

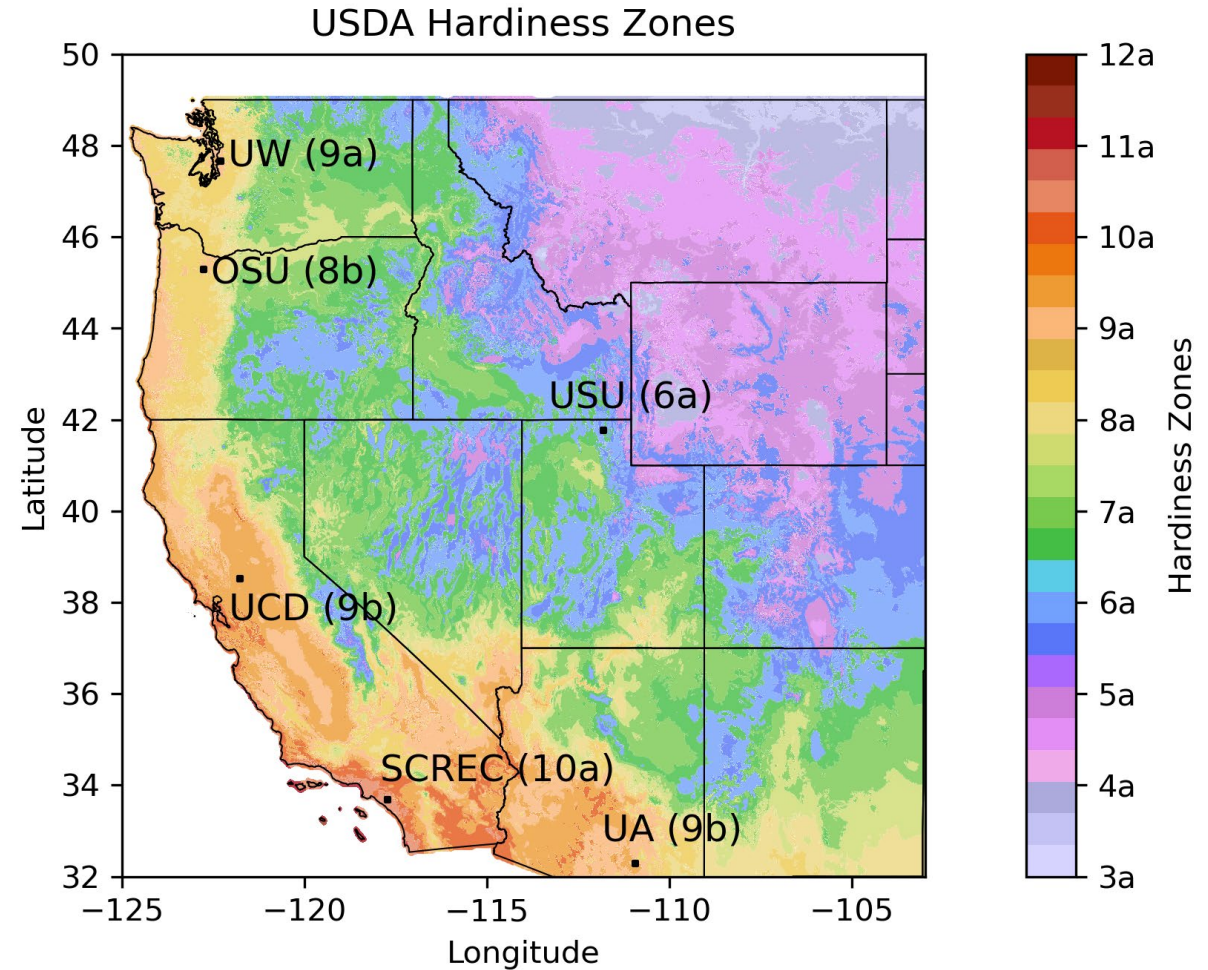


UW Climate Ready Vines

Amelia Keyser-Gibson, PhD Student
UW School of Environmental and Forest Sciences
Plant Ecophysiology and Modeling Lab (PEML)

