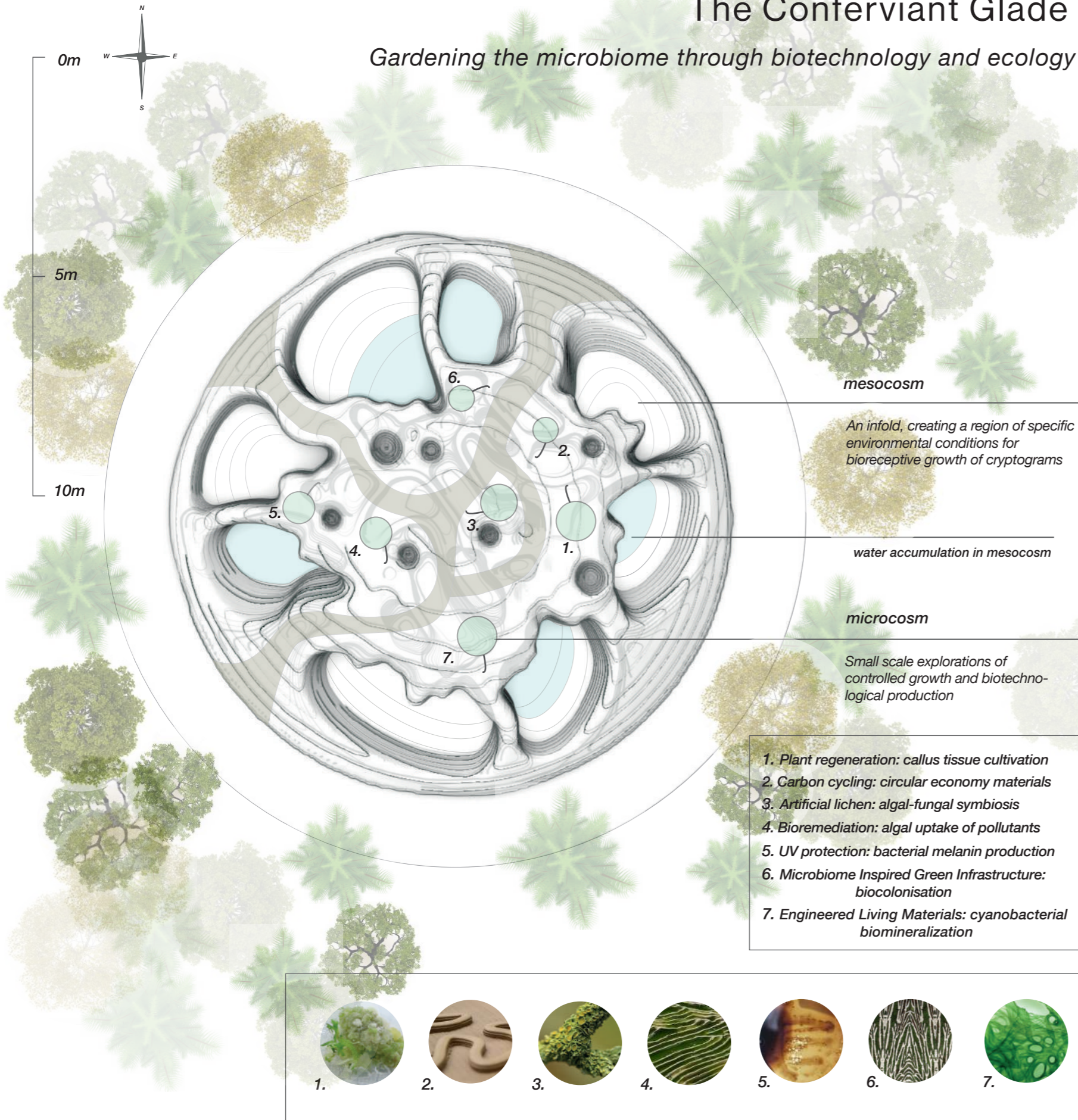


# The Conferviant Glade :

*Gardening the microbiome through biotechnology and ecology*



**mesocosm**

*An infold, creating a region of specific environmental conditions for bioreceptive growth of cryptogams*

**water accumulation in mesocosm**

**microcosm**

*Small scale explorations of controlled growth and biotechnological production*

1. **Plant regeneration: callus tissue cultivation**
2. **Carbon cycling: circular economy materials**
3. **Artificial lichen: algal-fungal symbiosis**
4. **Bioremediation: algal uptake of pollutants**
5. **UV protection: bacterial melanin production**
6. **Microbiome Inspired Green Infrastructure: biocolonisation**
7. **Engineered Living Materials: cyanobacterial biomineralization**



Within the depth of the forest an intriguing clearing unravels (macrocosm) – a glade defined by a smoothly elevated topology with a set of infolds in the ground (mesocosms), and numerous biotech components floating above (microcosms). We are attracted to get closer, and descend into the scenario to observe the subtle emergence of nature at multiple scales. From this subterranean vantage point we become aware of the microbiome as the foundation for an invigorated biodiversity.

The circular geometry of the garden symbolises how we coexist in a holistic manner with respect to multiple species. We are immersed in a juxtaposition of familiar and unfamiliar biological growth that shows us a path towards a more biophilic future human habitat.

