



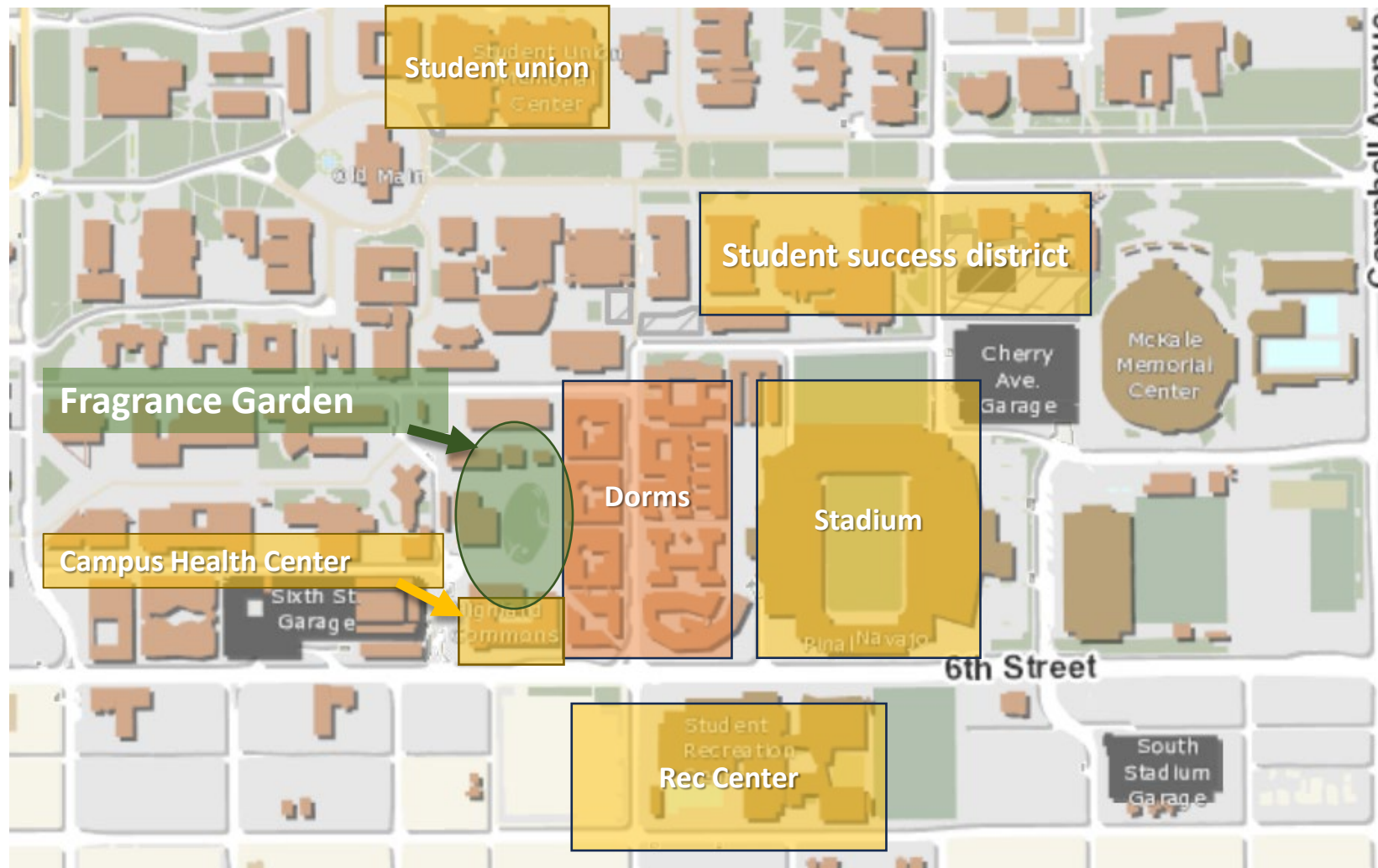
# Fragrance Garden

## Context, Concept, and Design

See also: <https://arboretum.arizona.edu/student-projects/2023-fragrance-garden>

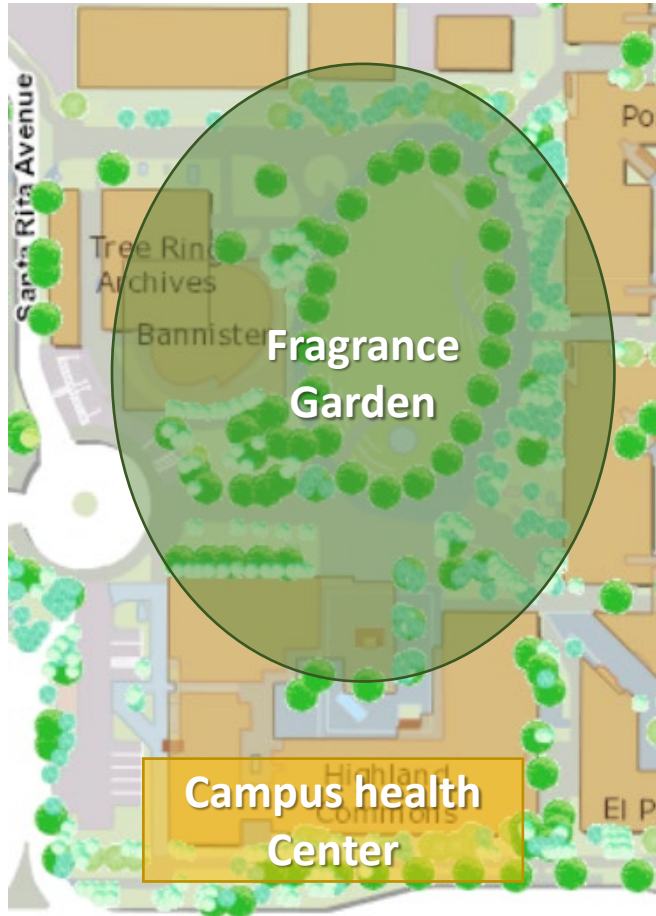
The Campus Arboretum is a living laboratory and immersive experience encompassing nearly 400 acres of the main University of Arizona campus in Tucson, AZ which aims to nurture a relationship between people and plants. This is done through education, research, and community outreach. Chief among our responsibilities is the curation of living specimens on the campus grounds to ensure a diversity of desert appropriate species are collected and conserved. Additionally, design and maintenance standards that support sustainability goals are promoted and accompanying educational and interpretative programs are offered to enhance the emotional and intellectual engagement with the landscaped grounds. When integrated with our research support role, the campus is transformed as a model of science-based practices. The lessons and practices here are increasingly relevant for urban landscapes in desert cities throughout the world facing both unprecedented population growth, urbanization and climate extremes. To educate the campus and community about new research showing the human health benefits of plants, a fragrance garden will be developed on campus. With the goals of supporting both human and environmental resilience the Campus Arboretum will enhance the diversity of the existing landscape with desert adapted plants known to release fragrant compounds that improve physiological and psychological functions.