Climate Ready Landscape Plants (CRLP)

- Collaborative project of field trials of horticultural plants across 6 sites the Western US
- Horticulture industry - “low-water” taxa
- Irrigation treatments based on reference evapotranspiration (ET_o)
 - low (20%), medium (50%) and high (80%) ET_o



CRLP: data collection

Aesthetic ratings



FOLIAGE
QUALITY



FLORAL
DISPLAY



PEST
TOLERANCE/
DISEASE
RESISTANCE



VIGOR



OVERALL
APPEARANCE



Plant physiology
measurements

Growth:

- $L \times W$ = Plant Growth Index (PGI)
- Relative Plant Growth Index (rPGI)



Plant	Mean Overall Appearance Rating by treatment ET ₀ (%)			Irrigation Recommendation
	80%	50%	20%	
<i>Buxus microphylla</i> ‘Little Missy’	3.4	3.5	3.3	Low
<i>Cercis canadensis</i> ¹	3.5	-	3.2	Low
<i>Cercis occidentalis</i> ¹	3.0	-	2.7	High
<i>Cotoneaster x suecicus</i> ‘OSUCOT2’ Emerald Beauty™	3.4	3.1	3.2	Low
<i>Hesperaloe parviflora</i> ‘Straight Up Red’	3.8	3.5	3.5	Low
<i>Miscanthus sinensis</i> ‘NCMS2B’ Bandwidth™	3.7	3.6	3.7	Low
<i>Physocarpus opulifolius</i> ‘Monlo’ Diabolo® Ninebark	3.3	3.6	3.5	Low
<i>Physocarpus opulifolius</i> ‘Donna May’ First Editions® Little Devil™ Ninebark	3.9 ^a	4.2 ^b	3.7 ^a	Low
<i>Rosa</i> Blushing Drift® ‘Meifranjin’	3.7	3.8	3.7	Low
<i>Rhododendron</i> ‘Roblex’ PP25073 Azalea Encore® Autumn Lily®	3.0 ^a	2.6 ^b	3.0 ^a	Low
<i>Rhododendron</i> ‘UMNAZ 633’ First Editions® Electric Lights™ Red Azalea	3.2	3.0	3.1	Low
<i>Vitex</i> ‘Helen Froelich’ Summertime Blues™	3.8	3.7	3.5	Low

