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SPECIAL MEETING

FRIENDS OF ROYAL PARK & ROYAL PARK PROTECTION GROUP

SATURDAY MAY 28, 2022 2PM

WALMSLEY HOUSE, ROYAL PARK
161 GATEHOUSE ST, PARKVILLE

ROYAL PARK PROJECTS

REPORT

Welcome to Country

The Friends of Royal Park and Royal Park Protection Group respectfully acknowledge the Traditional Custodians of the land that is Royal Park - the Bunurong Boon Wurrung and Wurundjeri Woi Wurrung peoples of the Eastern Kulin Nation - and we honour their Elders past, present and emerging.

Welcome to the Special Meeting

Kaye introduced the presentation topics and presenters, then handed over to Council's Lee Harrison, Senior Ecologist, Parks & City Greening, Urban Sustainability, to chair the meeting.

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1. **Superb City Wrens Project**. City of Melbourne, RMIT University, University of Melbourne, Birdlife Australia
   Presenter: Dr. Holly Kirk, Ecologist, Post Doctoral Fellow, Centre for Urban Research, RMIT University

2. **Skink Habitat Site Plans**. City of Melbourne, University of Melbourne
   Presenter: Dr. Julian Brown, Research Fellow, Urban Ecology, Ecosystem & Forest Sciences, University of Melbourne

3. **Re-Naturing Royal Park – Matchstick Grasshopper – *Vandiemanenella viatica*.** University of Melbourne, City of Melbourne
   Presenter: Professor Michael Kearney, School of Biosciences, University of Melbourne

SUPERB CITY WRENS PROJECT
Dr. Holly Kirk

This is a joint project examining how animals might be using the Melbourne city area to move about, find food, friends, places to rest and how to use such information to assess ecological connectivity and park/nature planning. The City of Melbourne has many revegetation areas, such as Royal Park, but are they effective in providing or enhancing animals' needs? Superb Fairy-wrens were the chosen species

for this project because they are a common species, easy to identify, but vulnerable and often missing in urban habitats, preferring denser vegetation. Royal Park was felt to be a 'hot spot', but predominantly just in one area closer to the Wetlands and nearby creek lines. However Royal Park is a good place to start and it was hoped the citizen scientists would be able to play a part. Questions posed were: Where are Superb Fairy-wrens distributed in and around Royal Park; how do they use the various landscape elements of the Park, including specific vegetated areas; does strategic revegetation, including recent projects, lead to increased movement and colonisation; how do they disperse, particularly the females, and where do they go?

Holly described male and female bird colourings, breeding and non-breeding, and gave special mention to 'Dame Edna' an unusual older female that shows some male colouration breeding plumage, possibly due to elevated levels of testosterone.

To date, 55 birds have been banded, using special combinations of coloured bands on left and right legs. Specialist banders and permits have been obtained. A blue left leg band indicates the Royal Park location; coloured plastic and metal bands on right legs indicate sex and other identifying factors.

Holly went on to describe how people can participate in the project – to be a 'Superb City Wren-watcher' and provided a flyer (see attached):

- Select a spot, heading to one of the 30 designated wren-watching locations shown on the flyer map
- Stay still for 5 mins to let birds get used to your presence
- Start counting for 10 minutes all Superb Fairy-wrens. Other birds can be counted too.
- Note/record as best as possible the coloured bands any Superb Fairy-wrens have; left leg band most important one.
- Take photo if possible
- Submit your survey using the BioCollect app or online suberbcitywrens.com and 'Report-a-wren'

The project will run for some years, so that the Council's conservation actions can be assessed if they are having positive impacts …. on both Superb Fairy-wrens and connecting people with urban nature.

Holly noted that the Superb City Wrens Facebook page set up for the project has attracted 'accidental' interest from further afield, with 951 members and 400+ sightings reported in five months!

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WHITE'S SKINK HABITAT PLANS
Dr. Julian Brown

This a project born out of concerns held for some time about the decline in the so-called Skink Habitat Site in Royal Park West and how to address these concerns. Declines in numbers of the White's Skinks – recognised as a regionally significant population in Royal Park; decline in habitat value because of vegetation changes and difficulty in vegetation management due to uneven terrain in one section (former rubble tip) of the site.