# Fragrance Garden Context



The fragrance garden will be developed in a 2.3 acre area of existing greenspace which has become a popular recreational space for campus and community members. It is populated by a plethora of student services, including the Campus Health Center, the Disability Resource Center, the Campus Recreation Center, and in close proximity to the Stadium and the Student Union. Immediately east of the site are 10 student dormitories with more than 2300 residents. Additionally, it is situated between the Tyndall Ave parking garage and the football stadium and the ring of trees flanking the central detention basin at the site makes the area popular as a recreational space for community and campus faculty/staff members to walk, sit and play.

# Fragrance Garden Concept



With the goal of supporting the well being of campus students, faculty, staff and visitors during stressful times, the garden will be integrated into existing landscapes immediately bound by the Campus Health and Disability Resource Center to the south, the Laboratory of Tree Ring Research to the west and a row of residence halls to the east.

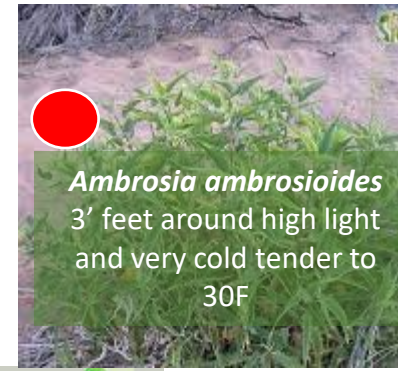
Recent research (Nabhan et al, 2022), has identified more than 100 oils released from desert plants. These oils are released into the air when it rains and when temperatures rise, producing a complex and soothing fragrance desert dwellers love. As it turns out, many of the oils produced by desert plants are similar to those known by **forest bathers** to reduce stress and create a relaxed state for humans. "**Forest Bathing**" is a practice common in Japan wherein practitioners seek out forested areas for respite and well being. The similar symphony of smells released by desert plants may account for our delight given their empirically documented influence in lowering stress hormones, blood pressure, and heart rate while also helping us to sleep better.

