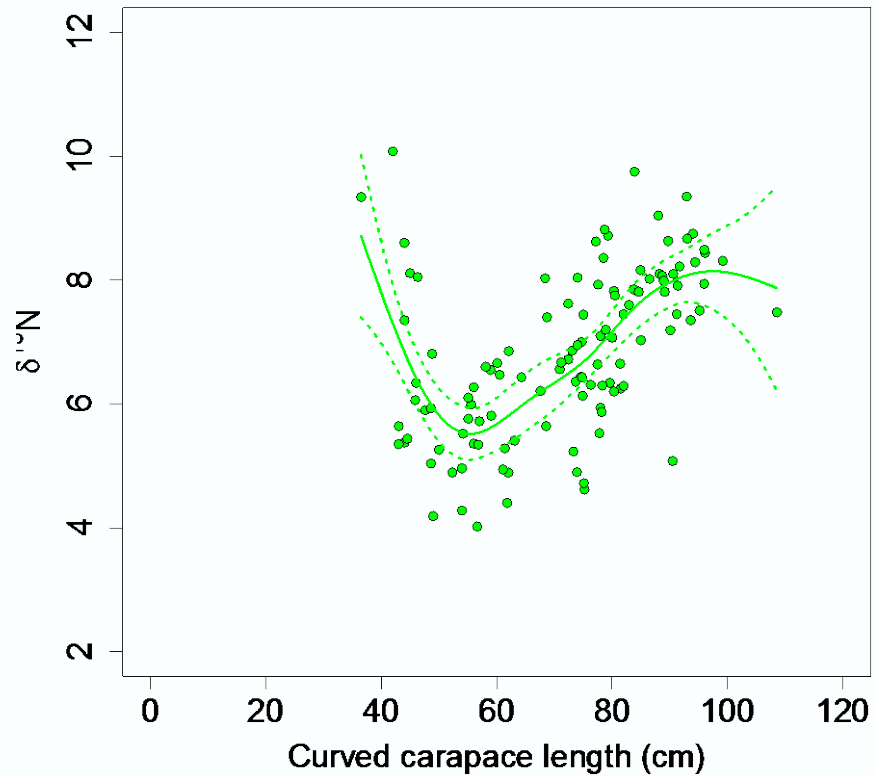




# Diet : nail works well

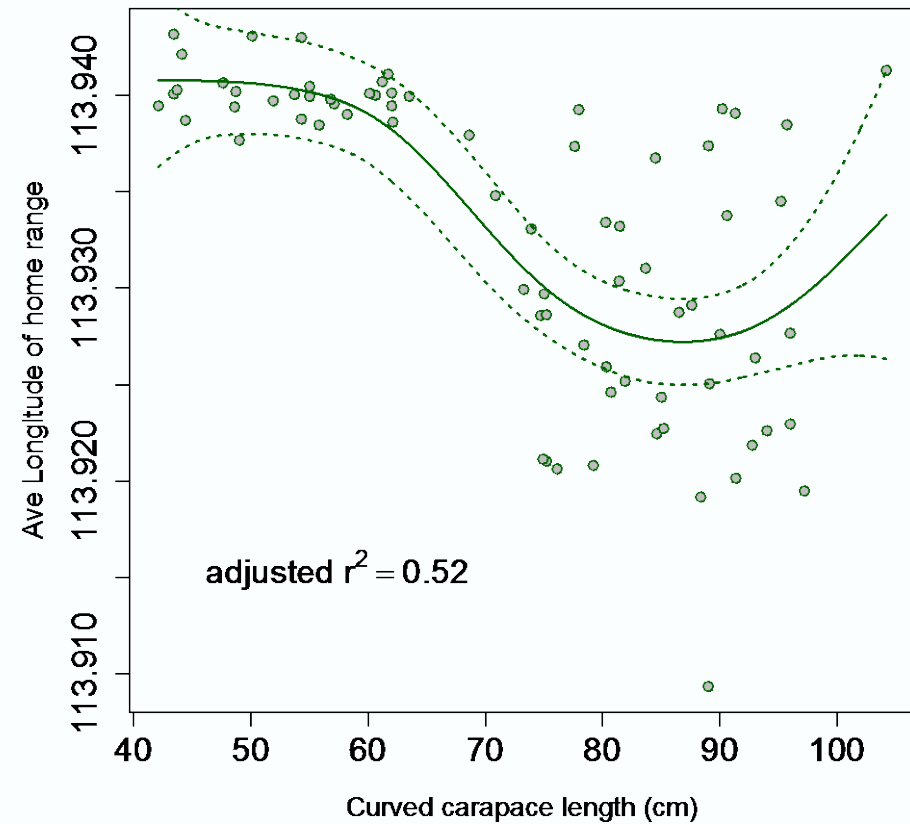


# Diet changes with size





# Diet changes with size



# Broader benefits



2015



2016



2017



2018



2019

# The punchlines

- Non-nesting green turtles don't leave Ningaloo  
... except when they next
- Nesting females originate from a wide area
- Green turtles change diet and location as they grow
- Nail is a useful low-impact biological archive of diet
- Community participation has been central



# Acknowledgements

- BHP-CSIRO Ningaloo Outlook Marine Research Partnership
- Susie Bedford & Exmouth District High School
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- The whole Ningaloo Outlook team!

