

Biodiversity Mapping: Monitoring Changes Through Land Use Changes

Biodiversity mapping was initiated as part of an educational workshop led by Payal Molur, designed to heighten awareness of the often-overlooked biodiversity in our daily surroundings. As RHATC fellows, along with workshop participants, we undertook the task of creating a detailed biodiversity map within a 100-meter radius around the Zooreach Field Station in Saravanampatti.

Using footsteps to measure distances, we translated our observations into a scaled visual representation on paper, documenting the existing vegetation diversity. This base map was then digitized and enhanced using Canva, where species recorded from field surveys were systematically added. The exercise commenced on October 24, 2024, and continued monthly until January 11, 2025. During this period, we consistently identified and mapped the area's faunal diversity, while monitoring changes in biodiversity.

Over the months, noticeable land use and land cover changes were observed, significantly impacting the biodiversity composition. Initially, the base biomap reflected abundant green cover, hosting diverse species of insects, birds, reptiles, and other invertebrates. However, as land clearing for construction and other activities progressed, the area's biodiversity began to decline in that area.

This exercise not only brought immense joy as we deepened our connection with the environment but also provided valuable insights into the dynamic relationship between habitat alteration and biodiversity. It highlighted the importance of documenting and preserving our surroundings amidst rapid urbanization.

Between October and February, the biodiversity around the Zooreach Field Station experienced significant changes due to land clearing for construction activities. Initially, the area was characterized by abundant green cover that supported a diverse array of insects, birds, reptiles, and invertebrates. However, as urbanization progressed, this green cover diminished substantially, resulting in a marked decline in species diversity. The faunal composition became less varied, with many species either displaced or lost altogether.

These changes underscored the adverse impacts of land use alterations on local ecosystems, highlighting the critical need to incorporate conservation strategies into urban planning.

Conversely, the establishment of a nursery with native plants in the area led to an increase in insect and invertebrate diversity. This suggests that planting native flora provides better support for local biodiversity, enabling more



species to thrive compared to areas dominated by non-native or invasive vegetation.

Biodiversity mapping can serve as a transformative educational tool for schools and eco-clubs in both rural and urban areas. By engaging students in hands-on mapping activities, it fosters environmental awareness,

scientific rigour, and active participation in conservation efforts. For example, a rural school could map the biodiversity around nearby farmlands, identifying critical areas where pollinators thrive. If plans arise to clear a portion for expansion, students could use their data to advocate for the preservation of pollinator habitats, showing the importance of these species to local agriculture.

In urban schools, children could map green spaces on their campus and monitor changes over a year. If a plantation drive is proposed, their data could guide the selection of native species that are better suited to the environment, demonstrating the ecological benefits of such choices.

Eco-clubs could use mapping to track changes in bird populations or insect diversity in local parks. If a park area is scheduled for redevelopment, students can present their findings to local authorities, proposing strategies to integrate biodiversity-friendly designs like butterfly gardens or birdhouses.

These activities not only inspire stewardship but also embed scientific rigor, teaching students data collection, analysis, and effective advocacy—all vital skills for driving meaningful environmental change.

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BIOMAP KEYS

DATE: 24 OCTOBER 2024





- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

- Beetle 
- Dragonfly 
- Damselfly 
- Grasshopper 

- Small Bird 
- Medium Bird 
- Big Bird 

- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
- Eggs 
- Caterpillar 
- Millipede 



BIOMAP KEYS

DATE: 25 OCTOBER 2024










- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

- Beetle 
- Dragonfly 
- Damselfly 
- Grasshopper 

- Small Bird 
- Medium Bird 
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- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
- Eggs 
- Caterpillar 
- Millipede 