17 plants included in this 2022 study were selected for installation at the fragrance garden site. Additionally, 13 other fragrant species were identified in local nurseries or observed in the existing landscape. The plants will be integrated throughout the 2.3 acre site July 2023, and 30 botanical signs with QR codes will be installed in September 2023. The QR coded signs will link to an arboretum web page, where participants can learn an array of information about plant identification, cultivation, health and medicinal applications. It is our hope that this garden enhances the beauty of the existing landscape, as it expands diversity of species in the living collection, and provides an immersive educational experience for the campus community and visitors.

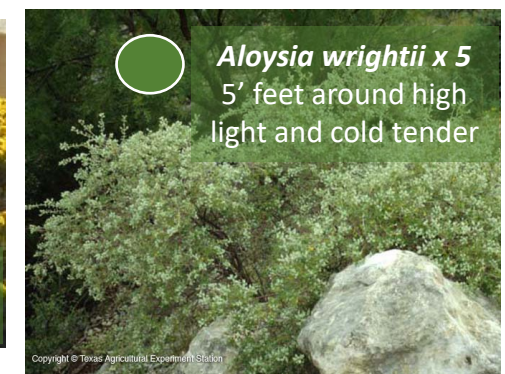
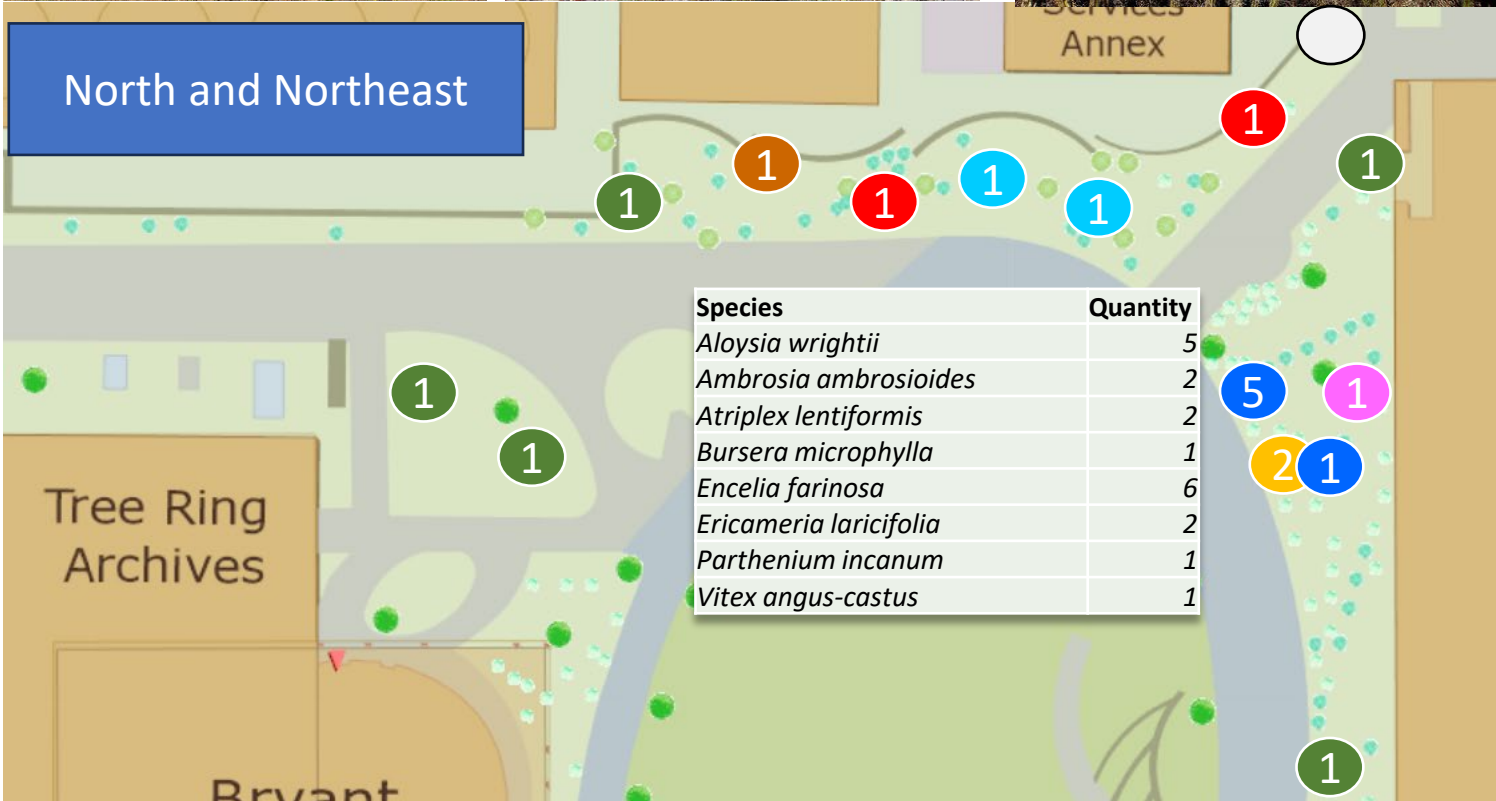
# Fragrance Garden Plants

