

Proposed Research Project

The Bird Diversity Between Tree Species in Hong Kong
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Introduction :

This study focus on the bird diversity between tree species in Hong Kong. Stagoll et al. (2012) mentioned that old trees can be greater quantity of eatable food sources for different type of organisms. Furthermore, according Barth et al. (2015), established trees can attract more birds than young tree because it can generate more fruits and generate tree hollows.

This paper is to investigate i) the necessary and advantages on implementing a holistic green planning including to introduce more tree species which could easily accommodate different kind of bird and the possibility of alternative proposal in urban greenery, ii) to study whether bird species are correlated with the species and iii) current situation of tree species and bird species in Hong Kong and assessing the opportunities and the barrier on implementation at present.

Methodology:

The study will be based on a systemic search and categorizing of relevant literature review on ScienceDirect databases (January 2014 – January 2024) to extract original research paper examining bird diversity between tree species , relevant literatures published between March 2014 to March 2024 only with English language. Papers will includes the data collection and analysis. Conference proceedings and papers difficult to locate were exclude. Evidence for showing importance on linkage of local, district and regional green forestry with bird diversity are summaries in general.

For the species of trees, Old Value Trees and non Old Values Trees in Hong Kong will be selected for flied work. Information will be analysis by the statistical method, describing data using descriptive statistics (e.g. graphical presentation)

For the tool collecting tree bird data, the range finder app and binoculars will be used as estimate the tree height and use to count the far objects.

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Table 2 : Authors, year, journal and study location of the 30 research paper on examining bird diversity between tree species extracted in this study

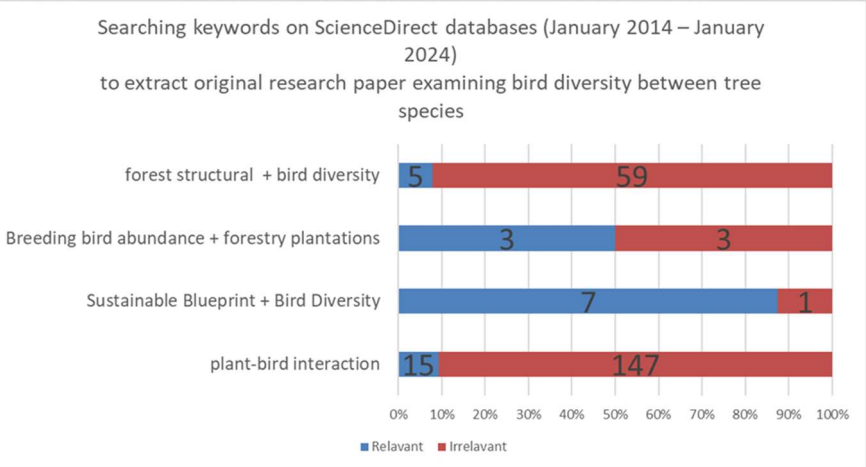


Table 1: Searching keywords on ScienceDirect databases (January 2014 – January 2024) to extract original research paper examining bird diversity between tree species

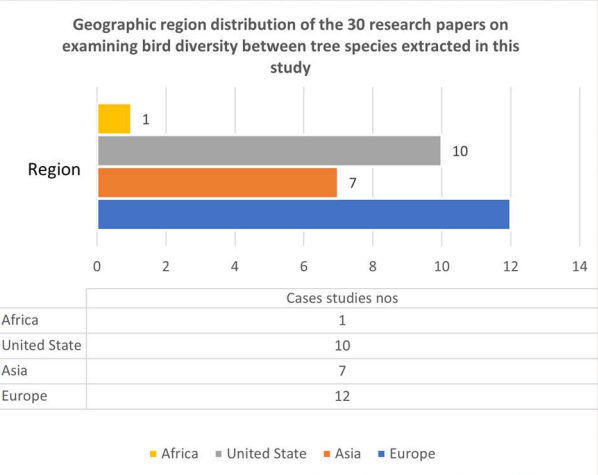


Table 3 : Geographic region distribution of the 30 research papers on examining bird diversity between tree species extracted in this study

References:

Barth James, B., Ian FitzGibbon, S., & Stuart Wilson, R. (2015). New urban developments that retain more remnant trees have greater bird diversity doi:https://doi.org.eproxy.vtclib9.vtc.edu.hk/10.1016/j.landurbplan.2014.11.003
Le Roux, D. S., Ikin, K., Lindenmayer, D. B., Manning, A. D., & Gibbons, P. (2014). The future of large old trees in urban landscapes. Plos One, 9(6), e99403. Retrieved from https://doi.org/10.1371/journal.pone.0099403
Jim, C.Y., Chan, W.H.,2016. Urban greenspace delivery in Hong Kong: Spatial-institutional limitations and solution. Urban Forestry & Urban Greening. 18. 65-85
Roy, S., Byrne, J.A., Pickering, C., 2012. A systematic quantitative review of urban tree benefits, costs, and assessment methods across cities in different climatic zones. Urban Forestry & Urban Greening 11, 351-363.
Stagoll, K., Lindenmayer, D. B., Knight, E., Fischer, J., & Manning, A. D. (2012). Large trees are keystone structures in urban parks. Conservation Letters, 5(2), 115-122. doi:10.1111/j.1755-263X.2011.00216.x
Shmelev, S.E., Shmeleva, I.A., 2009. Sustainable Cities: problems of integrated interdisciplinary research, International Journal of Sustainable Development 12, 4-23.

Discussion and Conclusion

By using strategic searching, a total of 295 original, peer reviewed research paper examining bird diversity between tree species extracted in this study were identified. A wide range of discipline was discovered, including arboricultural, ecology, economic, education and urban plantation, only 11 % of the papers are related to Bird Diversity between Tree species. Geographic region distribution of the 30 research papers on examining bird diversity between tree species extracted in this study as listed in Table 3, including Africa, United States, Asia, Europe and so on.

Compared with Old Value Trees and Non Old Value Trees Species Composition in Hong Kong, there are some birds namely: Tree Sparrow, Feral Pigeon, Spotted Dove, Yellow-crested Cockatoo, Red-whiskered Bulbul, Crested Myna, Eurasian Magpie, Oriental Magpie Robin, Japanese White-eye, Black-collared Starling, Large-billed Crow, Asian Koel, Great tit, Alexandrine Parakeet, Common Tailorbird, Masked Laughingthrush, Black crowned Night, Heron, Red-billed Blue and Magpie found in the top 5 common trees namely *Ficus macrocarpa*, *Cinnamomum camphora*, *Ceiba pentandra*, *Ficus virens var. sublanceolata* and *Albizia lebbek*. The details is listed in table 5.

However, it is found that the result may cause by external factors, such as animal disturbance (e.g. cats and squirrels, chemical applications).

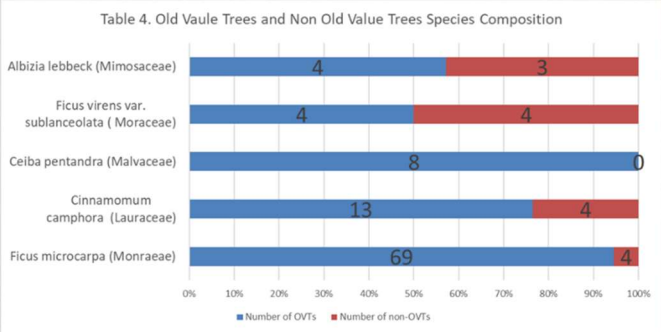


Table 4 : Top 5 Old Value Trees and Non Old Value Trees Species Composition in Hong Kong

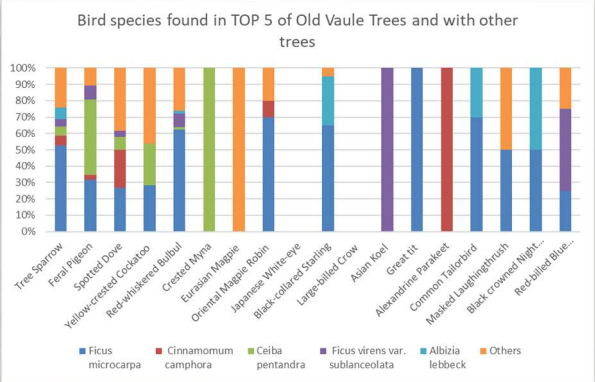


Table 5: Bird species found in TOP 5 of Old Value Trees and with other trees