



“Identifying and
addressing information
gaps in plant databases to
support emerging
planting design
technologies promoting
biodiversity and ecological
benefits”

A panel presentation with Doug Tallamy, Mary Phillips,
John Rowden, and Judy Venonsky, moderated by Casey
Sclar

Hosted by the Plant Conservation Alliance
November 14, 2018
at the National Institute of Food and Agriculture

HELP GROW THE INDUSTRY

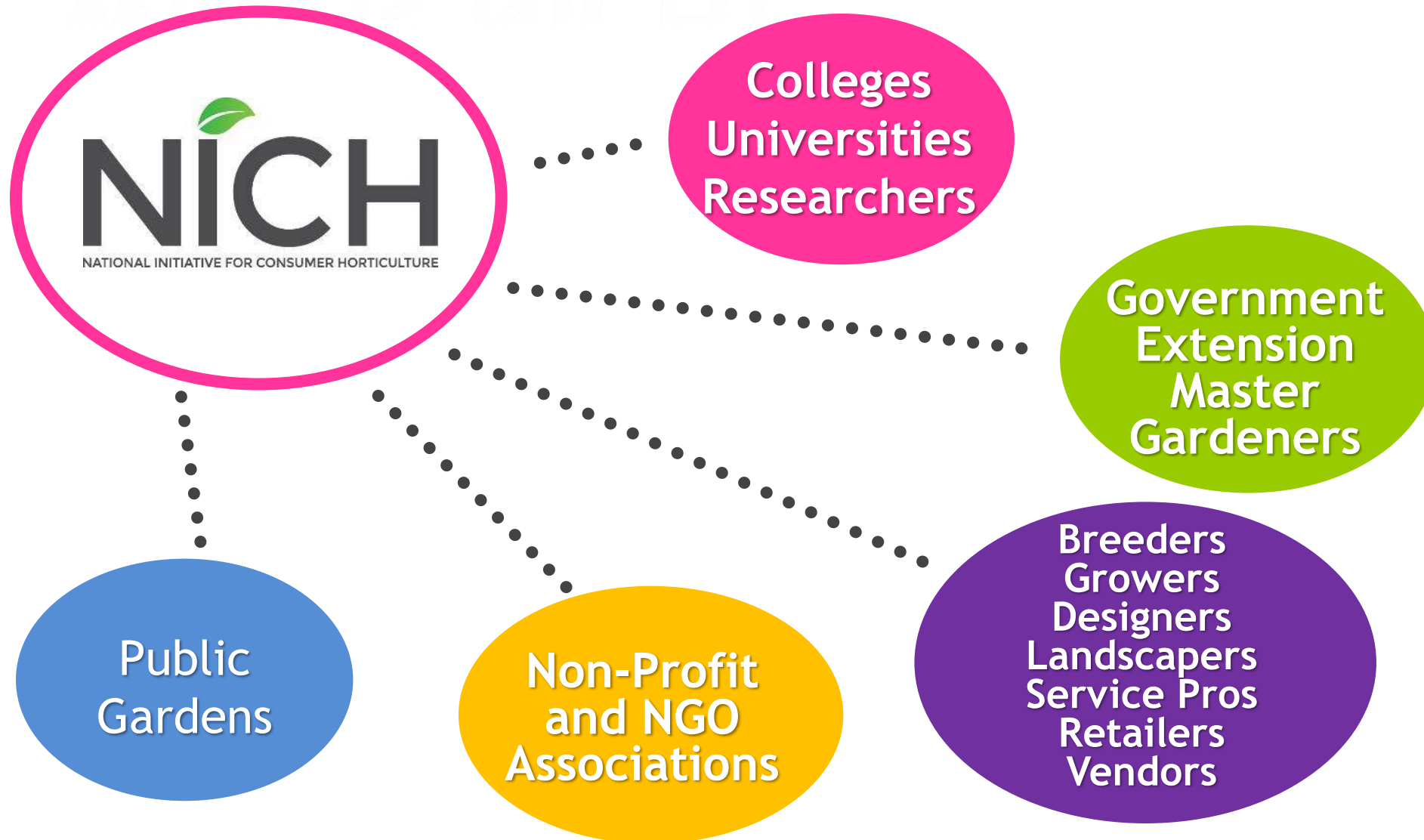


NIC

NATIONAL INITIATIVE FOR CONSUMER HORTICULTURE

CONSUMERHORT.ORG

Who is NICH?