Results: 2023





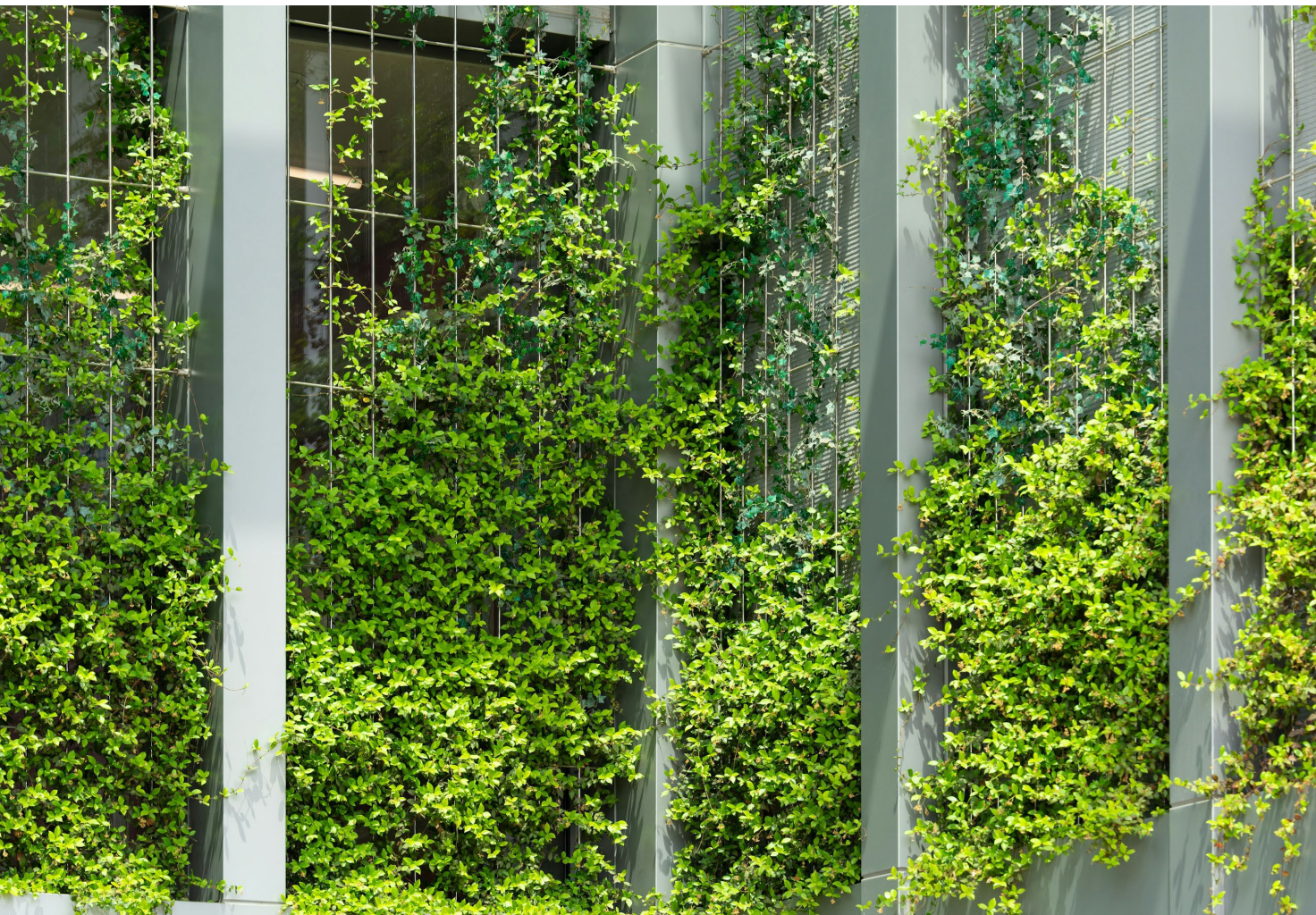
Climate Ready Vines

- Utilizing the CRLP network
- Identify vines best suited for low water
- Two years of irrigation deficit



Climate Ready Vines