Several surveys of the Skink population have been undertaken: 2000, 2006, 2010, 2022 by reptile expert, Peter Robertson. Julian worked with Peter on the latest, 2022 survey, counting the number of records per day and the distribution over three areas: the former tip site/'wasteland', the middle revegetated section and the main remnant native vegetation site plus outliers of remnant native vegetation. From 2000 at 15 records/day, numbers rose to 25/day in 2006 and 2010, but have since declined to 12/day in 2022. Changes were also seen in the spatial distribution between the three areas. The questions posed are: Are the differences seen due to illegal collection or could it be habitat change with fewer basking sites due to increasing vegetation or could it be change in population or detectability?

A project to address habitat change and the increased vegetation has thus been proposed. Julian outlined options for vegetation management, namely weed control in the 'wasteland' area, using herbicide, fire or grazing and described the pros and cons. The predominant weed is Kikuyu. A combination approach has been selected: graze with goats during winter when skinks are hibernating, then spot spray any re-shooting weeds with herbicide to kill roots, followed by replanting tussock grasses to prevent weed re-colonization, but leaving the rock/rubble exposed. Fifteen 10 metre square plots will be either grazed or not grazed and skink numbers reassessed. Professional grazing company GrazeAway will join the project with their goats.

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RE-NATURING ROYAL PARK – MATCHSTICK GRASSHOPPER – *Vandiemanella viatica*
Professor Michael Kearney

Professor Kearney introduced his talk describing some of the systematics of grasshoppers – that they are part of the larger insect group known as Orthopteroids or straight-winged insects, that also includes cockroaches, stick insects, crickets, locusts. Grasshoppers (suborder Orthoptera) lay eggs in the ground, hatch, moult and are winged. There are many different families of grasshoppers, with four in Australia. Here the multiplier effect comes into play: tens of genera and hundreds of species. "Australia is grasshopper country" to quote Murray Upton, author of guides to collecting, preserving, and studying insects. Prof Kearney showed examples of the many different types of grasshoppers with many types of colouring and camouflage … and exotic common names such as 'living stone', crested tooth-grinder', 'leopard', 'chamaeleon', 'giant green slantface', 'gumleaf' and of course, 'matchstick' grasshoppers.

'Matchstick grasshoppers' do look like matchsticks, being long and slender; they belong to the family called Morabidae with 41 genera and 250 species. They come in green, light and dark brown. They are all wingless and feed on shrubs and grasses.

Vandiemenella viatica

Former Professor of Genetics at the University of Melbourne, Michael J D White, was particularly interested in the genetic adaptation of the matchstick grasshopper – *Keyacris scurra* and went on to study *Vandiemenella viatica*, originally found in Tasmania, but also in fragmented habitat - 'ecological islands' - in SA, southwest Victoria and small part of Gippsland.

Formerly widespread, but threatened with loss of habitat, Professor Kearney, is working to bring back this species in translocation projects - 're-naturing' areas that have suitable habitat. Royal Park is one such an area because of its plantings of the grasshoppers' preferred food, a low-growing plant called *Chrysocephalum*.

Luck was with the project as an area of bushland in Diamond Valley was to be cleared for development in 2021 and 2300 *Vandiemenella*'s were collected. They were translocated to a number of trial sites around metropolitan Melbourne, Royal Park hosting one small site. Tagged insects, half male, half female, were monitored and how far they moved (remembering they don't fly). The translocations were a success and a larger site release is planned. Royal Park is currently being investigated for suitable sites/suitable habitat and vegetation.

Why introduce these grasshoppers into Royal Park? It is part of the ongoing efforts to enhance the biodiversity of the Park, enhancing the ecological systems in the Park, from the small critters to the preying birds, from the fungi in the ground to the mature eucalypts. *Vandiemenella* will provide a food source during late winter/early spring when there are not a lot of other food sources around. Their lifecycle is such that they hatch mid summer, mature in autumn-winter, breed, then die off in Nov-Dec.

Following Professor Kearney's talk, he led a mini field trip to find a *Vandiemenella* in the Royal Park trial site with successful result:

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