The Conferviant Glade is in essence a refugia for water and carbon. It is a silent yet noisy place, where keystone species such as cyanobacteria and algae assemble and exchange with bacteria, fungi and plants, forming novel ecosystems.

The garden explores the tension between laboratory-made conditions (controlled) and landscape (uncontrolled). It provokes curiosity to encounter biotechnology in unexpected forms within the natural context.

## Proposed flora



*Proposed flora (Top from left)*

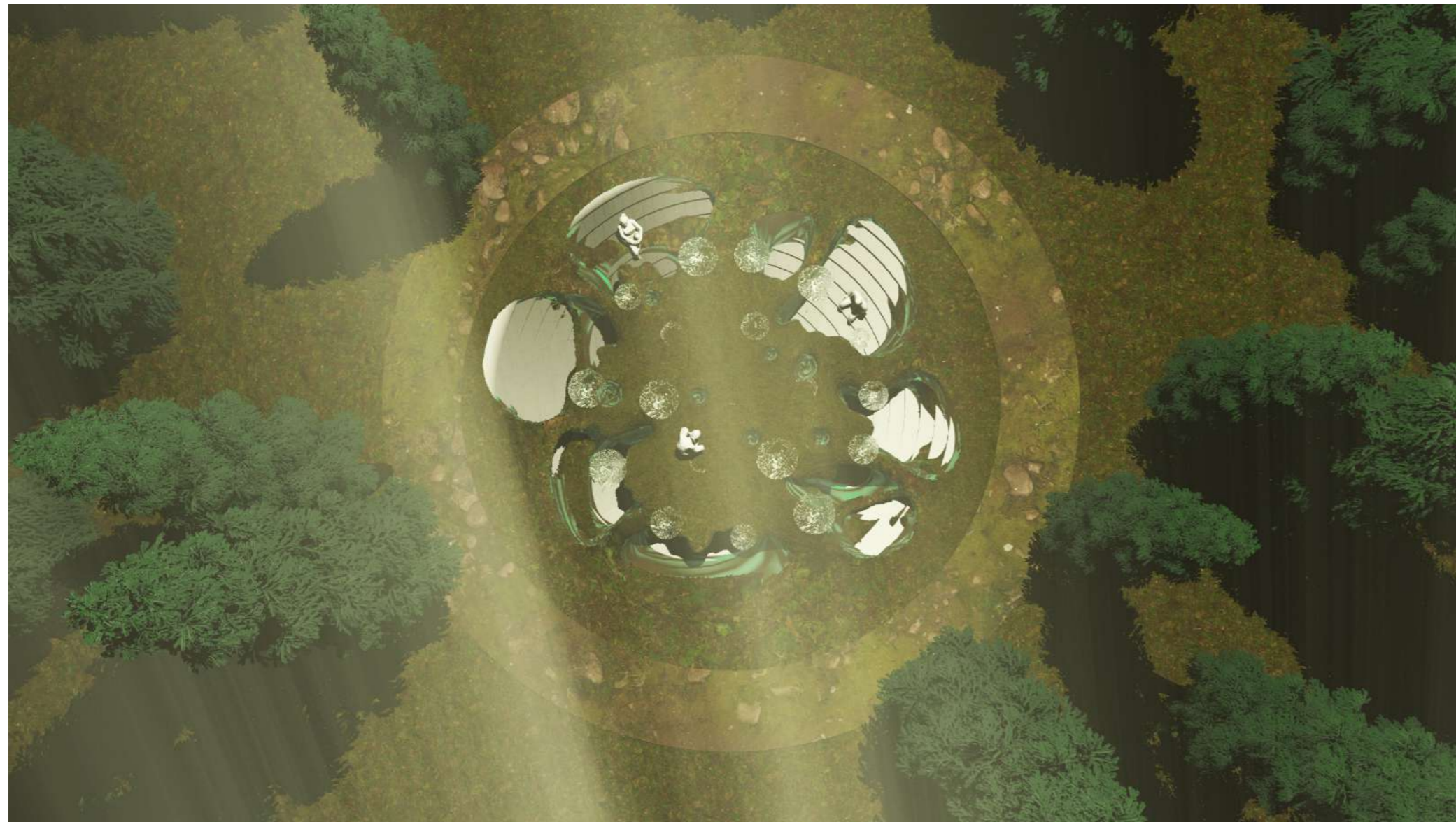
- Trifolium pratense,
- Botrychium rugulosum,
- Capnoides sempervirens,
- Monotropa uniflora,
- Myosotis laxa

*Proposed flora (Bottom from left)*

- Lathyrus japonicus,
- Gaultheria procumbens
- Comarum palustre,
- Hypopitys monotropa,
- Selaginella rupestris



Example of a glass enclosed biophotovoltaic microcosm.



**Top Left**  
View of microcosms (Small scale explorations of controlled growth and biotechnological production)

**Top Right**  
View of mesocosms (An infold, creating a region of specific environmental conditions for bioreceptive growth of cryptograms)

**Left**  
Perspective view of entire garden. View of macrocosm, the conferviant garden in the forest glade.