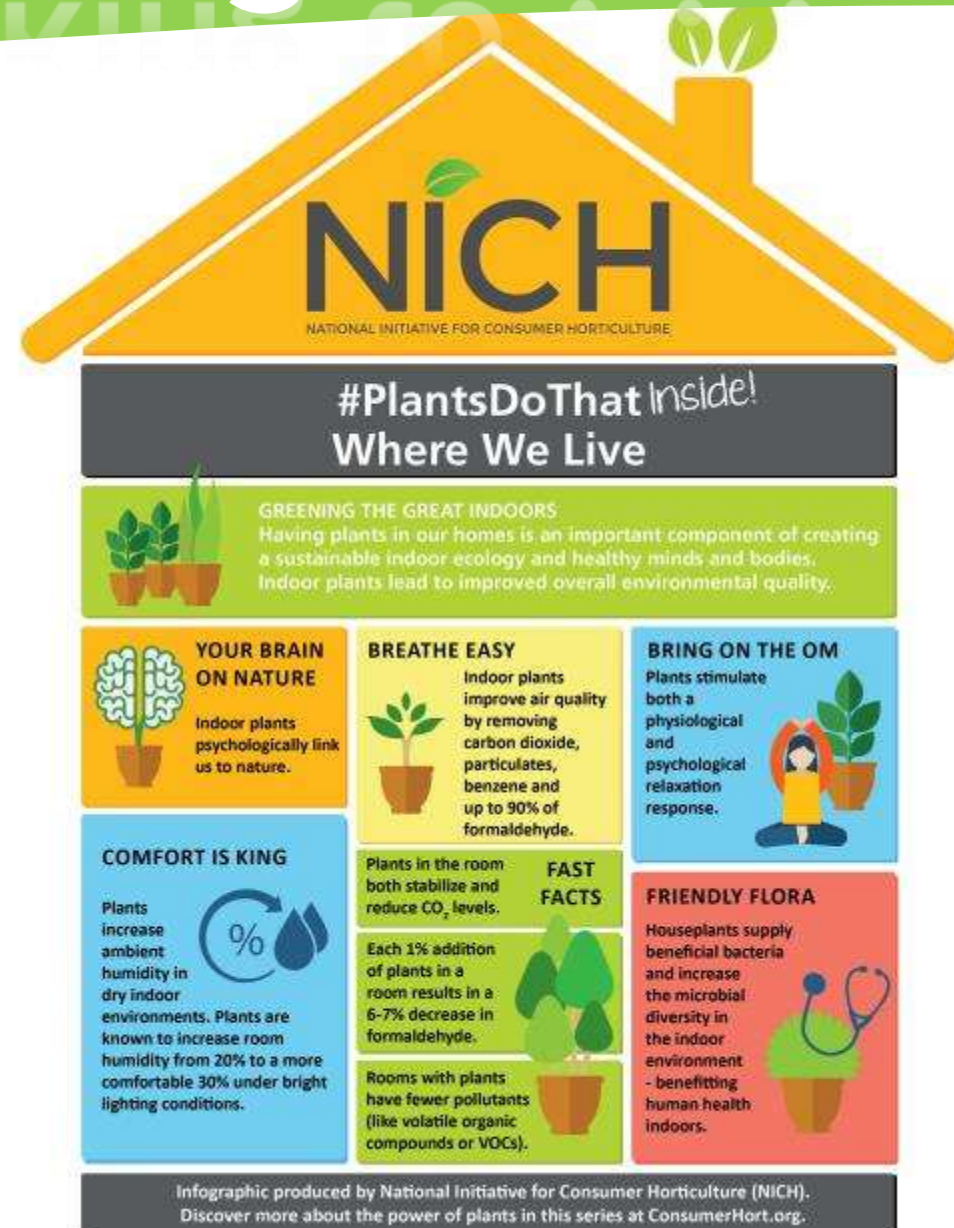
NICH Is Working to . . .

Create a
unified voice



NICH Is Working to . . .

Promote the
benefits of
plants, garden
and landscapes



NICH Is Working to . . .

Increase the value of our \$196 billion industry that creates 2 million jobs



GREENHOUSE GROWER GROW in Action BUILDING FLORICULTURE'S FUTURE

Invest in The Industry
Sharpen Business Management
Demand Quality
Cultivate New Customers
Drive Consumer Success

2.3 Billion

the money generated in tourism dollars by American Public Gardens.

Source:
National Initiative for Consumer Horticulture



Here's a few noteworthy facts to share with your customers about how plants make a difference in their lives.

- 1 Reduce sick time in the workplace (14%)
- 2 Repairing costs saved by shaded roadways (60%)
- 3 Annual heating and cooling costs saved in a typical home by a 25-foot tree (8-12%)
- 4 Return on investment for landscape upgrades (109%)
- 5 Jobs created by horticulture (2 million)

How Much Does Horticulture Contribute to the Economy? How Does \$200B Sound?

Now that spring has sprung, it's a great time for you to remind all of your customers how horticulture positively affects people's lives whenever they live, work, shop, and play. A new infographic from the National Initiative for Consumer Horticulture (NICH)

at Consumer hort.org called "PlantsDoThat, Horticulture: The Art, Science, & Business of Plants," makes it even easier to reach out to your customers. The infographic, developed by the NICH Economic Committee, uses data gathered by Dr. Charlie Hall, the Ellison Endowed Chair in International

Floriculture at Texas A&M University, to illustrate how consumer horticulture contributes \$196 billion to the U.S. economy and the impact it has on people. Since its release, #PlantsDoThat has created a stir on social media and continues to build momentum, with several shares across all platforms.



Infographic courtesy of National Initiative for Consumer Horticulture

Increase Value of Horticulture

Increased
awareness
promotes the vital
role plants play in a
healthy lifestyle,
healthy community
and healthy world



How Can I Help?

- **Join** our unified effort to make this happen, add to our strength in numbers, and offer your expert advice, feedback and views
- **Spread the message** and tell 10 friends
- **Get involved** with a Committee or Council to have a greater impact or recommend someone who should be involved

Sign up @ ConsumerHort.org

NICH Committees and Councils

NICH Executive Committee

Chair: Casey Sclar, Executive Director, *American Public Gardens Association*

Co-Chairs: Ellen Bauske, *University of Georgia Center for Urban Agriculture*; and Tom Underwood, Executive Director, *Birmingham Botanic Gardens*

Secretary: Missy Gable, *University California*, Master Gardener Program Director

MarCom: Susan McCoy, President, *Garden Media Group*

Government Liaison

USDA Liaison: Tom Bewick, National Program Leader, *USDA-NIFA*

NICH Committees & Councils

Community Committee: Pam Bennett, *Ohio State University*, Associate Professor, State Master Gardener Volunteer Program Director,

Economic Committee : Debbie Hamrick, Director of Specialty Crops, *North Carolina Farm Bureau Federation*

Environmental Committee: Gail Langellotto, Associate Professor, *Oregon State University* Urban and Community Horticulture Extension, Statewide Master Gardener Coordinator

Academic/Government Council: Rick Durham, *University of Kentucky*, Extension Professor and Master Gardener Coordinator

Commercial Council: Mason Day, GrowIt!

