

Are management practices supporting ecosystem services and amenity in urban parks and greenspaces?

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Parks have many important roles for urban populations including recreation, healthy exercise, air pollution reduction and flood mitigation. However, they are an easy target for budget cuts as there are no statutory obligations for their provision or maintenance. Various strategies are being used in the UK's cities to reduce management costs in parks, for example reduced mowing and new types of floral display. It is not well known how these strategies will impact on parks, and the services they provide. Will these new management regimes improve parks for people and wildlife? Or will the services they provide suffer?



Figure 1: Floral displays in Coventry. Left: Traditional seasonal bedding, Right: 'Pictorial Meadows' planting

Objectives of this Project

1. Identify ecosystem services that urban parks deliver (e.g. pollination and aesthetic enjoyment) and the biodiversity that supports these services.
2. Identify management changes in urban parks (e.g. new mowing regimes, different types of floral display).
3. Investigate effects of changing management practices on biodiversity.
4. Investigate effects of changing management practices on amenity.
5. Examine possible trade-offs between management practices supporting biodiversity and other aspects of amenity.

"There is little available research, guidance or general agreement on new models for management and maintenance in order to cope with the reduced funding available."

Sheridan (2015)

[1]

Studies and Progress to Date

1. Investigate changing management practices in parks and their effects on ecosystem services, through case studies of pollinators and birds, in Coventry and Sheffield where management has changed. Data already collected in Coventry on pollinators for 4 months on 13 sites, a total of 50 quadrats and 50 transects (see Figures 4 and 5), 3 sites also surveyed for birds. Data provided on birds, butterflies and flora, for 3 case study sites by Sheffield Urban Nature Project.

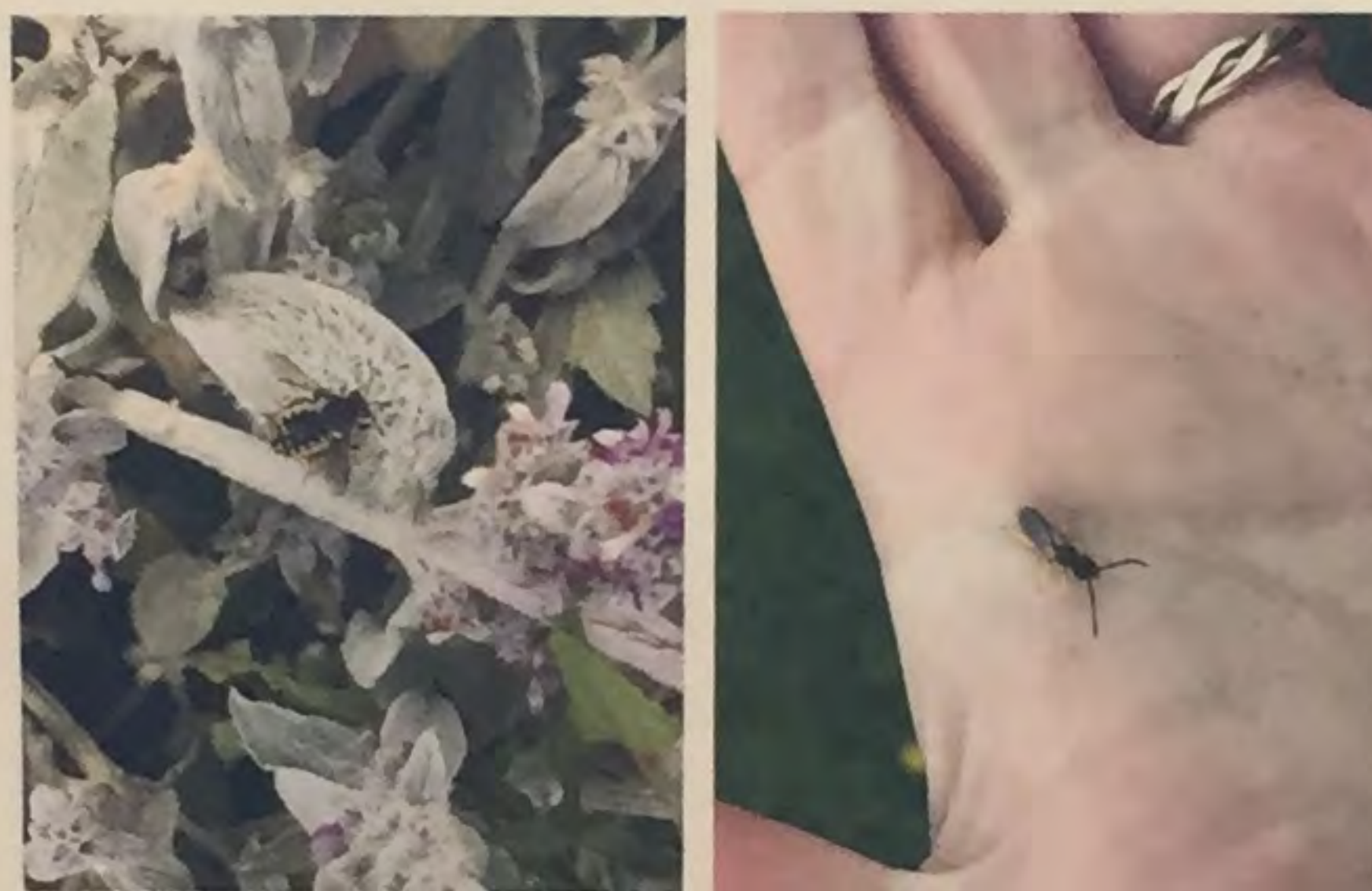


Figure 2: Bees seen on surveys in Coventry. Left: Wool Carder Bee *Anthidium manicatum*, Right: Orange Legged Furrow Bee *Halictus rubicundus*