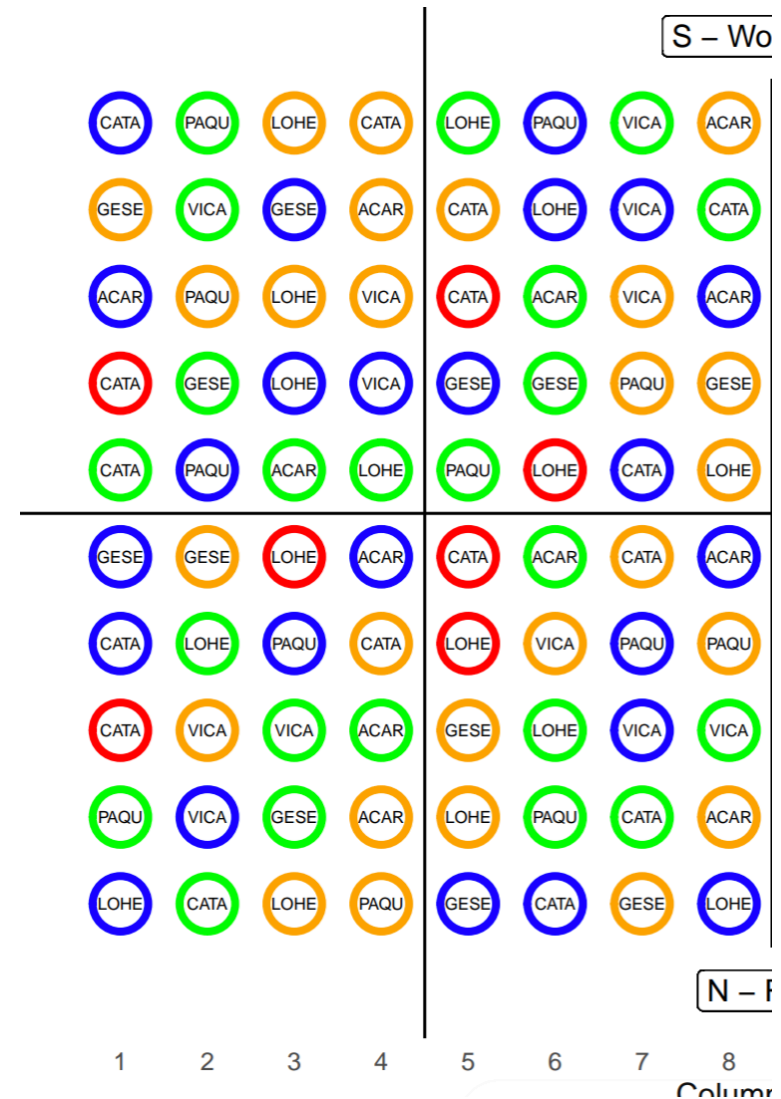
- Utilizing the CRLP network
- Identify vines best suited for low water
- Two years of irrigation deficit
- Does the amount of water vines receive change their cooling potential?