Non-Profit Council: Shannon Spurlock, Director of Public Affairs and Policy, *Denver Urban Gardens*

Give us your feedback
& join the army growing
our horticulture industry.

ConsumerHort.org

Connect
with NICH
today


NATIONAL INITIATIVE FOR CONSUMER HORTICULTURE



Google

Plants and Pollinators



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The Importance of Plant Selection Tools

Doug Tallamy
University of Delaware

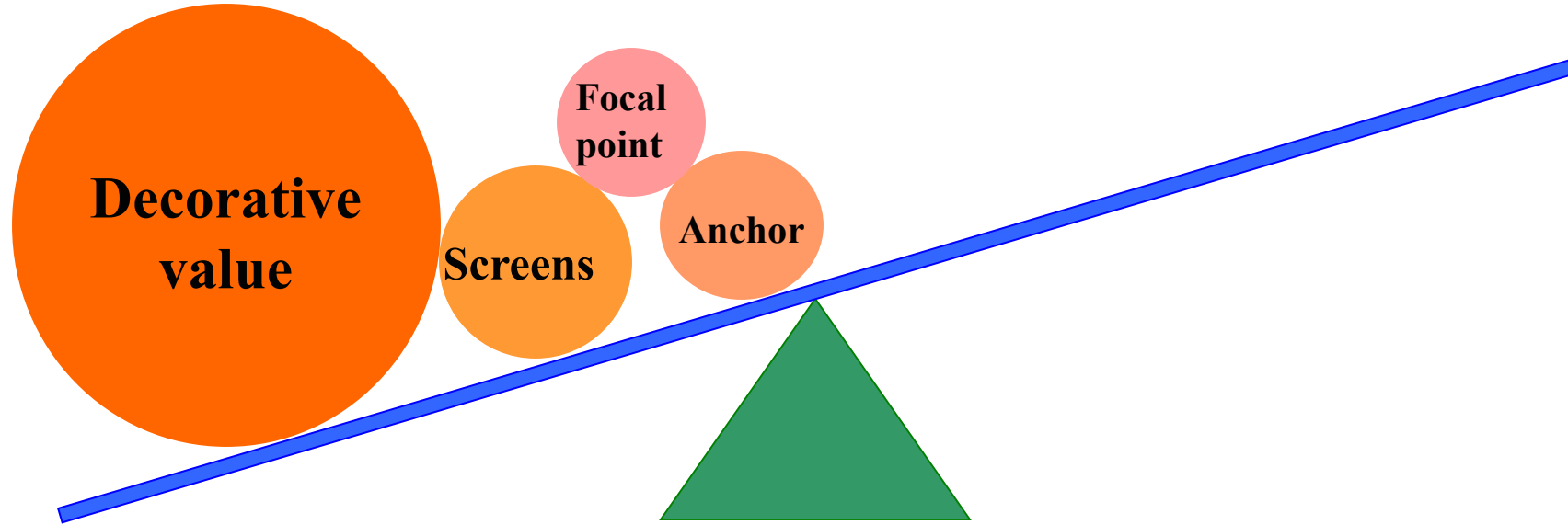
1) The future of
conservation is on
private land



83% of the U.S. is privately owned
85.6 % east of the Mississippi is privately owned.

We have parks and
preserves but they are
too small and too
isolated to sustain
biodiversity indefinitely