BIOMAP KEYS

DATE: 26 OCTOBER 2024








- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

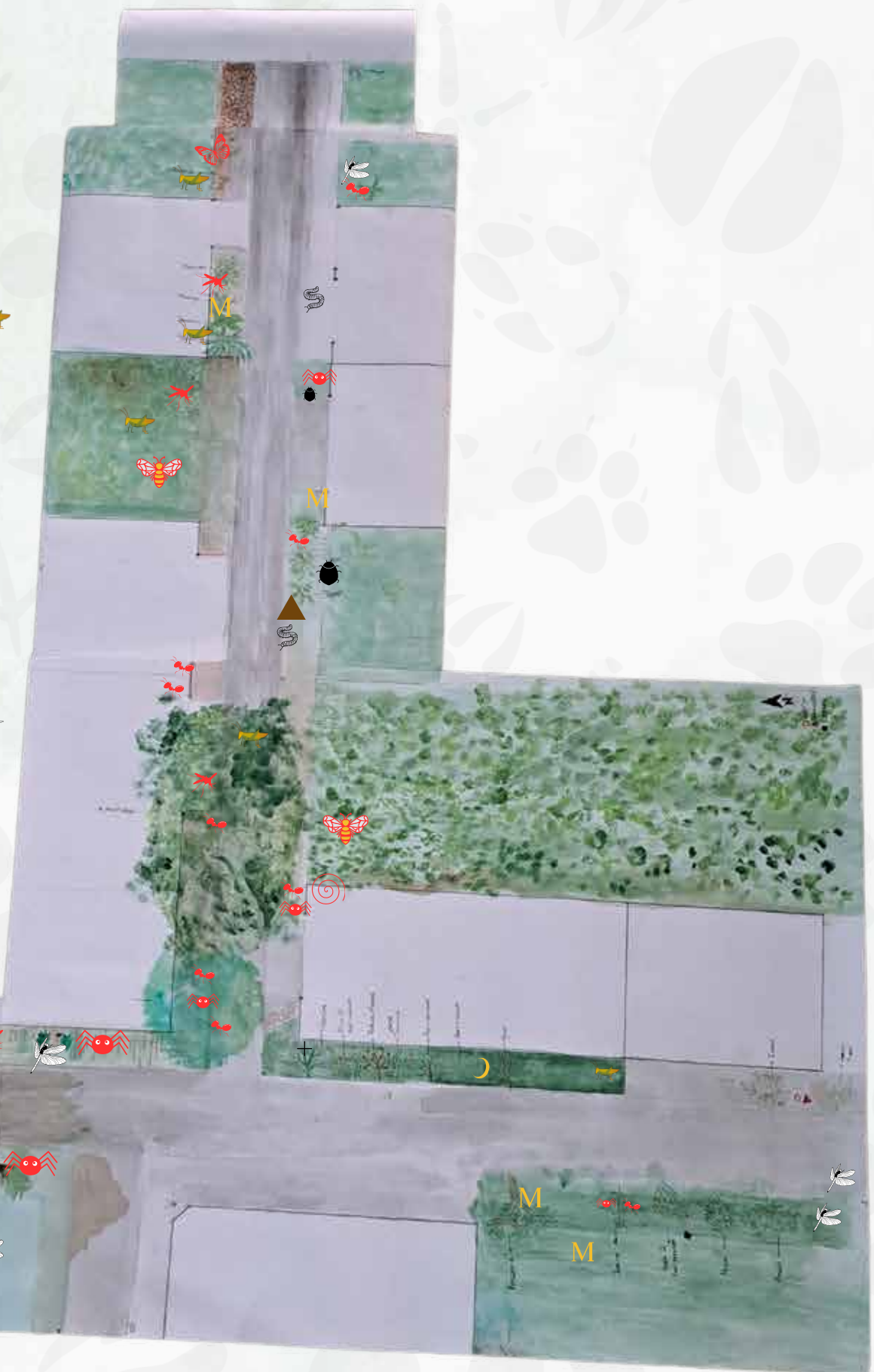
- Beetle 
- Dragonfly 
- Damselfly 
- Grasshopper 

- Small Bird 
- Medium Bird  M
- Big Bird 

- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
- Eggs 
- Caterpillar 
- Millipede 