- Quick rate of growth – trees take years to grow to maturity
- Provide cooling, and promote water conservation
- Increasing maximum heat and urban heat island effect

Experimental set-up

- Irrigation treatments based on reference E_{t0} , recent weather and soil condition
 - H: 80%
 - M: 50%
 - L: 20%
- Randomized complete block design
- Monthly measurements across two growing seasons
- 6 taxa of interest

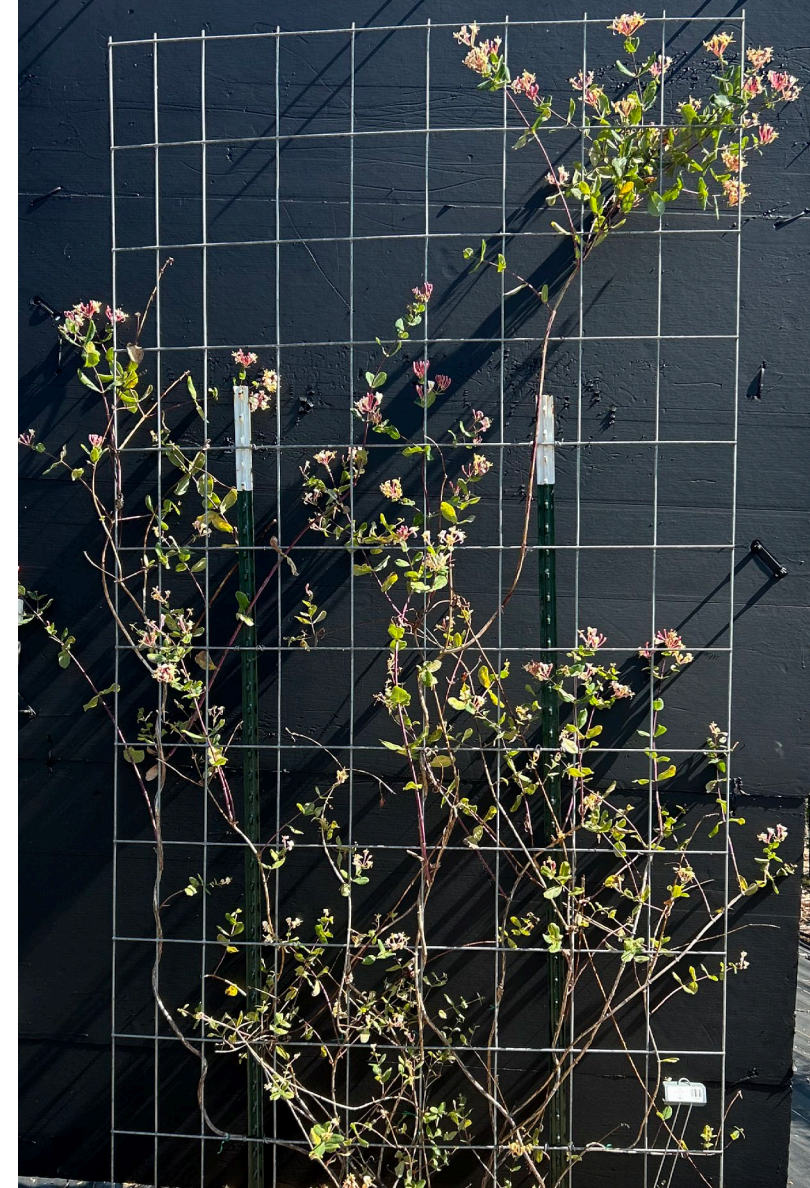