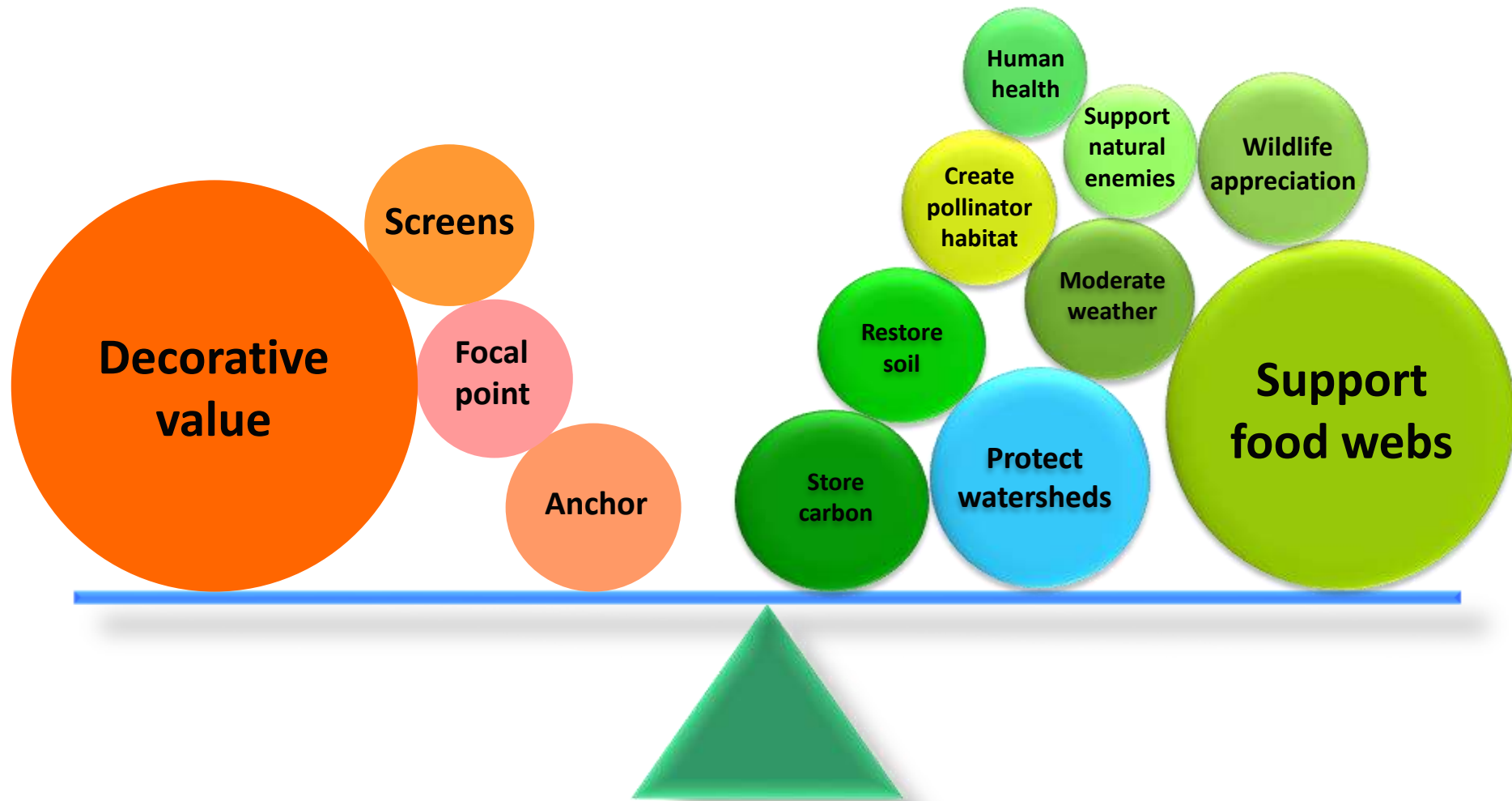
2) Property owners are going to need guidance in changing the current landscaping culture



Past criteria for choosing plants for our
landscapes



When we think of plants only as decorations,
landscaping = ecological destruction.



Future criteria for choosing plants for our
landscapes

If we add function to the criteria used to select plants,
landscaping = ecosystem restoration





Homeowners are going to need guidance in restoring their properties

3)The two most important insect groups:

Insects that maintain plant diversity

Insects that contribute the most energy to food webs

Pollinators



Caterpillars



4) Most insects are specialists and can only use particular plant lineages



Which plants should we
be sure to have
in our landscapes?

Quercus (557)
Prunus (456)
Salix (455)
Betula (411)
Populus (367)
Malus (308)
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Vincetoxicum (1)
Callicarpa (1)

Dirca (1)
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Menispermum (1)
Nemophila (1)
Osmanthus (1)
Stewartia (1)
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Toona (0)
Zelkova (0)
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Arceuthobium (0)
Berchemia (0)
Borrichia (0)
Cladrastis (0)
Empetrum (0)
Eubotrys (0)
Itea (0)
Loiseleuria (0)
Nestronia (0)
Styrax (0)
Xanthorhiza (0)
Zenobia (0)

“Native Plant Finder”

National Wildlife Federation

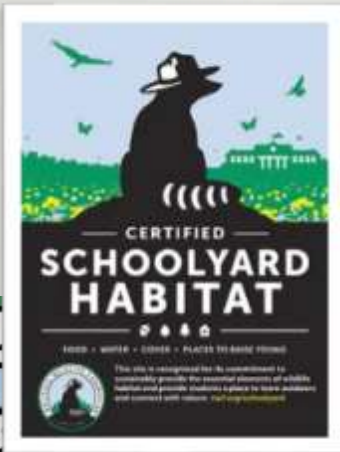
<http://www.nwf.org/NativePlantFinder/>



45 Years of Garden for Wildlife

Today the National Wildlife Federation's Garden for Wildlife™ movement engages approximately seven million wildlife gardeners in planting with a purpose—doubling the abundance of butterflies, birds, pollinators, and other wildlife at each site. Discover how the movement has grown over four and a half decades.

PROGRAMS



**GARDEN
FOR WILDLIFE™**

CWH Affiliate
Partners



**COMMUNITY WILDLIFE
HABITAT™**

& Habitat Stewards



**SACRED
GROUNDS®**



**MAYORS
MONARCH
PLEDGE**

CAMPAIGNS, SEEDS, PLANTS, TREES,



**BUTTERFLY
HEROES™**



**TREES
FOR WILDLIFE™**



By 2021:
250,000 Certified Wildlife
Habitats
FY18: 224,000



By 2021: 400 Mayor Monarch
FY18: 425 Pledged!



MAYORS
MONARCH
PLEDGE

By 2021: 300 Community Wildlife Habitats
FY18: 200 Reached!



COMMUNITY WILDLIFE
HABITAT



NATIVE PLANT FINDER



UNIVERSITY OF
DELAWARE

REGISTER LOGIN SET LOCATION

Search



FIND NATIVE PLANTS



FIND BUTTERFLIES



MY LIST

Bring your garden to life.