2. National map of greenspaces (from Ordnance Survey, 2017) compared to crowdsourced scenicness ratings (scenicornot.datasciencelab.co.uk) to evaluate park users' preferences for different types of greenspaces and management regimes. Trialled with existing data: Scotland and London.
3. Examine the effects of changing greenspace management on habitats by comparing maintenance data from Coventry City Council to data from Warwickshire Habitat Biodiversity Audit.
4. Public opinion and park usage in different types of habitat/management type will be evaluated using on-site surveys in Coventry and a national online survey using photographs.



Figure 3: Strikingly different adjacent mowing regimes, Top Green, Coventry

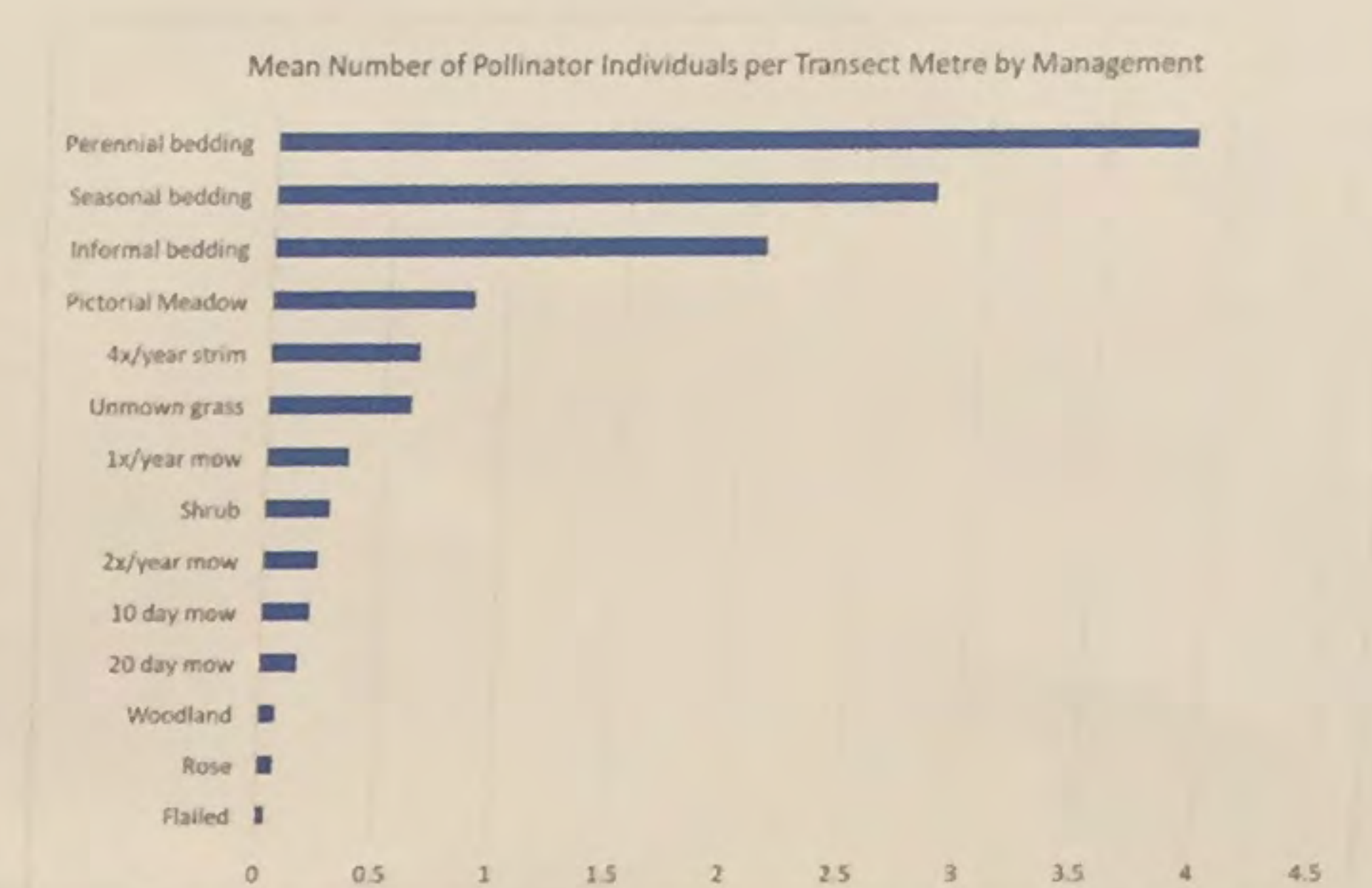


Figure 4: Initial findings for pollinator transects suggest perennial bedding is preferred by pollinators. Low numbers of pollinators on 'Pictorial Meadows' was due to recent resowing, numbers were much higher later in the season