Vitis 'Roger's Red'



Campsis radicans
'Madame Galen'



Lonicera x heckrottii
'Goldflame'



Actinidia arguta 'Issai'



Gelsemium
sempervirens



Parthenocissus
quinquefolia

Data collection: Aesthetics and Growth



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QUALITY



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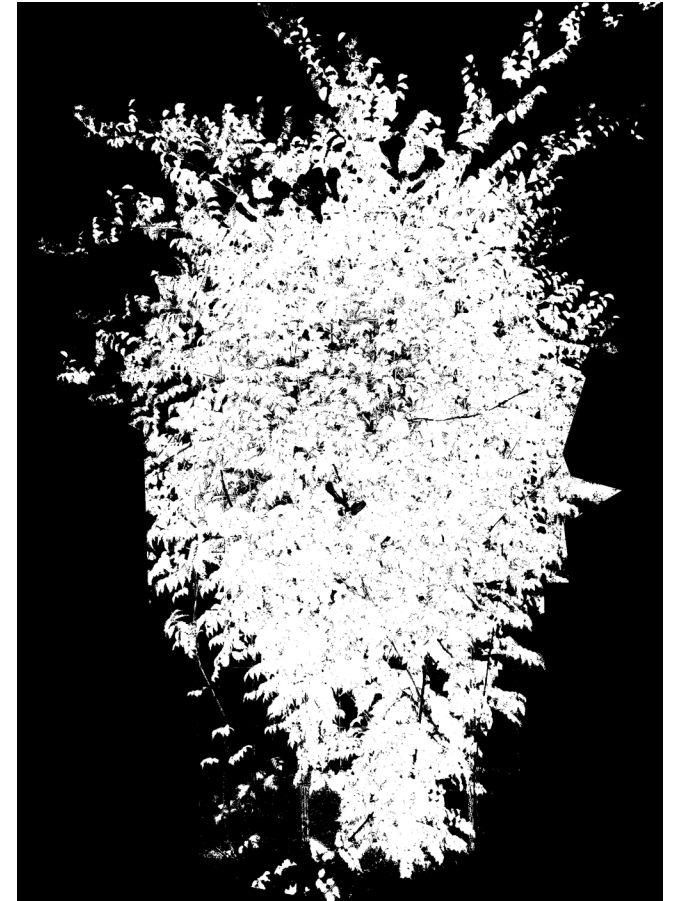
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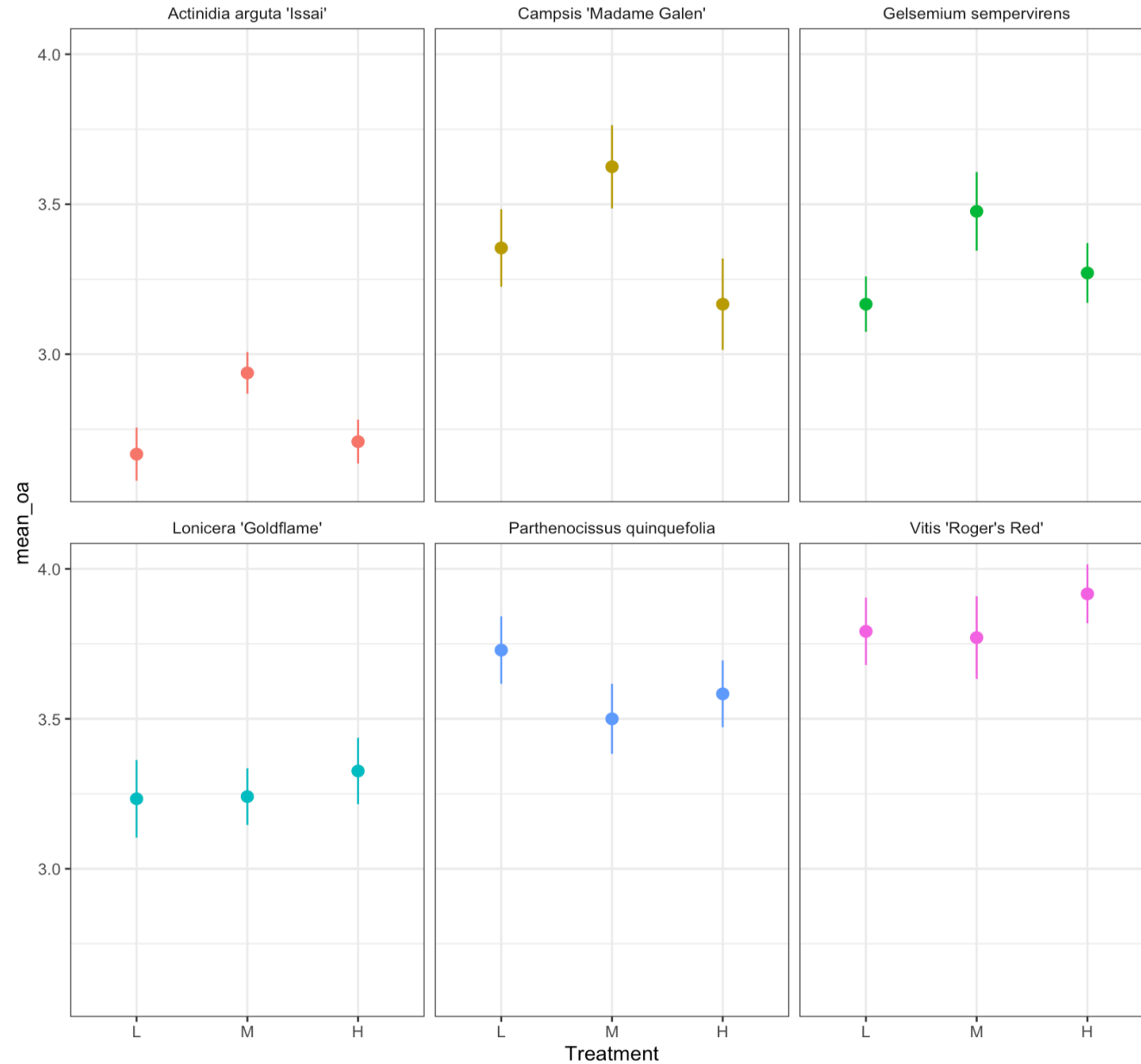