Find Native Plants



Find Butterflies



My List



DATA UPDATES IN PROGRESS

Find the best native plants to help wildlife — based on the research of Dr. Doug Tallamy. [Want to learn more?](#)

Discover native plants, ranked by the number of butterfly and moth species that use them as host plants for their caterpillars.



FLOWERS AND GRASSES



☆ SAVE

114 🦋

goldenrod
Solidago
Asterales



☆ SAVE

73 🦋

strawberry
Fragaria
Rosales



☆ SAVE

66 🦋

sunflower
Helianthus
Asterales



☆ SAVE

33 🦋

joe-pye weed, thoroughwort, do ...
Eupatorium
Asterales



TREES AND SHRUBS



☆ SAVE

513 🦋

oak
Quercus
Fagales



☆ SAVE

390 🦋

beach plum, cherry, chokecherr ...
Prunus
Rosales



☆ SAVE

321 🦋

birch
Betula
Fagales



☆ SAVE

316 🦋

willow
Salix
Salicales



Butterflies and Moths

- 🦋 Discover butterflies and moths and the native plants they rely on as host during their caterpillar stage. The number represents the number of host plants it uses.
- ★ Save butterflies and moths to [My List](#).
- ❓ Learn more about [why butterflies and caterpillars are important](#).



★ SAVE

1 🌿

American Snout, Gulf Fritillary ...

Agraulis vanillae

Nymphalidae



★ SAVE

1 🌿

Beloved Emarginea Moth, Mistle ...

Emarginea percara

Noctuidae



★ SAVE

1 🌿

Brown Scoopwing

Caledapteryx dryopterata

Uraniidae



★ SAVE

1 🌿

Connected Dagger Moth

Acronicta connecta

Noctuidae



★ SAVE

1 🌿



★ SAVE

1 🌿

Hairy Woodlighter



★ SAVE

1 🌿

Great Spangled Fritillary, Var ...



