

FUTURE GARDENS

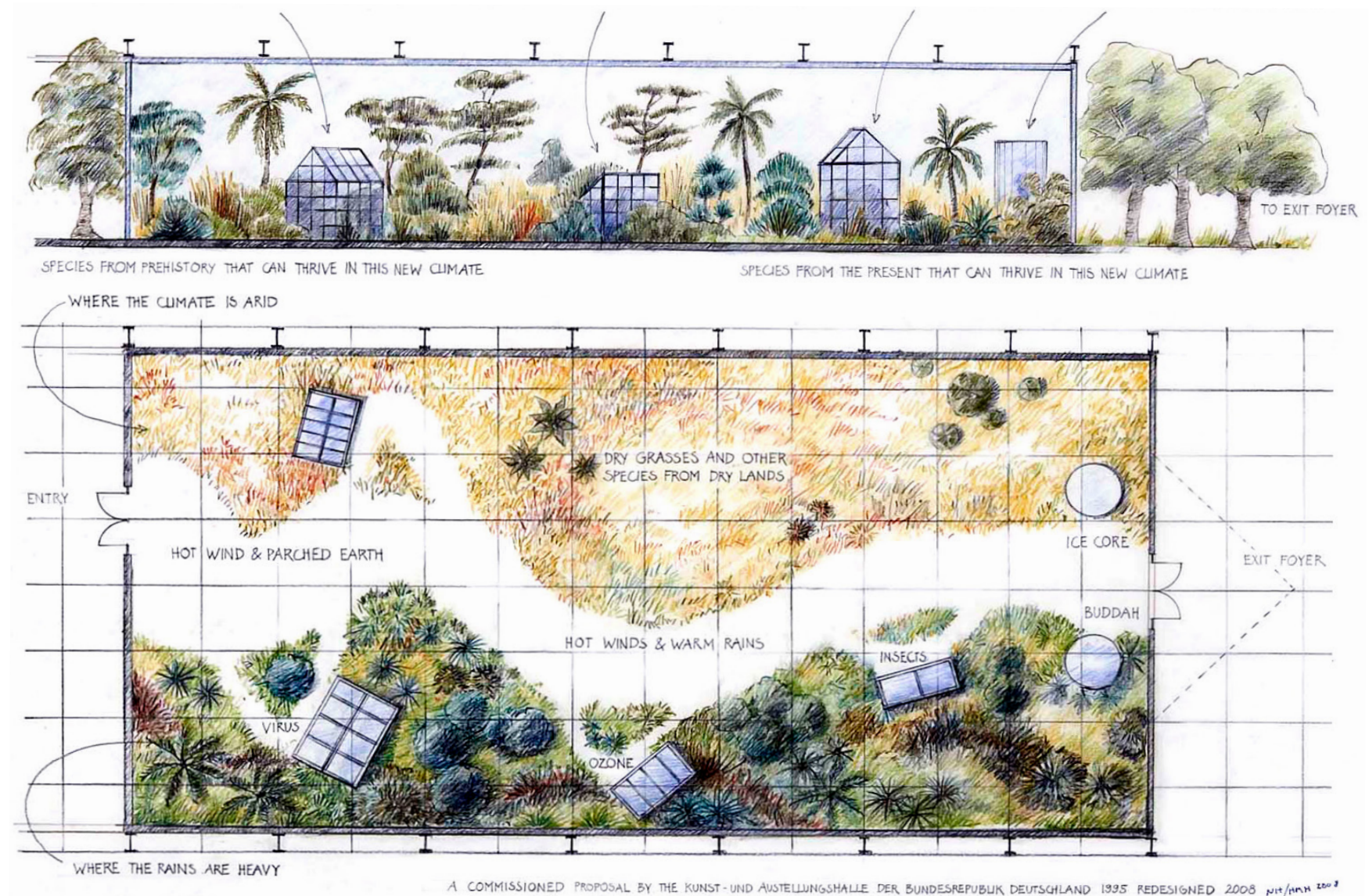
Where every place is the story of its own becoming

These are a series of works we call Future Gardens that began in 1995. The concept of Future Gardens is that every place that has survived heat and drought in its past has present and historical plant species in its history and present that can survive in a heat-stressed future. Local botanists can collect such species, propagate them, and generate the scaffolding for more rapid regeneration of local ecosystems as warming occurs.