Data collection: Thermal

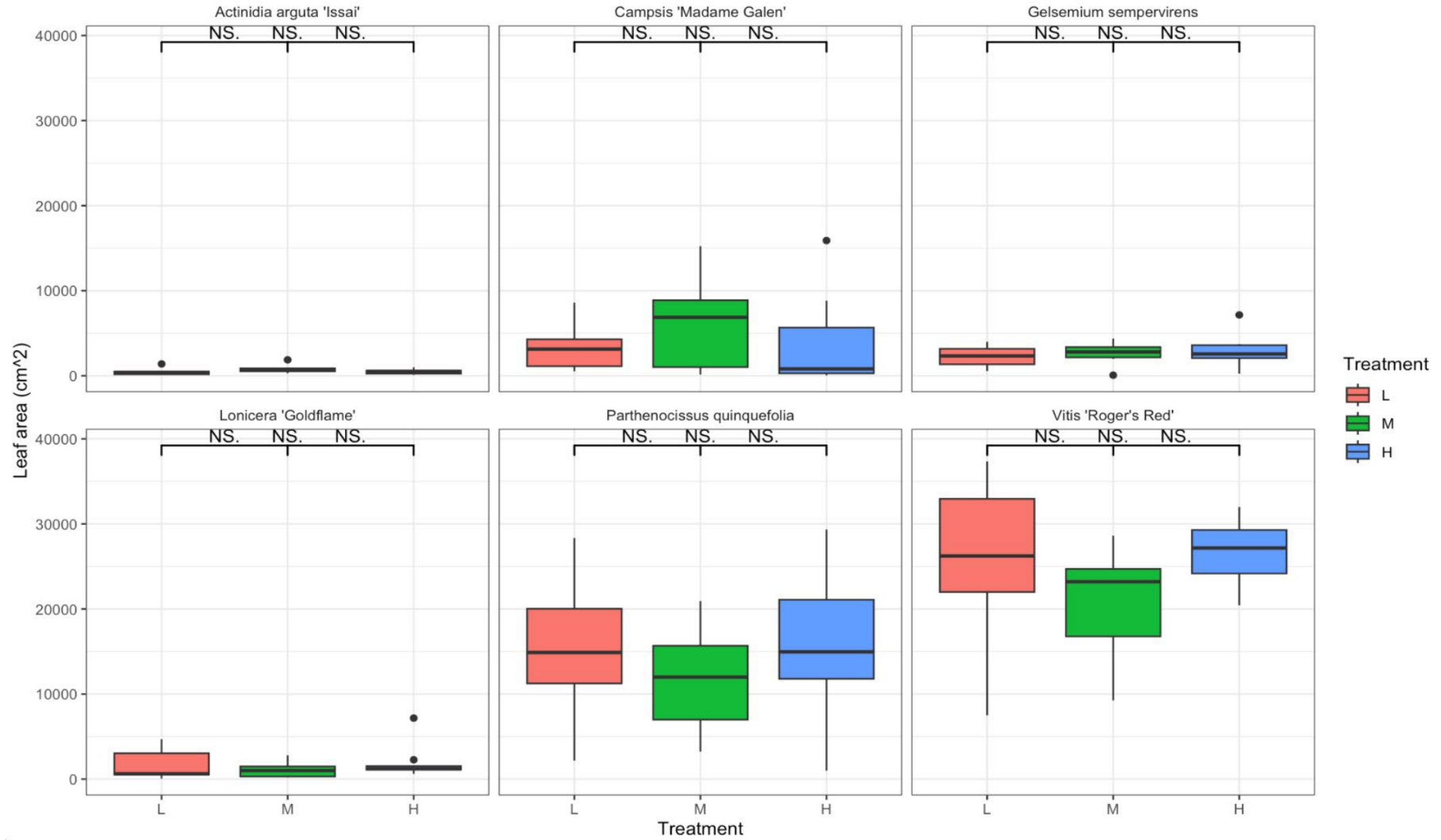
- Is there a significant difference in leaf temperature between irrigation treatments and leaf shape?



Preliminary results: aesthetics



Preliminary results: growth



Outreach: open houses



- Invitation for horticulture, landscape, nursery, research etc. professionals
 - Learn about the project
 - Rate a subset of plants
 - Network/outreach
 - Select “People’s Choice”

For more info!