★ SAVE

1 🌿

Hackberry Emperor



Close to 400,000 visits- 285,000 Unique Views

75,612 page views to the nativeplantfinder/plant page

54,322 unique page views to the nativeplantfinder/plant page

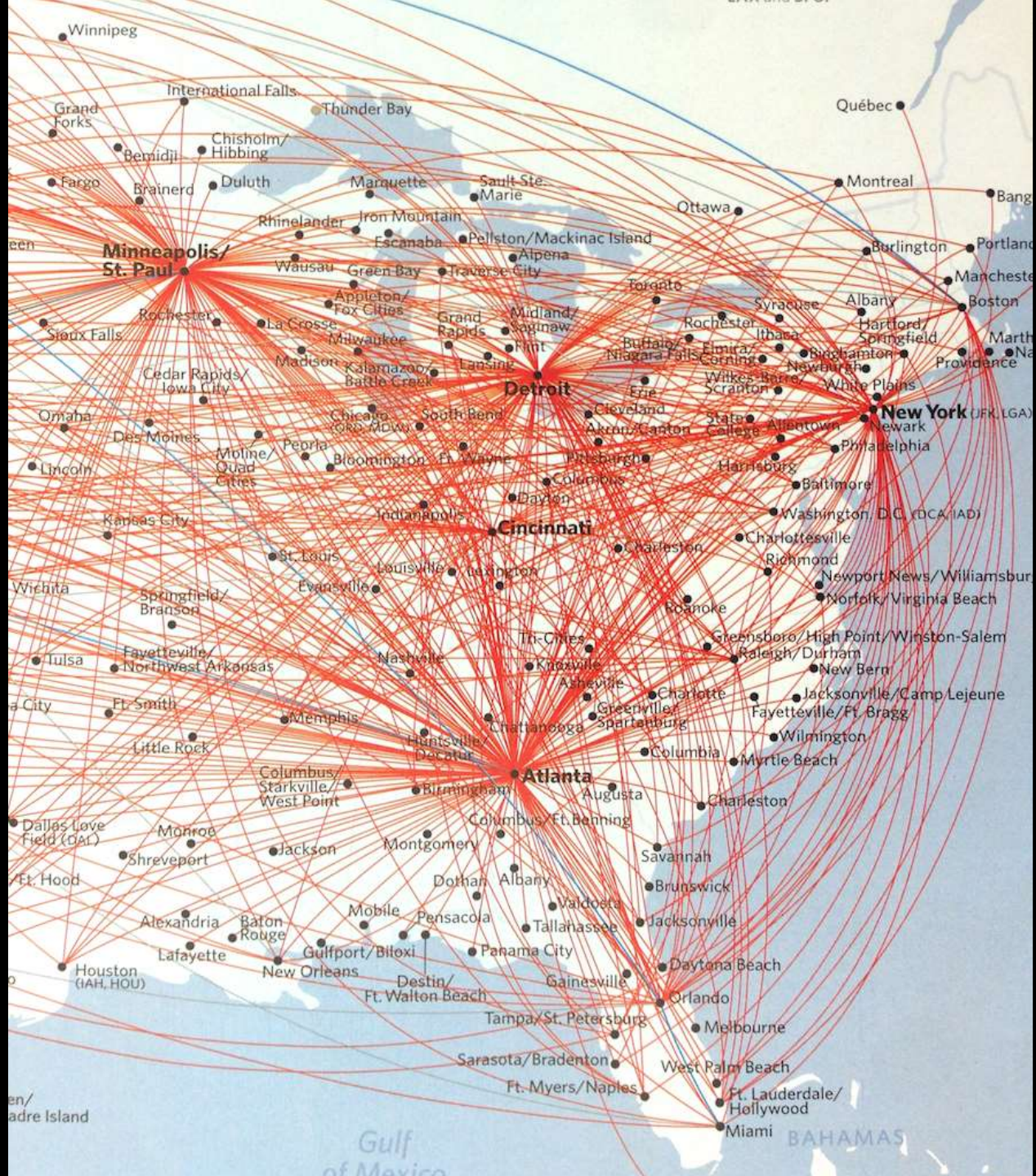
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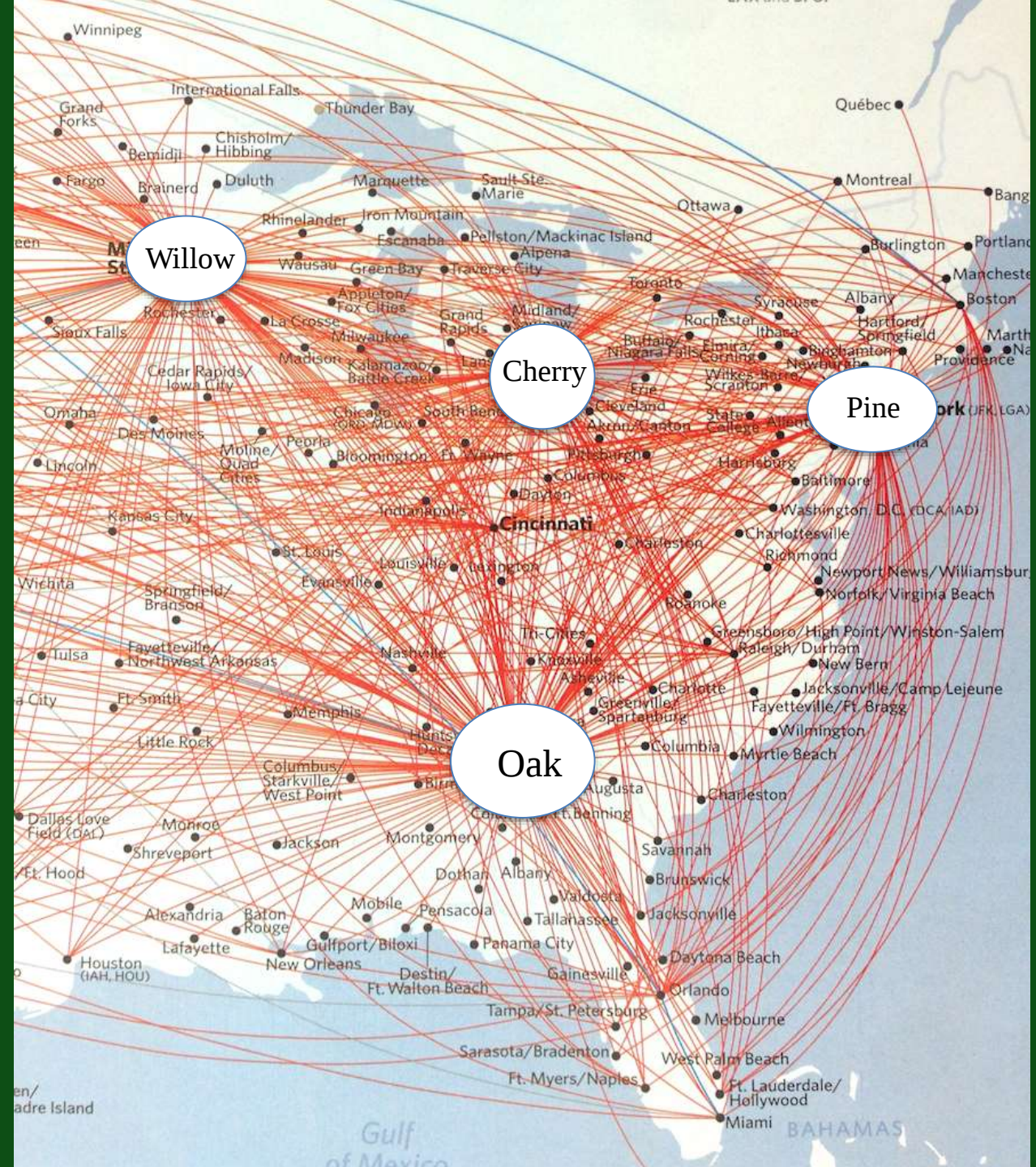
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We call plants
that serve as key
sources of food
Keystone Plants



Why hunt on oaks,
cherries, willows
and pines? Cause
that's where the
food is!!



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5% of the available native plant genera
(keystone genera) support 73% of the
available caterpillar species

You could build a landscape using 95%
of the available native plant genera and
still only support 27% of the available
Lepidoptera

Keystone genera for Augusta Co. VA

Woody plants

Oaks
Cherries
Willows
Birches
Maples
Cottonwood
Blueberries
Crabapples
Alders
Elms
Pines
Basswood
Hawthorns

Herbaceous plants

Goldenrod
Asters
Wild strawberries
Sunflowers
Nightshades
Plantain
Ragweed
Wild lettuce
Smartweed
Joe Pye weed
Morning glories
Goosefoot
Native grasses

We are not fooling the
birds when we fail to
plant keystone genera!