BIOMAP KEYS

DATE: 30 OCTOBER 2024







- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

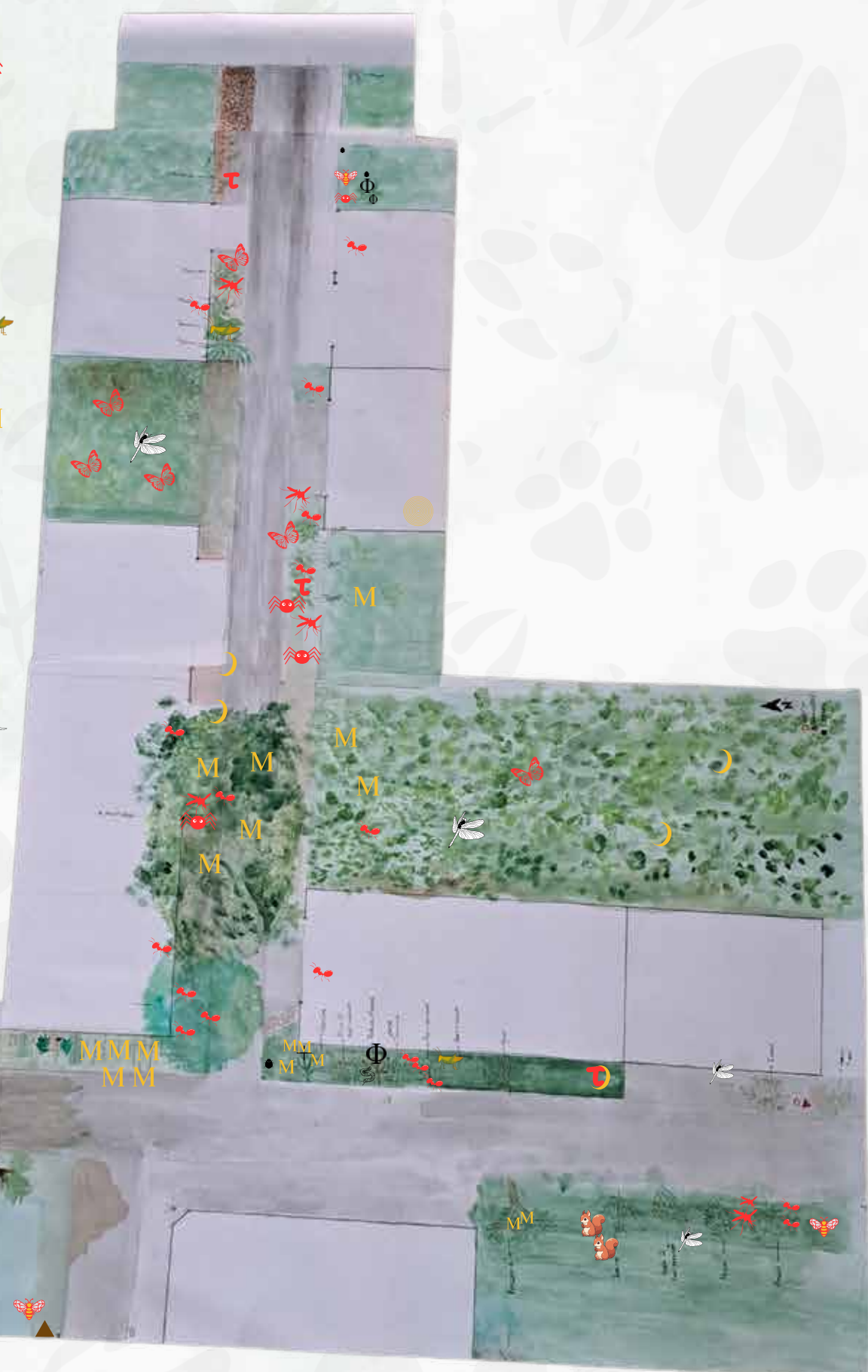
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- Dragonfly 
- Damselfly 
- Grasshopper 

- Small Bird 
- Medium Bird  M
- Big Bird 

- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
- Eggs 
- Caterpillar 
- Millipede 



