Baseline Insect Survey at Garden City Lands Miyawaki Forest

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Introduction

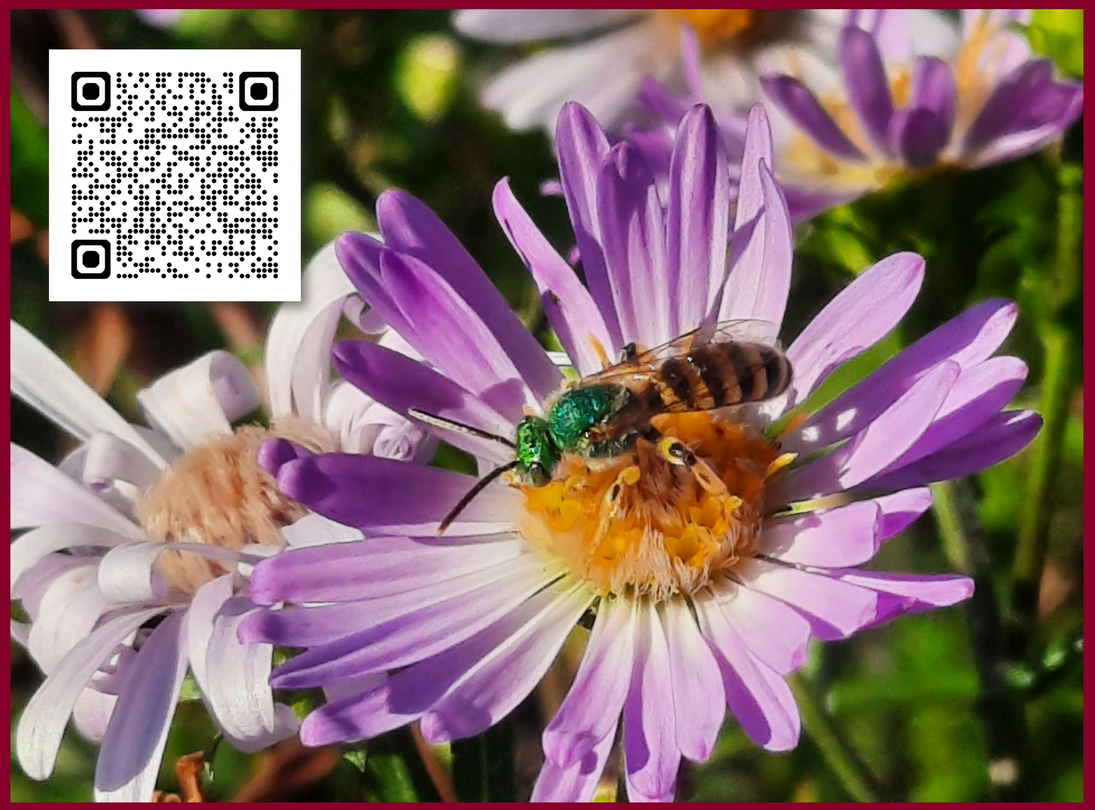
- Insect diversity is falling worldwide due to numerous factors including habitat loss
- Miyawaki mini forests provide habitat and act as connectivity stepping stones in urban environments
- Garden City Conservation Society planted a new Miyawaki Forest at Garden City Lands in Fall 2024

Figure 1. *New Miyawaki forest (left) and representative lawn (right), Summer 2025*

Methods

- Systematic pollinator monitoring conducted May-September 2025 (Xerces Society method)
  - Insects interacting with flowers recorded
- 2 sites at Garden City Lands
  - Miyawaki forest (n=2)
  - Lawn (n=2)
- Pitfall trapping and soil arthropod extractions with Berlese funnels also conducted at both sites, results pending analysis

Pollinator abundance increased in a young Miyawaki forest



Results

- Pollinator abundance was initially comparable in mowed control and forest treatment; after lawn was mowed, pollinators increased in forest but decreased in lawn (Fig. 2A)
- Forest pollinators were mainly hymenoptera (bees and wasps) while coleoptera (beetles) and hemiptera (true bugs) were more common in the lawn than the forest (Fig. 2B)

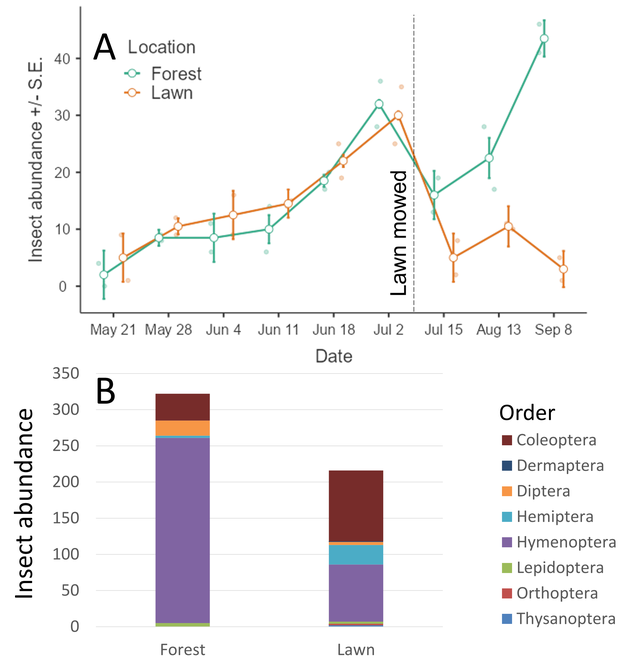


Figure 2. *Pollinator abundance in forest and lawn plots by date (A) and insect order (B)*

Conclusion

- Greater pollinator abundance in Miyawaki forest plots than adjacent lawn
- More effective pollinators (hymenoptera) were most abundant in Miyawaki forest plots

Acknowledgements

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