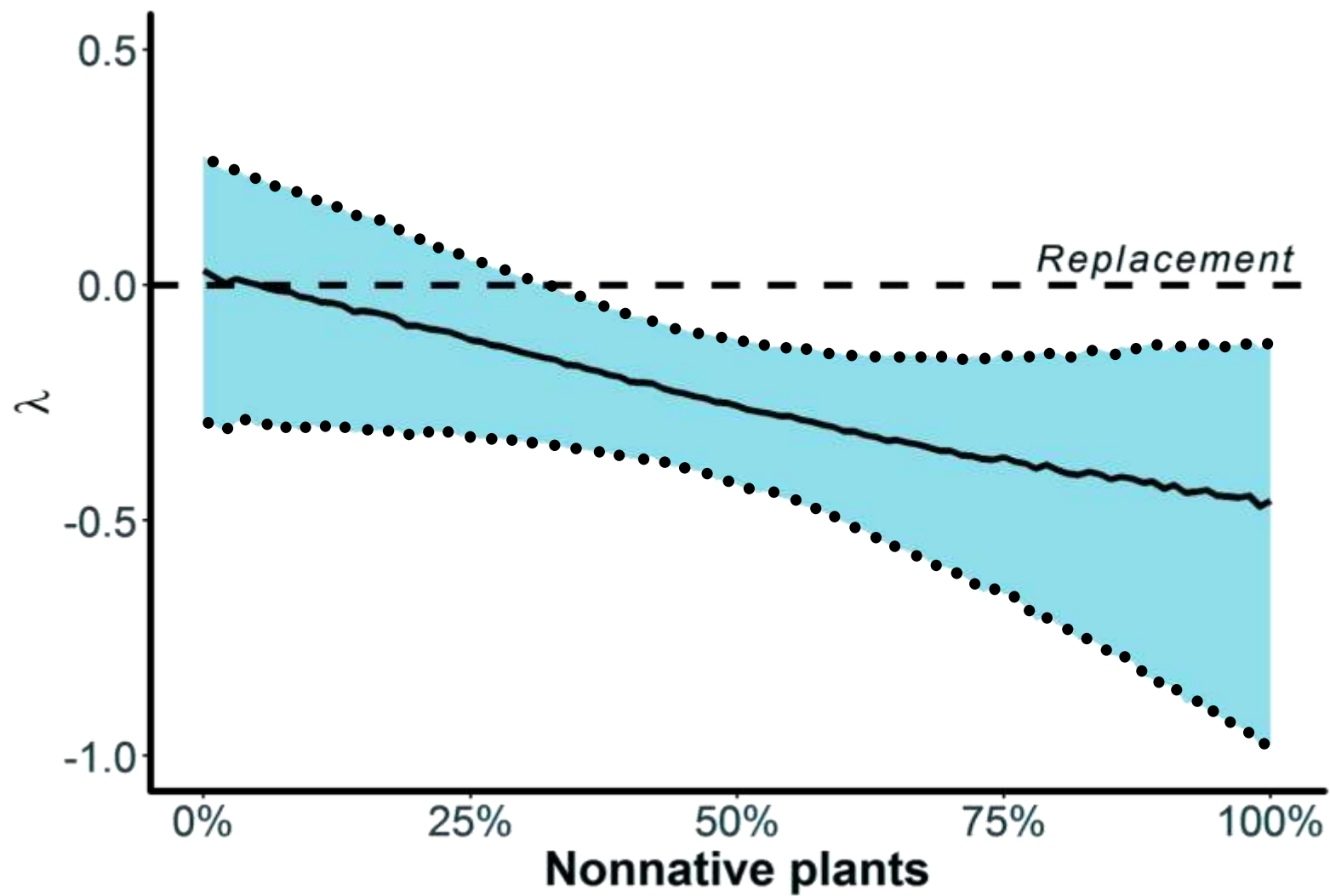


Narango, D.L., D. W. Tallamy and P. P. Marra. 2018. Nonnative plants reduce population growth of an insectivorous bird. PNAS

Compared to native landscapes, yards dominated by introduced plants :

- 1) Produced 75% fewer caterpillars
- 2) Were 60% less likely to have breeding chickadee
- 3) Nests contained 1.5 fewer eggs
- 4) Nests were 29% less likely to survive
- 5) Nests produced 1.2 fewer fledglings
- 6) Delayed maturation by 1.5 days

