



Ecological Connectivity of Kimberley Marine Communities

WAMSI Kimberley project 1.1.3

Jim Underwood and Mike Travers

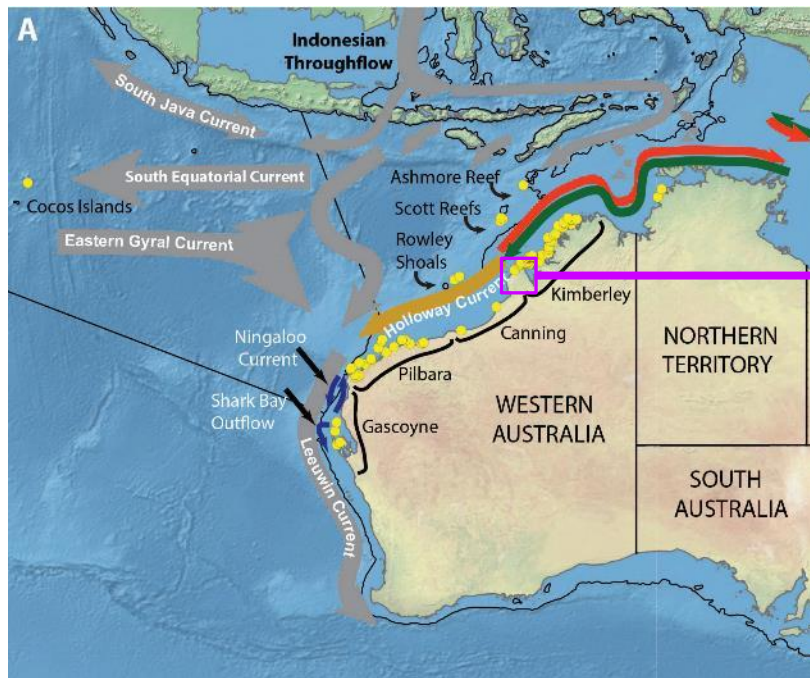


Oliver Berry, Zoe Richards, Kathryn McMahon, Glenn Moore, Udhi Hernawan, Joey DiBattista, James Gilmour

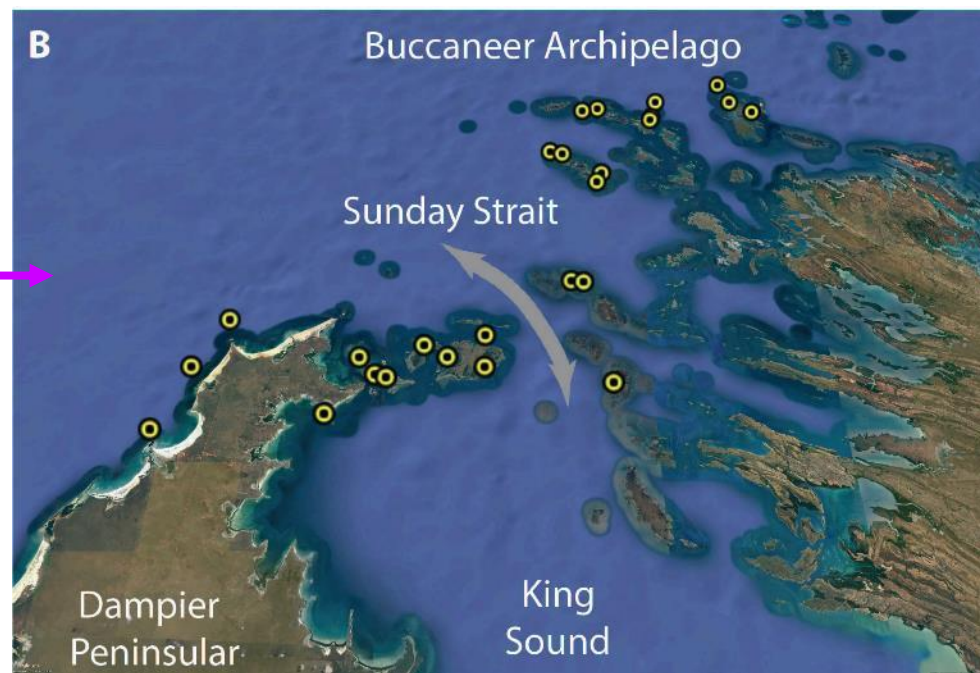


- How far do larvae of fish, corals and trochus, and seeds of seagrass, move away from “home” on the oceans currents?
- Or, how big are the populations (mobs), and do they ever mix?