These clusters of species, when propagated in Future Gardens then act as educational scientific experiments, works of art, public gardens and nursery beds of future plant ensembles that have the capacity to regenerate heat-stressed ecosystems far more rapidly than the life web can unassisted.

Envisioning a Global Network

We are exploring the idea of creating a public process for building Future Gardens linked to parks, botanical gardens, arboretums, zoos, churches and other public spaces around the world, building a global network of gardens tying people in communities large and small across the planet to a future of their own creation.



First Future Garden, *The Garden of Hot Winds and Warm Rains*.
For the city of Bonn, 1991

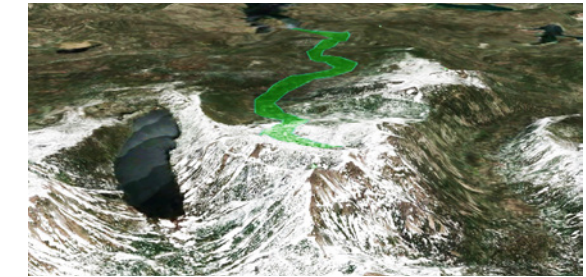
Future Gardens in the Now

We currently have several Future Gardens in process on the ground. Each one is adapted to its unique circumstance and context. The experimental design is co-created with scientists in order to yield valuable information that can eventually be collated to give a larger sense of how to respond to rapid heat and ecological stress across different bio-regions of the world.

“Future Gardens generate biodiversity fields, which can self-replicate in virtuous cycles, expanding and improving the ecoregion as they develop.”

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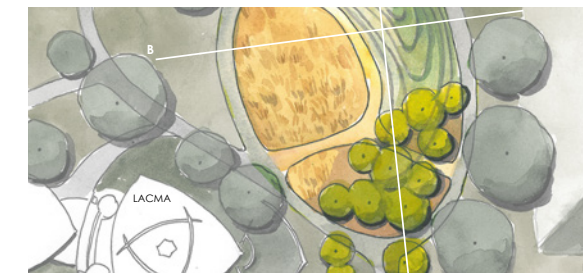
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Future Garden for the Central Coast of California

We are propagating plant ensembles inside three donated Buckminster Fuller domes located at the UC Santa Cruz Arboretum. We are testing novel ensembles for resilience at a 50-year predicted temperature increase of 3–4 degrees celsius.

Each greenhouse will hold a unique ensemble and will be held at 3–4 degrees C above average year round. We expect to have die-off and we will be replacing species as the experiment develops. This investigation will be focused on building, in the now, a diverse group of plants that can move into the region by creating a self-complicating scaffold of species that act as replacements as others die back from rapid temperature changes. The Future Garden intends to make a serious contribution to the well-being of local biotic communities 50–75 years from now. Opening to the public in May 2018.

This project could not have happened without the support of the Institute of Arts and Sciences (IAS) and the Arts division at UCSC. It has been funded by the Metabolic Studio and the McEvoy Family Fund of the San Francisco Community Foundation, Rowland and Pat Rebele, Kathleen Rose, and annual donors to the IAS.



Newly built dome green houses to propagate plant ensembles at raised temperatures



Site design with external plant ensembles matching those to be grown in the greenhouses