BIOMAP KEYS

DATE: 12 NOVEMBER 2024










- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

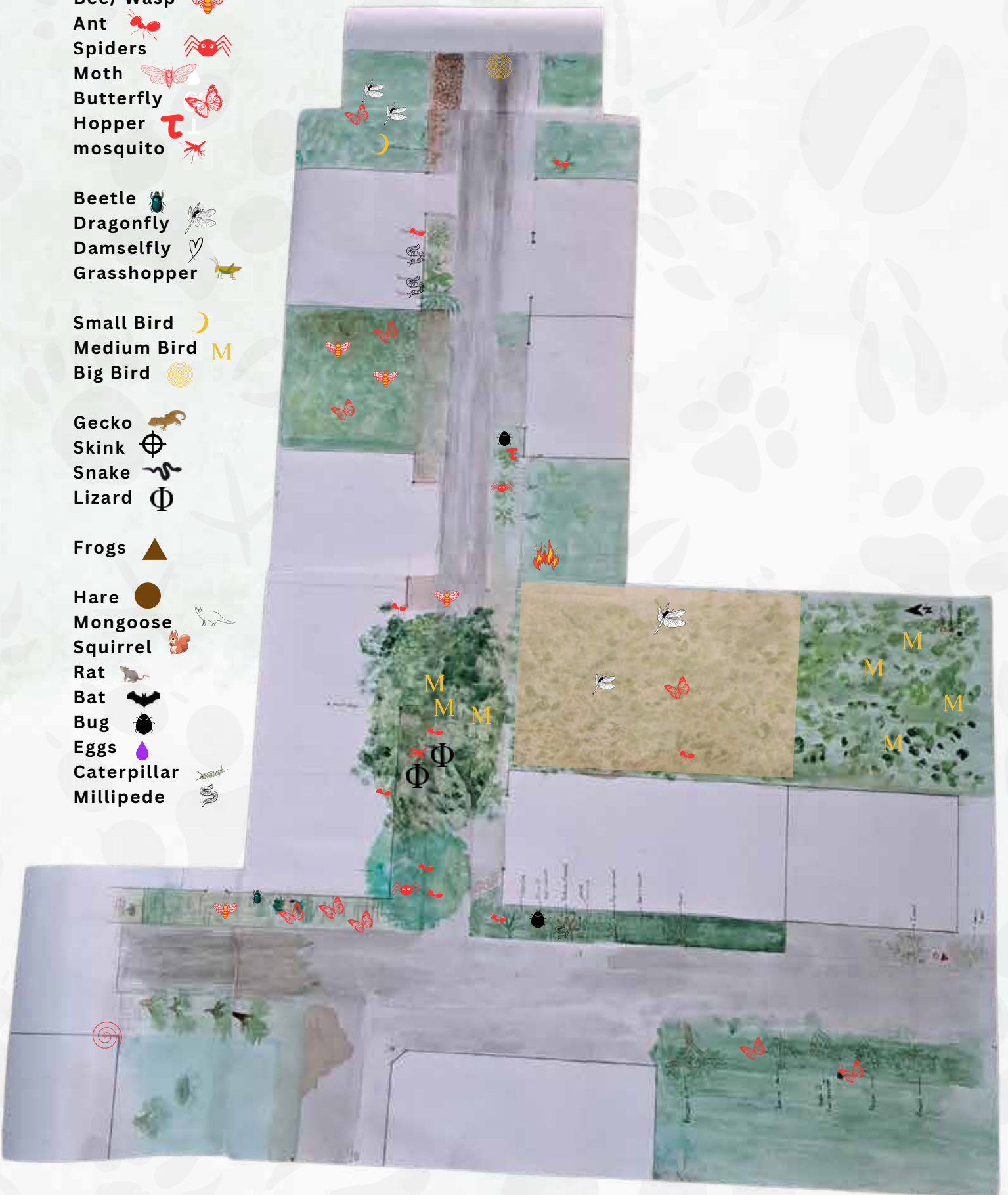
- Beetle 
- Dragonfly 
- Damselfly 
- Grasshopper 

- Small Bird 
- Medium Bird 
- Big Bird 

- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
- Eggs 
- Caterpillar 
- Millipede 