big distances



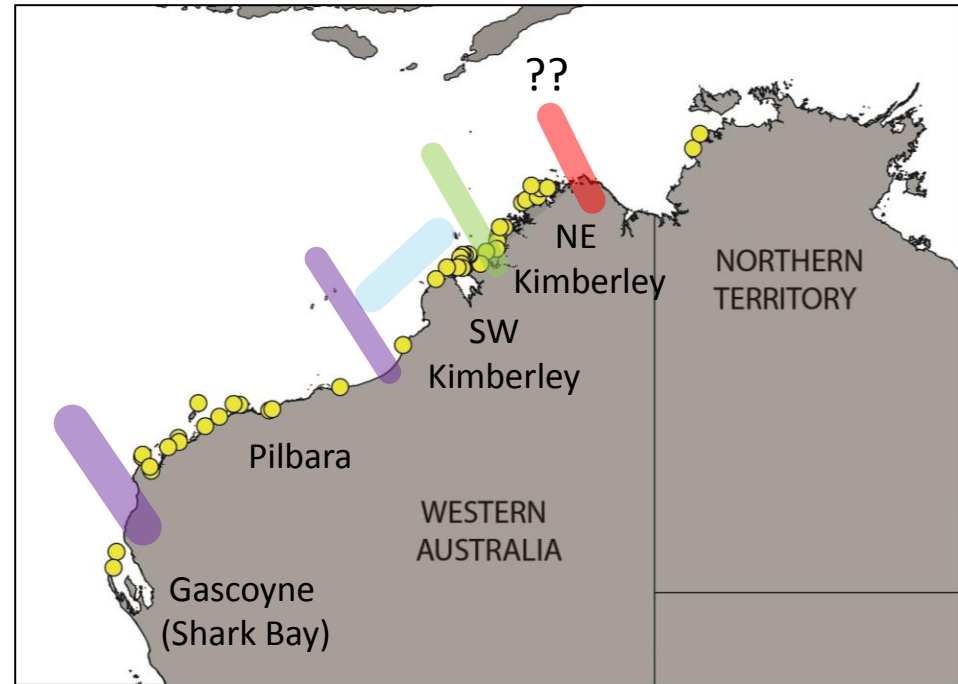
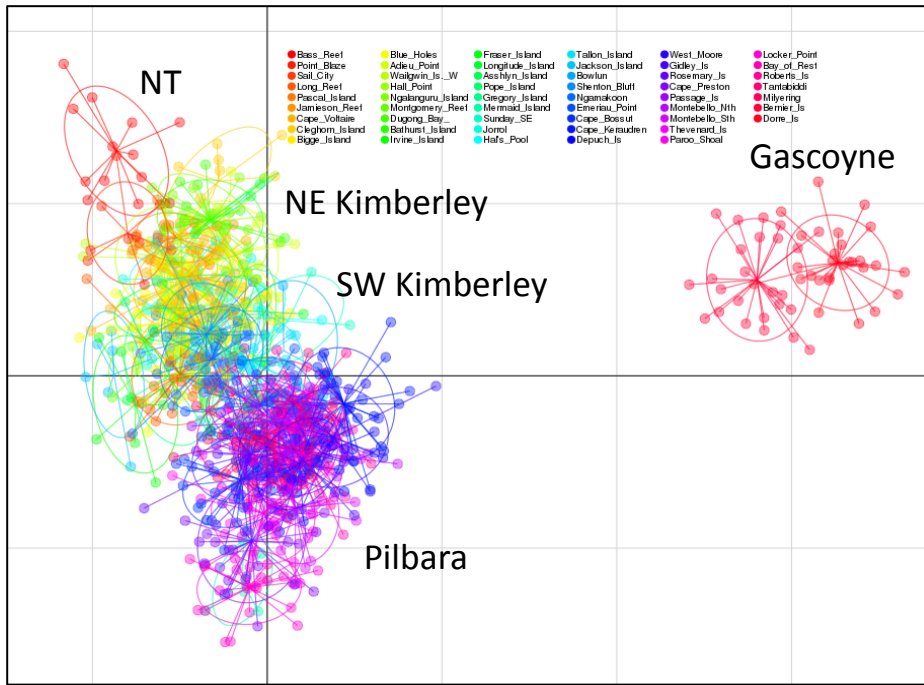
small distances