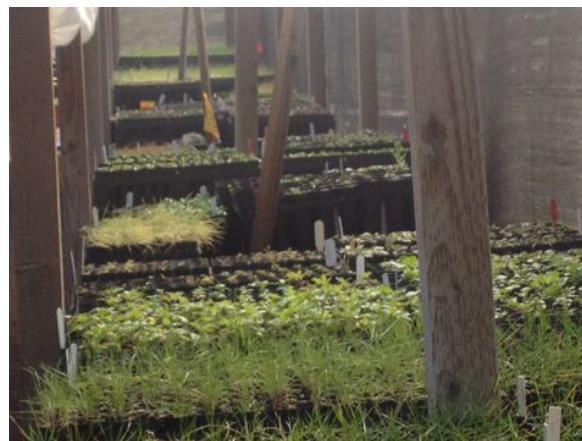
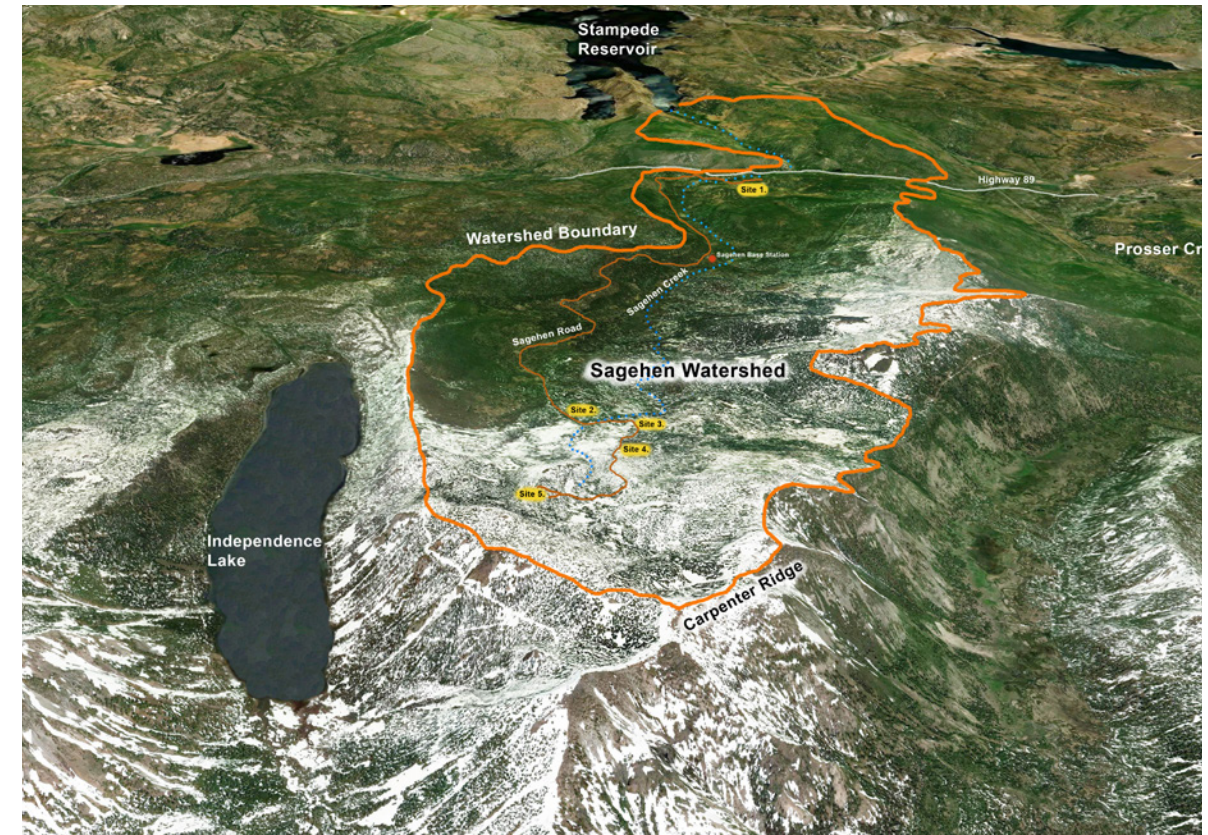
In the High Sierra

A Future Garden for the Sagehen Watershed in the Sierra Nevada is located in the 9,000 acre UC Berkeley Sagehen Creek Field Station. At this site we have tested a representative group of plant species at five different altitudes to see if enough individuals would survive to create what we call a resilience ensemble.

This smaller ensemble would be the source to reestablish both the ecological regeneration and water-holding properties of the earth more rapidly than unassisted natural processes.