BIOMAP KEYS

DATE: 25 NOVEMBER 2024







- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

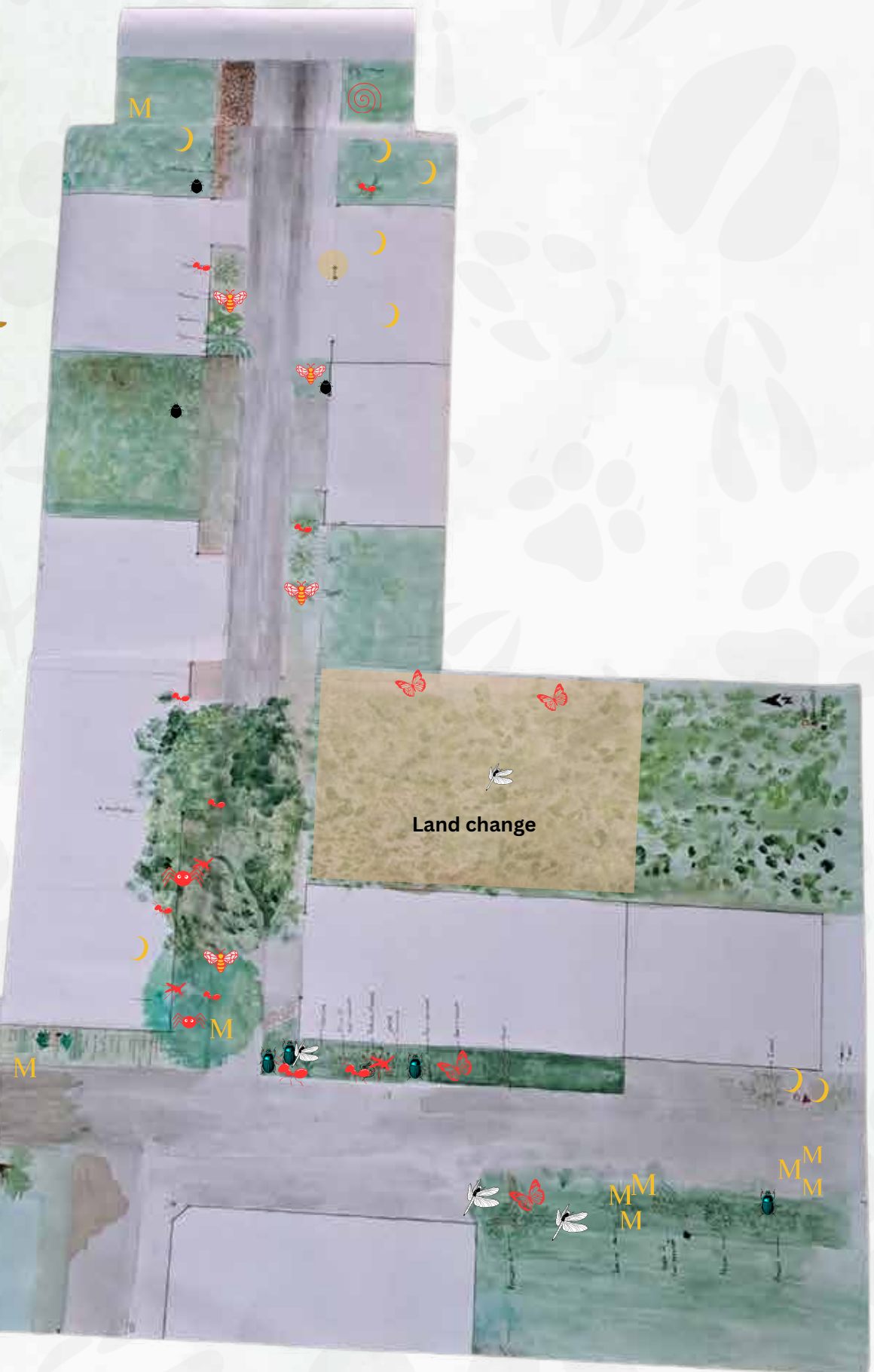
- Beetle 
- Dragonfly 
- Damselfly 
- Grasshopper 

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- Medium Bird 
- Big Bird 

- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
- Eggs 
- Caterpillar 
- Millipede 