Stripey- 4 mobs in WA, and 1 in NT



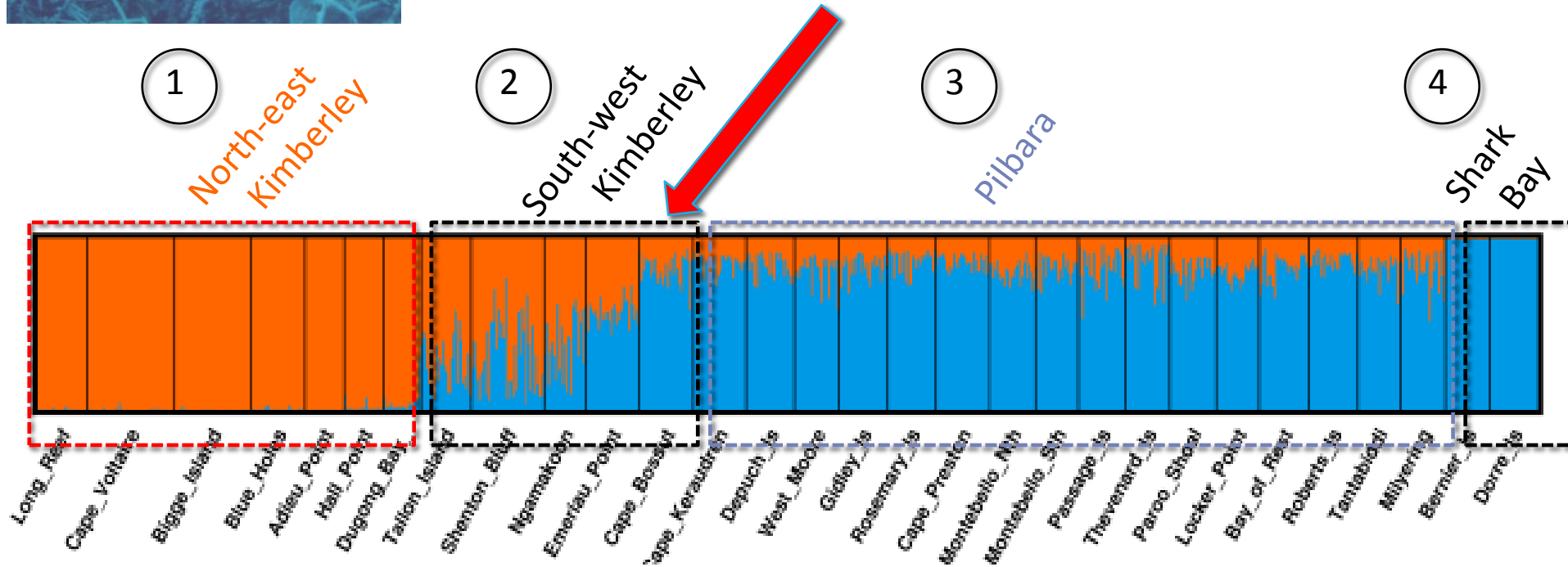
Barriers to mixing



Stripey- 4 mobs in WA



TRANSITION ZONE with lots of mixing at Dampier Peninsular!



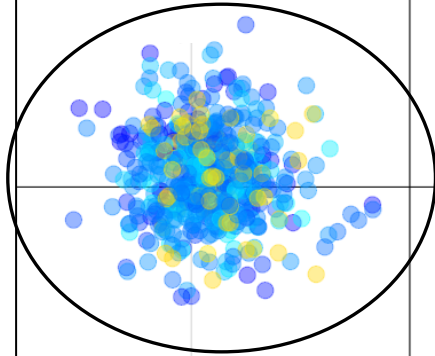
Damselfish – 3 mobs in WA



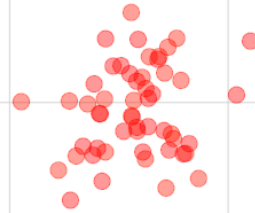
Kimberley population is one big mob,
but very different to Pilbara and Gascoyne (not much mixing)