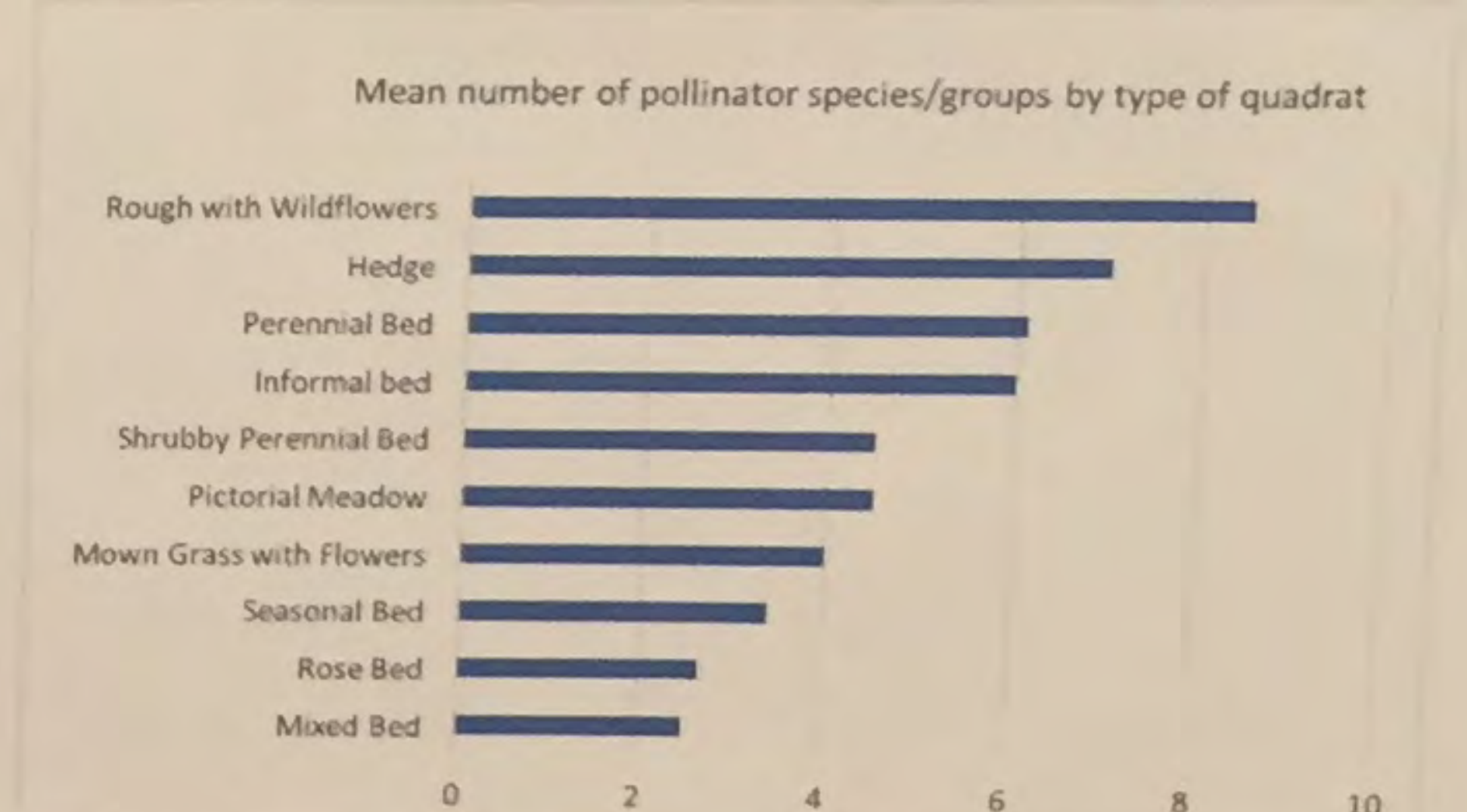


Figure 5: In pollinator quadrats seasonal bedding had fewer pollinators than perennial bedding. As above, 'Pictorial Meadows' were recently resown

Initial Conclusions and Next Steps

Initial findings suggest pollinators prefer perennial bedding to seasonal bedding, more detailed analysis is ongoing, which will inform planning for next year. Trial analysis of existing data for scenicness suggests people do not have a strong preference for formal parks over more natural spaces, this will be repeated with the new national map. Further analysis for study 3 will be carried out as updated data becomes available. Study 4 is currently being planned.

Acknowledgements

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References

- [1] 2015 Sheridan. Public parks and green spaces: Who cares? *Pitchcare*, 60.