The question we posed for the 8,000 acre Sagehen drain basin was, is there enough biodiversity in the species currently existing in Sagehen to survive when the high grounds of the Sierra experience rapid warming in the next 50 to 100 years?

A 50-year project, this work is still underway that began with the propagation of 12,000 plants from seed gathered in the watershed. In the third year of operation, we have a 25 percent successful survival rate of species in all plots, at all elevations.



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In the Sichuan Province on the Edge of the Tibetan Plateau

In collaboration with professor and ecologist Dr. Tang Ya of Sichuan University, we have begun to propagate a Future Garden in the high grounds bordering the Tibetan Plateau in China. The site is located toward the top of the Min River watershed, which flows into Chengdu city.

Species have been collected from lower elevations along the Min River and are currently being propagated at around 13,000 feet to be tested for resilience. These species can then be used to recover the diversity loss occurring as temperatures rapidly rise.



Dr. Tang Ya working with locals at the site



The first seedlings planted



The first Sichuan Province team



The Min river valley on the Tibetan Plateau

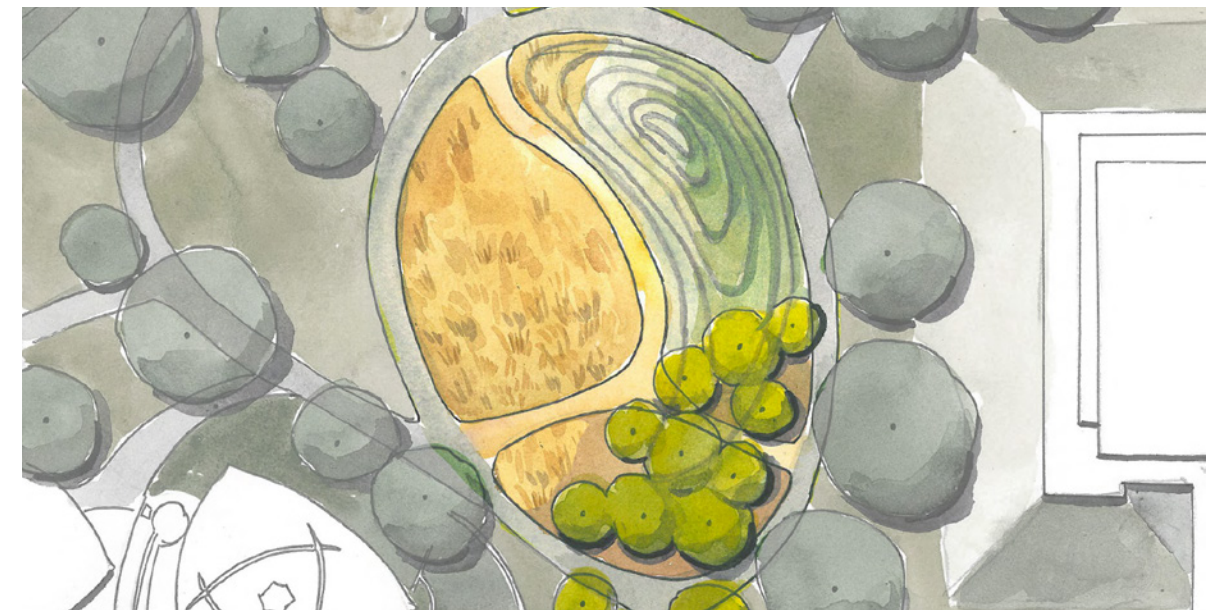
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Three Futures for the Los Angeles Basin

A Work for the La Brea Tar Pit Park

In a $\frac{3}{4}$ -acre site three botanical futures for the LA Basin will be expressed. They are grassland, chaparral, and open-canopy forest with understory. Species are in the process of being selected for all three sections of this work. These three gardens will engage local volunteers and expertise at modest cost. They are designed to democratize science and enable people to act on behalf of their own environments.

The Tar Pit Park space is perhaps the most rational available site in the LA Basin as it inherently connects the deep past to the unknown future. This work will be done with Rana Creek Design.



open canopy forest



grassland

chaparral