ENVS2018 Environmental Science Field School 2023  
Kioloa report

# Outline

For the Kioloa week of the Field School, the report will focus more on biodiversity. In particular, you should examine the composition and structure of different plant communities, whether animal communities also differ, and how these patterns relate to the underlying soils and geology.

The reports must use our field-collected data. We will work together to collect and summarise the data we collect, then we will share these summaries so everyone is working with the same information. You will not be required to conduct any additional statistical analyses. Rather, the task is to describe the patterns you observe in the data we have shared with you, and indicate what processes/drivers have influenced the development of these patterns.

# Task

Describe variation across the Kioloa campus in the plant communities and associated fauna, considering the data we collected across all the sites. This survey information could be used to make decisions regarding changes in land use.

**Note:** whereas the first week report you were asked to focus on ONE location, this report should cover ALL the sites we surveyed at Kioloa.

# Word count

* ENVS2018 students: 2,000 words.
* ENVS6218 students who have chosen this to be their long report: 2,800 words.
* Word counts do not include references and figure/table legends.

# Sections

The report should be roughly split into these proportions:

* Sections 1 (Introduction), 2 (Brief literature review) and 3 (Location and site characteristics) should add up to about **15%** of the word count for the report.
* Section 4 (Methods) should be about **15%** of the word count for the report.
* Section 5 (Results) should be about **35%** of the word count for the report.
* Section 6 and 7 (Discussion and Conclusion) should be about **35%** of the word count for the report.

Report template

*Please replace all red writing with your own words*

Student name: XXX

Student number: ###

# Introduction

* Where and when are you conducting this study? Note that details for this is in section 3.
* What is the purpose of this study? Keep in mind the task that has been set – remember that understanding the distribution of biodiversity is essential to good land-use planning.
* What are the specific questions you are trying to answer?

# Brief literature review

* This is where you refer to peer-reviewed (e.g., journal) articles relevant to the study
* Has there been any prior work by others completed at this site (that is relevant to your study)?
* Is there a specific matter you mention later that needs some introduction here?

# Location and site characteristics

* Describe the climate, underlying geology, soils, and land-use (historical and current).
* This can be presented using a similar approach to the Canberra report (week 1), but because we did not do our own soil profiles - do not go into as much detail. Instead provide a short description based primarily on what you can extract from the internet and any field observations that you may have made.

# Methods

* What survey methods did you use?
* What procedures (e.g. Standard Operating Procedures [SOPs]) did you follow?
* Write a paragraph or two here and refer to any figures you want to integrate if you think they make your explanation of the Methods clearer.
* Note that if there is an existing Manual then you need to briefly refer to what you did but then cite the reader to the Manual (formal reference) for the detail.

# Results

## General observations

* Write a paragraph (or so) here and refer to any figures you want to integrate that show the features you are talking about.
* REMEMBER: do not give a reason (i.e., interpretation) for why you see these features yet – it goes in the next section.
* What general observations did you make about the study sites?

## Specific observations, surveys, and measurements

* What specific observations did you make about the data from the study sites?
* What patterns are there in the data you have collected? In what ways are some sites similar in the structure of the vegetation?
* In what ways are some sites similar in terms of the plants or animals that occur there?
* In what ways are some sites different in terms of structure of vegetation and community composition?
* Be specific about which sites are similar to each other and how they differ to others. Consider if there are groupings in terms of similarities and differences.
* Where possible plot a graph or present a representation of the data that helps you describe the patterns you are observing.
* REMEMBER: do not give a reason (i.e., interpretation) why you see these features yet – this goes in the next section.

# Discussion

* Write a few paragraphs here – this is where you provide your **interpretation** of the most important processes that explain the patterns you have observed.
* Do the answers to these questions help you answer the (research) question/s you posed in the Introduction above?
* Do you need to acquire more information? This is sometimes referred to as a ‘limitation’.

# Conclusion

* What are the potential implications or applications of your findings, for land managers, researchers, and/or the community?
* Write a sentence or two here.

# References

* List any references you have cited here.
* Remember to list these in alphabetical order by first-author surname (examples below).

ABARES (2016) The Australian Land Use and Management Classification Version 8, Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), Canberra.

Abell R. S. (1992) Canberra (1:100 000 scale geological map). Bureau of Mineral Resources, Canberra.

Jenkins B. J. (2000) Soil Landscapes of the Canberra 1:100 000 Sheet. NSW Department of Land and Water Conservation (DLWC), Sydney.