BIOMAP KEYS

DATE: 19 DECEMBER 2024









- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

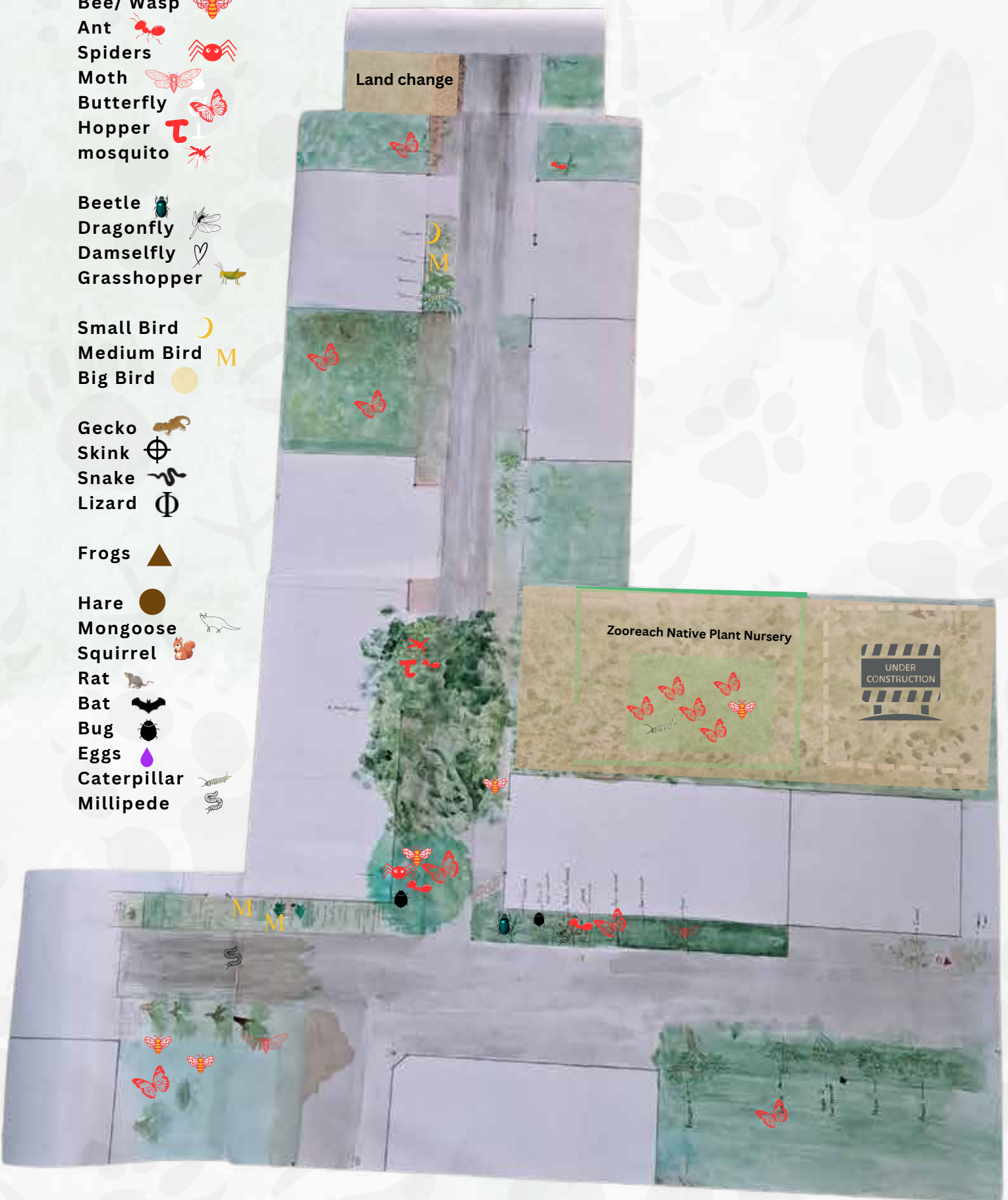
- Beetle 
- Dragonfly 
- Damselfly 
- Grasshopper 

- Small Bird 
- Medium Bird  M
- Big Bird 

- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
- Eggs 
- Caterpillar 
- Millipede 



BIOMAP KEYS

DATE: 04 JANUARY 2025

- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

- Beetle 
- Dragonfly 
- Damselfly 
- Grasshopper 

- Small Bird 
- Medium Bird 
- Big Bird 

- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
- Eggs 
- Caterpillar 
- Millipede 



BIOMAP KEYS

DATE: 11 JANUARY 2025








- Snail 
- Bee/ Wasp 
- Ant 
- Spiders 
- Moth 
- Butterfly 
- Hopper 
- mosquito 

- Beetle 
- Dragonfly 
- Damselfly 
- Grasshopper 

- Small Bird 
- Medium Bird  M
- Big Bird 

- Gecko 
- Skink 
- Snake 
- Lizard 

- Frogs 

- Hare 
- Mongoose 
- Squirrel 
- Rat 
- Bat 
- Bug 
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