				Fragrant Blooms			
Scientific name	English Common Name	Medicinal	Fragrant Foliage	W	Sp	Su	Fa
<i>Agave parryi</i>	Parry's agave	X				X	
<i>Aloysia wrightii</i>	oreganillo	X	X			X	X
<i>Ambrosia ambrosioides</i>	canyon ragweed	X	X			X	X
<i>Ambrosia deltoidea</i>	triangle leaf bursage	X	X		X		
<i>Atriplex lentiformis</i>	big saltbush	X	X			X	
<i>Berlandieri lyrata</i>	chocolate daisy	X			X	X	X
<i>Bursera microphylla</i>	elephant tree	X	X				
<i>Carissa macrocarpa</i>	natal plum	X		X	X	X	
<i>Carnegiea gigantea</i>	saguaro	X			X	X	
<i>Chilopsis linearis</i>	desert willow	X			X	X	
<i>Chrysactinia mexicana</i>	damianita daisy	X	X		X	X	X
<i>Condea emoryi</i>	desert lavender	X	X	X	X		
<i>Encelia farinosa</i>	brittlebush	X		X	X		
<i>Ericameria laricifolia</i>	turpentine bush	X		X	X		
<i>Eucalyptus spathulata</i>	swamp mallet	X	X	X	X		
<i>Fouquieria splendens</i>	ocotillo	X			X		
<i>Larrea tridentata</i>	creosote	X	X		X		
<i>Leucophyllum candidum</i>	Texas ranger				X	X	X
<i>Lippea graveolens</i>	Mexican oregano	X	X		X	X	X
<i>Lycium andersonii</i>	Anderson's wolfberry	X		X	X		X
<i>Melampodium leucanthum</i>	blackfoot daisy	X			X	X	X
<i>Parthenium incanum</i>	feverfew	X			X	X	
<i>Rosmarinus officianalis</i>	rosemary	X	X			X	X
<i>Salvia clevelandii</i>	Cleveland sage	X	X		X	X	
<i>Salvia greggii</i>	autumn sage	X	X		X	X	X
<i>Vitex angus-castus</i>	monk's pepper	X			X	X	X
<i>Vitex trifolia purpurea</i>	Arabian lilac	X				X	X

