

MINUTES OF MARINE LGP MEETING

10.30-11.15 am, Thursday 3rd June 2010

Phone conference attended by Ken Ryan, Mary Sewell, Phil Lyver, Craig Marshall, and Vonda Cummings.

1. Research updates:

Craig Marshall: Work is focussed on past distributions of fish, rather than variation with latitude per se. Some fish species have regional variation and some don't; size and numbers appear to be influenced by productivity; there is no one past event that seems to influence speciation.

Phil Lyver: Penguin colonies at Hallett, Ross Island (Royds, Bird, Crozier), and climate change affects. Identifying the drivers of foraging at different sites. Noted the import influence of colony size on foraging behaviour. Birds from larger colonies have to forage further away – however, birds from the small colony at Hallett forage like those from large colonies, probably due to competition from the nearby Cape Adare and Possession Island birds. Predicting a 50-70% decline in populations at locations north of 70°S in the future.

Mary Sewell: Meroplankton community composition (diversity and abundance) changes markedly with latitude; Cape Hallett is very different to the other sites and has higher numbers.

Vonda Cummings: Marine benthic invertebrate community composition is driven by environmental factors that influence food availability, and not by latitude. This pattern was noted for coastal shallow water benthos from Terra Nova Bay south, and for continental shelf benthos in the northern Ross Sea.

Ken Ryan: Sea ice communities (bacteria and amphipods). Did not find any patterns correlated with latitude, but vertical gradients in environmental factors are important.

2. Identify and discuss links between the different pieces of work.

We are all looking at distinct but related parts of the ecosystem. While there are no direct overlaps between the bodies of work other than location (in some cases anyway), there does seem to be a common theme of productivity driving distribution patterns which could be further explored.

3. Synthesis publication:

Level of interest;

Everyone is interested, although there was some discussion about timing in relation to publishing papers on our own pieces of work first. For example, Mary has 2 methods papers to write before she writes her main paper. Victoria Metcalf commented via email (23/6/10) that she is interested too.

Potential thread/hook;

System productivity as a broad scale environmental driver? But difficult to tell until we have all completed our own analyses.

Analysis/additional data required;

We discussed gathering some relevant climate information for the region which might help tie the different bodies of work together. Matt Pinkerton (NIWA) may be able to help here.

People to go away and think about what might be needed, and to look at what the AWIS's collect. Potentially we could get a student to process this data over the next 12 months or so, perhaps with help of AntNZ?

Marine, marine/terrestrial focus;

The feeling was that it would be best to write separate marine and terrestrial papers – because of the disparate (at present) connection between the two realms, and because it would be easier to coordinate fewer people.

However, if the timing matches we suggest having the marine and terrestrial papers submitted as part I and II to the same journal.

Timeline (e.g., submit 2012?).

General consensus was that a mid 2012 deadline for submission would work.

5. *Presentation at AntNZ conference LGP workshop**.

Vonda to do as she is the only one of us that is going to be there!

6. *The future of LGP.*

We discussed the evolving plans for AAD's ICEMATE, the new SCAR EBA, and a broader Antarctic (rather than latitudinal) gradients focus. Also discussed the probably long lead in time to visit a further north site through AntNZ due to logistics and the 'winding down' of LGP. Ken and Vonda had flagged in their FRST proposals to visit sites north of TNB next season. Phil to do a scoping exercise of potential sites for AntNZ on his penguin census fly over. Mary unlikely to be involved in LGP Antarctic research in the near future.

Victoria Metcalf commented via email (23/6/10) that she believes it is 'imperative that LGP keeps going in some form to be able to provide meaningful information'.