What level of ecological complexity can a (small) urban nature reserve support?

Northfleet Technology College
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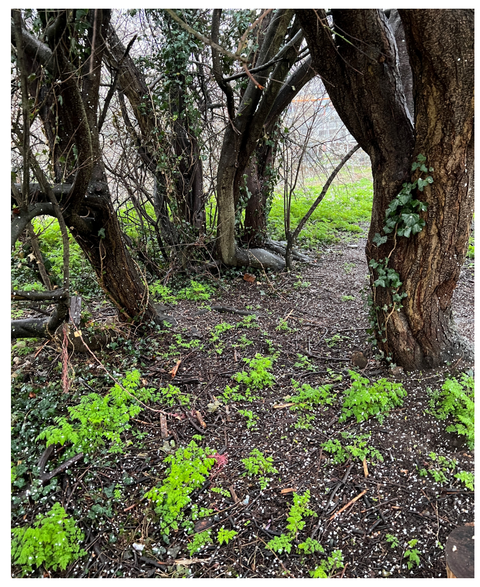
Overview

Climate change is an issue that affects all of us. It is our responsibility to do what we can to avoid global temperature increase of 1.5 degrees or more. Our nature reserve was first created to answer the question “what lives here?” but rapidly developed into a set of actions focused on improving biodiversity: creating a space where the carbon cycle could be harnessed to improve the environment in our area.



Fox Den #1

Aims

To answer the question "how diverse is our reserve?" we wanted to find out what birdlife, mammals and insects populate the reserve at night and during the day. To achieve this, we manually collected data and used an array of wildlife cameras to record activity.

Background information

Honeybee Frame

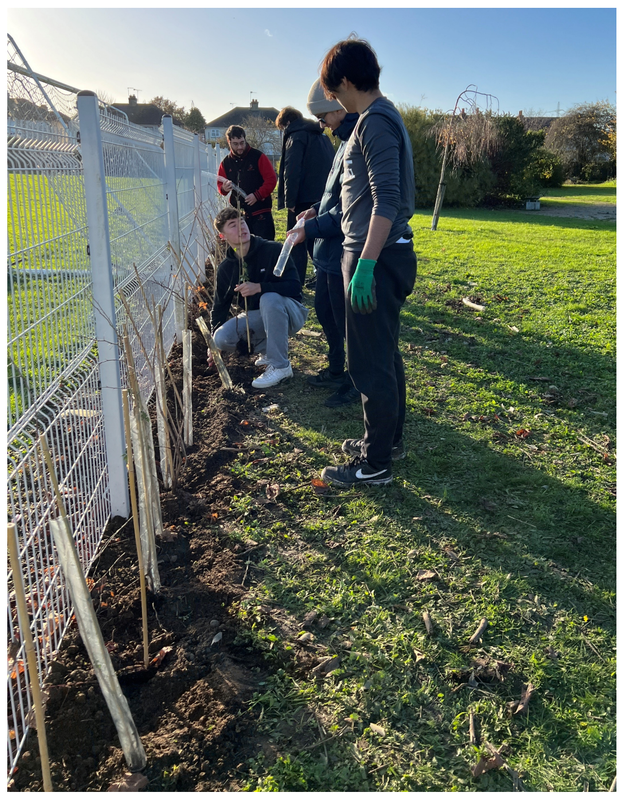
Assessing biodiversity of an area can give an indication of how healthy the area is. We knew that there must be a range of plant and animal species in our nature reserve, which is at the far end of the school grounds, has a perimeter fence and was rarely visited by humans. Once we established what the environment held, planting trees and encouraging pollinators such as bees was agreed as a vital step in the battle against climate change.

Methodology

Using an array of wildlife cameras, we were able to capture the day and night life of our nature reserve when the fauna were most likely to be active. This data was then screened and edited to provide a longitudinal study and record of animal life. Students undertook manual recording of plant and insect life during the early stages to provide a benchmark of what we had. This will be followed up with a recording session in Spring 2024.

Results

Our nature reserve has a healthy range of fauna. There are at least two fox families, possibly three. The presence of so many apex predators increases the chances of other mammals, birds and insects. Elusive birds live with us, including a greater spotted woodpecker and jay. Our flora diversity is good, with many established fruit trees and native shrubs. This has been enhanced with over 2000 planted trees, which will increase the biodiversity of the area.



Planting a wildlife corridor

Conclusion

Our research and subsequent rewilding has meant that we are increasing the biodiversity of the nature reserve. The use of trees as a core element will provide a massive source of pollination for bees and other pollinators. This in turn will encourage insects, birds and small mammals to populate the nature reserve as the pollinators and eventual fruit will provide a source of food for them. These smaller animals will subsequently become a source of food for the larger mammals and birds of the area.

Next steps

The journey has been one of wonder and hard work. The student body are committed to extending the nature reserve further. We have made a start on building an apiary with 2 hives. By the summer of 2024 we hope to have a minimum of 10 hives in place. These will be shared with and managed by the local primary schools. This will increase the number of people who are aware of and engaged in positive climate change activities.

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