# Fragrance Planting Plan - North



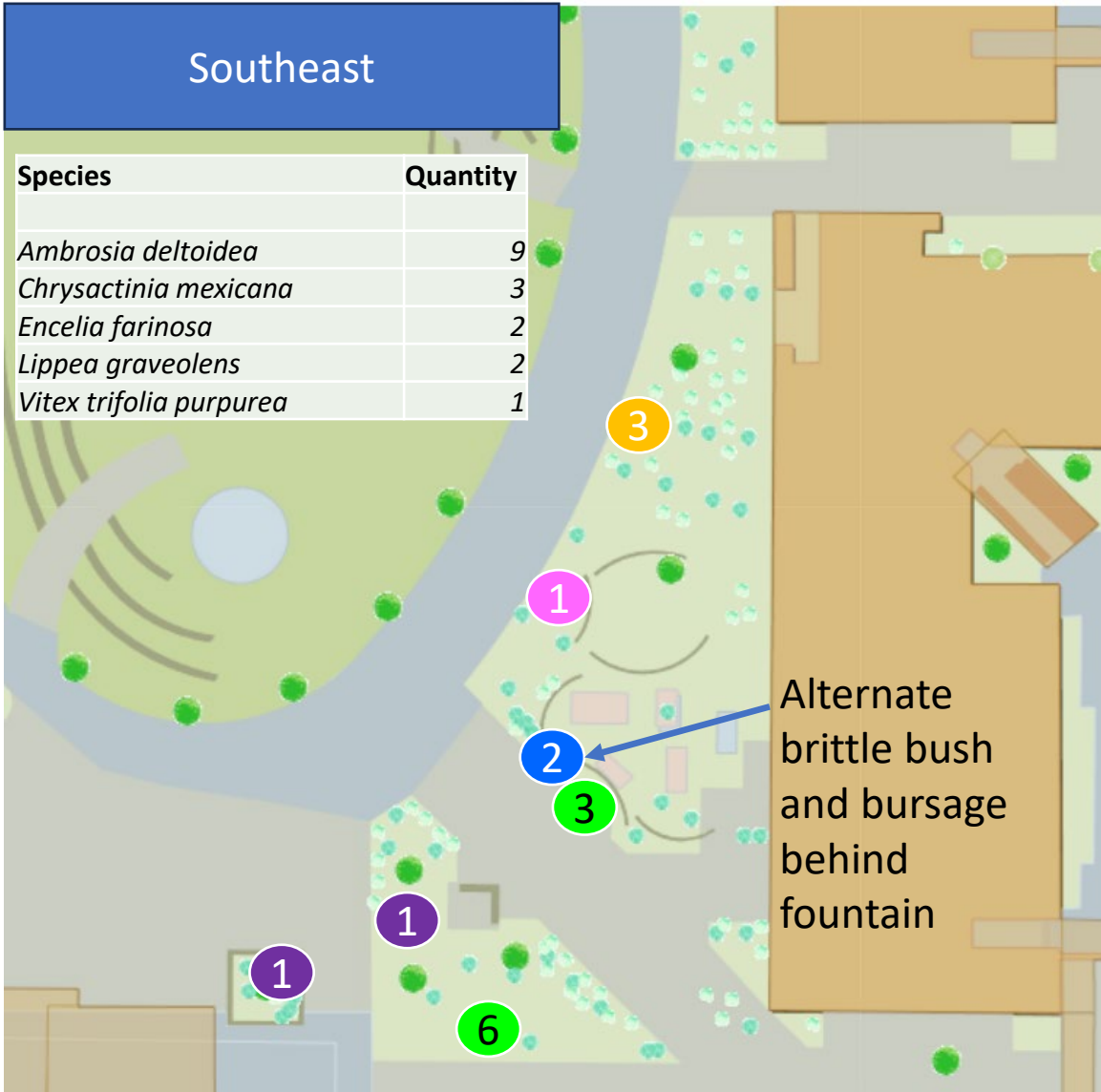
North and Northeast



# Fragrance Planting Plan - Southeast

Southeast

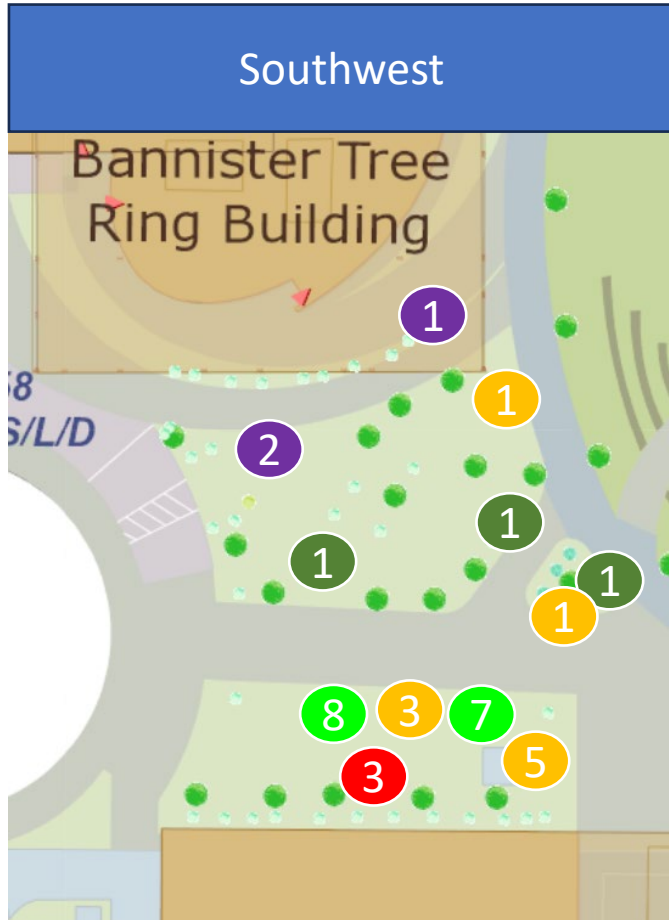
Species	Quantity
<i>Ambrosia deltoidea</i>	9
<i>Chrysactinia mexicana</i>	3
<i>Encelia farinosa</i>	2
<i>Lippia graveolens</i>	2
<i>Vitex trifolia purpurea</i>	1



# Fragrance Planting Plan - Southwest

Southwest

Bannister Tree  
Ring Building



Species	Quantity
<i>Berlandieri lyrata</i>	10
<i>Bursera microphylla</i>	1
<i>Lycium andersonii</i>	3
<i>Melampodium leucanthum</i>	15
<i>Rosmarinus officianalis</i>	3
<i>Salvia clevelandii</i>	3