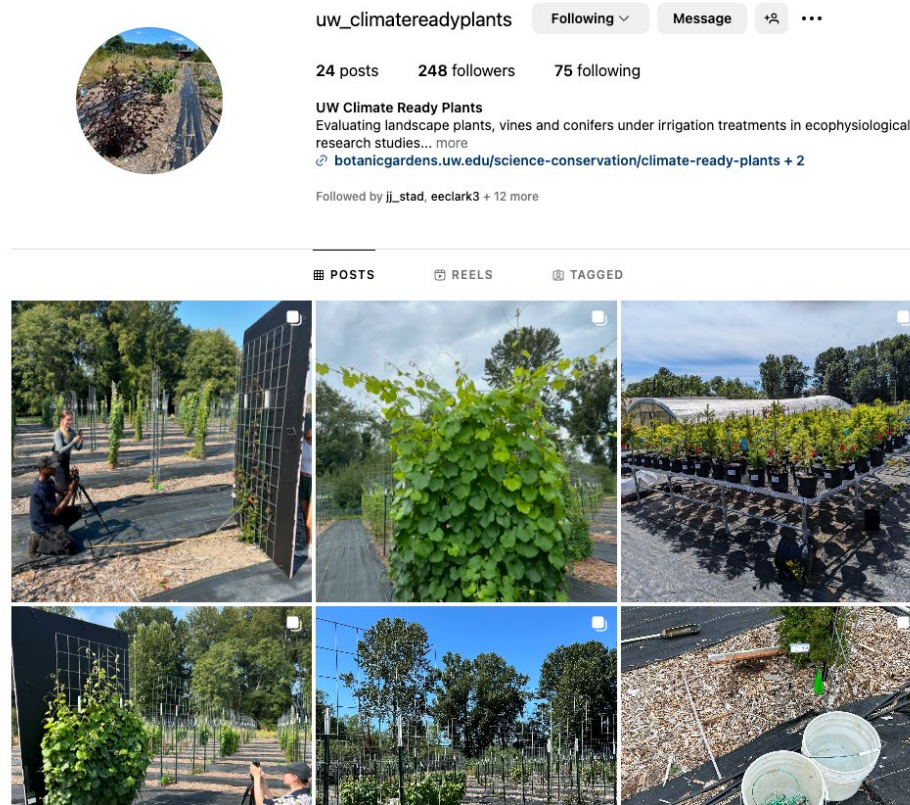
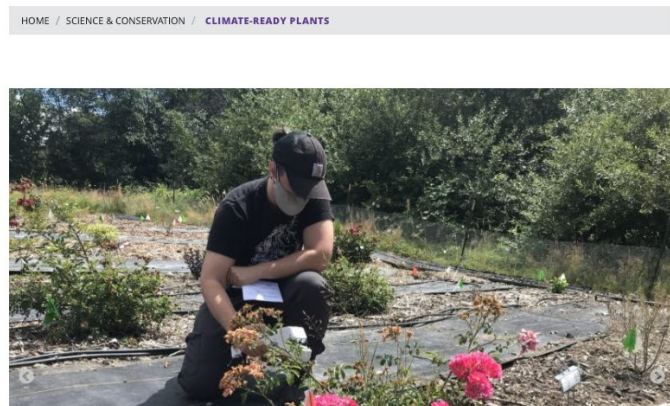
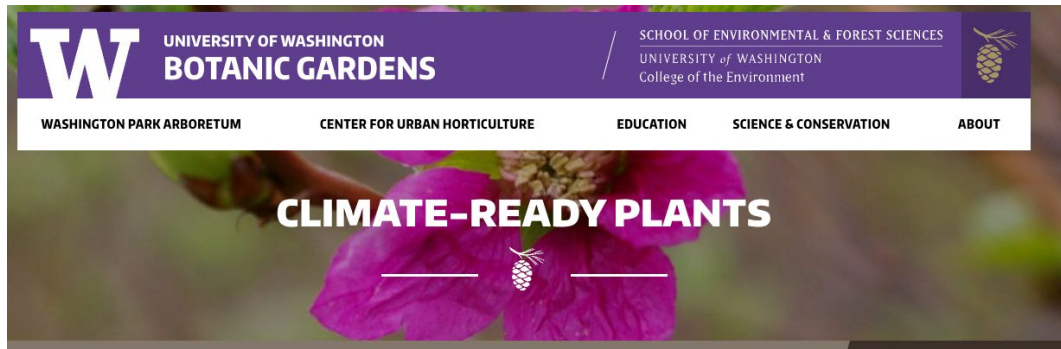


CRLP website



CRLP reports

- Contact me: akeyserg@uw.edu
- Follow us on Instagram:
[@uw_climatereadyplants](https://www.instagram.com/uw_climatereadyplants)
- Visit our website



CRLP Instagram

A photograph of a garden scene. In the foreground, there is a metal trellis structure covered with green foliage and some bare branches. To the right, there are clusters of bright red flowers. The background features more green trees and a clear blue sky. A semi-transparent white rectangular box is overlaid in the center of the image, containing the word "Questions?".

Questions?