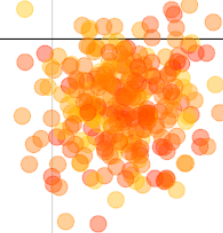
Kimberley



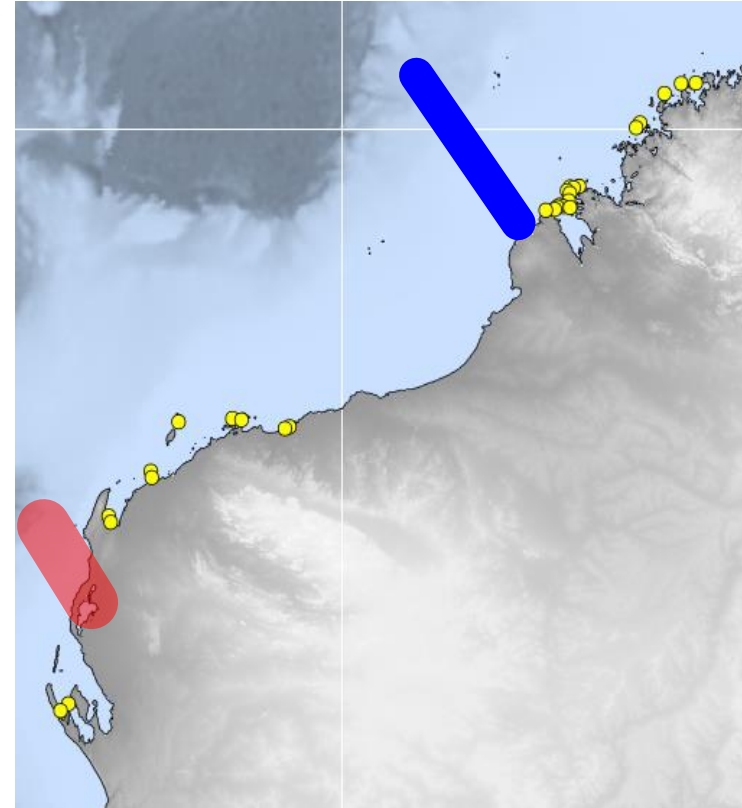
Gascoyne



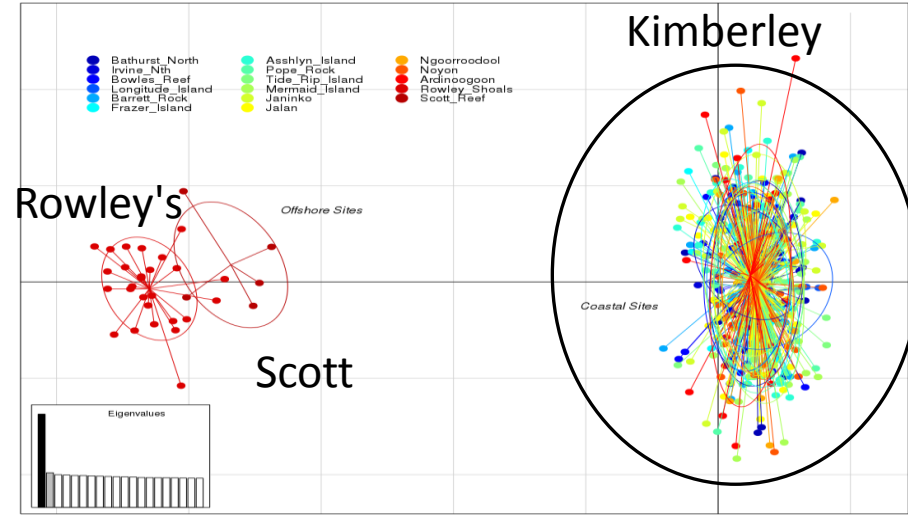
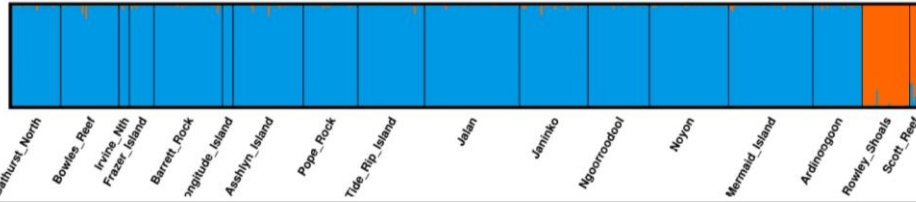
Pilbara



- | | | | |
|---------------------|------------------|-----------------|----------------------|
| ● Long_Reef | ● Fraser_Island | ● Bowlin | ● Montebello_Islands |
| ● Condillac_Island | ● Asshlyn_Island | ● Shenton_Bluff | ● Thevenard_Is |
| ● Montalivet_Island | ● Pope_Island | ● Chile_Head | ● Paroo_Shoal |
| ● Colbert_Island | ● Gregory_Island | ● Depuch_Is | ● Bay_of_Rest |
| ● Hedley_Island | ● Mermaid_Island | ● West_Moore | ● Roberts_Island |
| ● Bathurst | ● Sunday_SE | ● Gidley_Is | ● Barflats |
| ● Longitude_Island | ● Tallon_Island | ● Rosemary_Is | ● Homestead |



Dampier Peninsular and Buccaneer Archipelago are one big mob,
but very different to offshore reefs of Scott Reef and Rowley Shoals,
(no mixing!)



Corals and seagrass for habitat



Healthy corals and healthy seagrass =
healthy fish, dugongs and turtles

Question: where do the young corals come from after
bleaching?



Corals and seagrass



Central Kimberley, Buccaneer and Dampier Peninsula populations are different mob, but Tide-rip and Mermaid Islands connect them (occasional mixing)

