

Mountain Matters: Explaining Change in the Mount Majura Nature Reserve

For those of you who walk in Mount Majura Nature Reserve (MMNR), this information may be of interest. When next you walk past the Lower Hackett Reservoir, you will notice a new and unusual fenced area just behind the reservoir on the right hand side of the green Reserve notice board. This fenced area is another example of the Friends of Mount Majura (FoMM) at work on behalf of the Hackett community. Here is what it is all about.

FoMM successfully applied for a grant from the ACT Government for the fencing costs of a small project, which while designed by the parkCare group, has the support of the Park Rangers. This project is designed to provide information and insight into how two factors affect the landscapes of Mount Majura that we enjoy so much.

What is this information, and why is it needed? It is needed to answer two questions that often occur to anyone who regularly enjoys walking in MMNR, and who notices how the landscape changes. We all walk past the signs that declare one of the objectives of MMNR is to “protect the grassy woodlands” within its boundaries. That is, it is not just the woodland trees are to be protected, but also the ground layer of grasses and wildflowers. In contrast to the tree layer, which changes little over periods of years, the ground layer can change a lot within months. Our memories of the details of such change, when, what and how much, is far from perfect. But, repeated photographs can capture any change, refresh our memories and often generate some surprise.

For example, in this the area behind the reservoir, 2005 photographs show an abundance of native grasses where there are none now in 2009. The question is: why the big change in the grassy layer, and is this change permanent?

One can quickly think of two plausible reasons for this change. The first is seasonal (year-to-year) variation in rainfall. Most grasses respond best to summer rain, while forbs, and some grasses, respond best to winter rain. Because the rainfall during the last few years has been very low, that is why there are so few grasses and forbs now. The other possible reason is grazing pressure. While MMNR is protected from grazing by sheep and cattle, there has been no management of grazing by kangaroos and rabbits. In the last few years, populations

of both these grazers have increased, and because rainfall has been low, their grazing impacts on the ground layer are greater than before.

Either of these reasons is persuasive. Most likely they act together, but which is more important? If we don't know which, then how can MMNR be effectively managed? The matter can't be decided because we have only opinions but no data: while the rainfall was recorded, there are no measurements of kangaroo and rabbit populations. Opinions, even if based on experience, are no substitute for facts.

Returning to the FoMM project. It cannot contribute understanding of the past four years but over the next few years, it will provide an answer to the question: what is the most important influence on the grassy layer within MMNR – seasonal rainfall variation or grazing by kangaroos and rabbits? The areas being fenced will do this by working as a sieve. Two plots of land will be fenced: one to exclude both kangaroos and rabbits, the other just kangaroos. Nearby is another plot that is unfenced. All three plots will receive the same rainfall but different grazing regimes.

Thus, by erecting these two small fenced areas and photographically recording the change within them, FoMM volunteers will demonstrate the relative influence of rainfall variability, and kangaroos and rabbits on the diversity and abundance of the ground layer. The changes will also be obvious to the interested walker because you will be free to walk around each plot and closely examine them. The fencing will be temporary: established and recorded for 5 years, then removed and the subsequent change monitored for a further 3 years.

Furthermore, any interested public in MMNR will be provided with an informative and dynamic demonstration of how and why the vegetated landscape changes. FoMM members hold that the increased understanding that can develop from this simple demonstration project will enhance public appreciation of the value of Mount Majura Nature Reserve, and of all other ACT Parks and Reserves.

We hope you will keep an eye on the project. If you wish to be involved, please contact the FoMM coordinator Waltraud Pix at admin@majura.org or Phone 62477515.