Population Growth

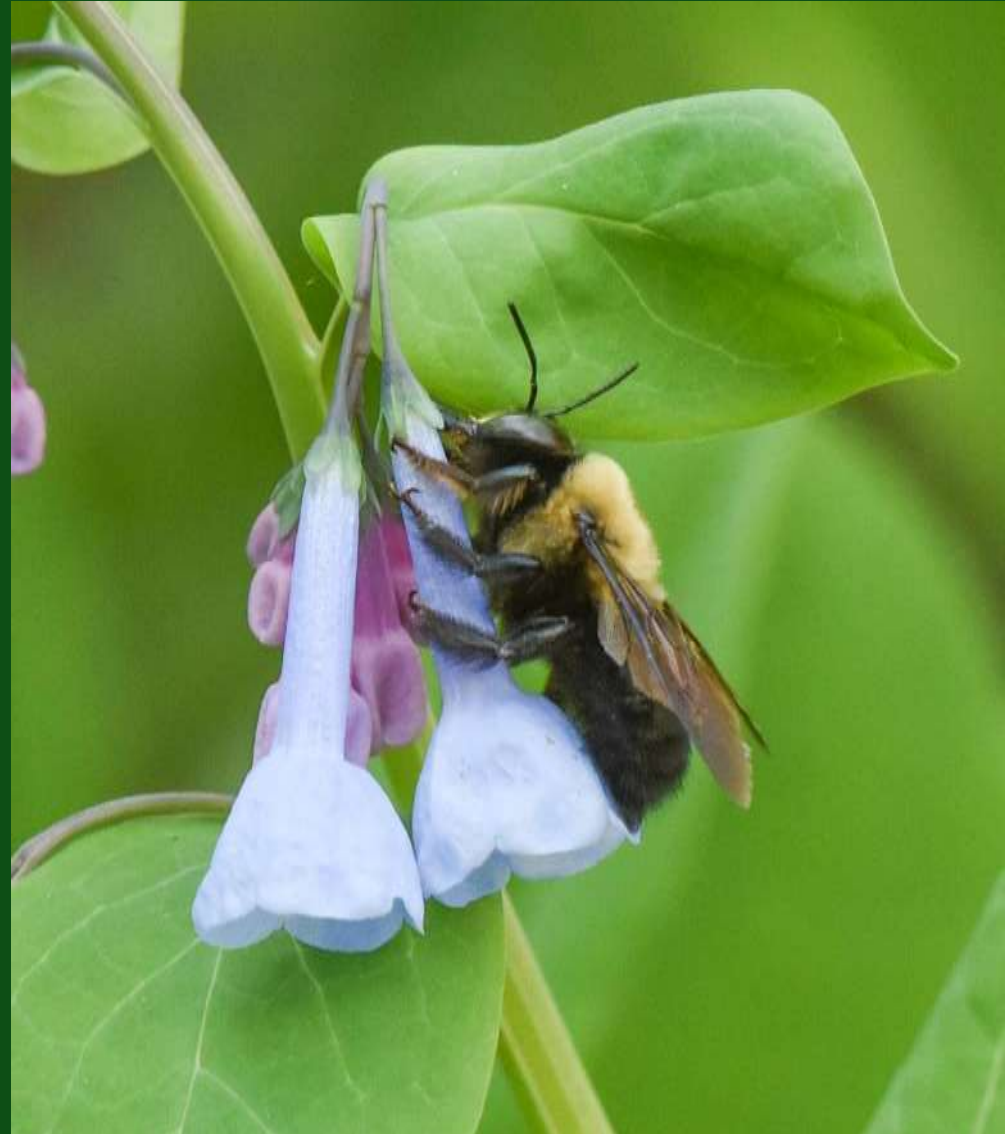


5) The next big advance in user-friendly tools will be identifying plants for specialist bees

What species should we plant
for native bees?

“Meet the needs
of our specialists.”

Sam Droege



Many bee species have been forced to specialize
because all flowers and pollen are not created equal!

Flowering phenology

Visual and olfactory cues

Floral and pollen morphology

Nutritional value:

- amino acids

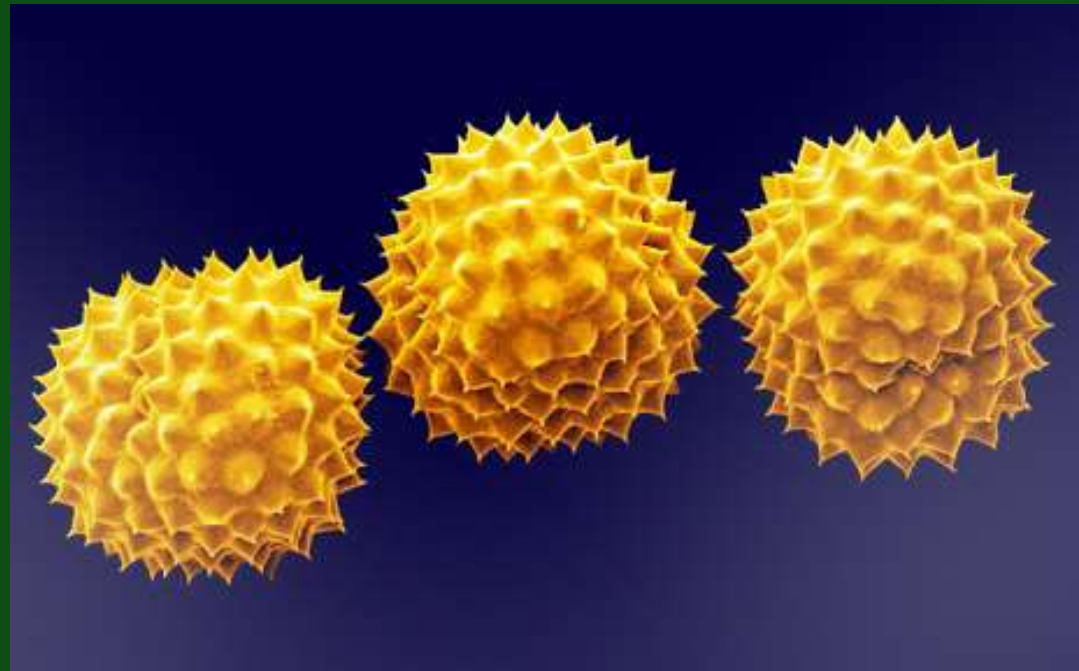
- lipids

- secondary metabolites

- proteins

- starches

- sterols



Best plant genera for native bee specialists in the mid-Atlantic

<i>Helianthus</i>	Sunflowers	18 spp
<i>Symphyotrichum</i>	Asters	32 spp
<i>Solidago</i>	Goldenrods	35 spp
<i>Oenothera</i>	Evening primrose	17 spp
<i>Salix</i>	Willows	16 spp
<i>Viola</i>	Violets	26 spp

A close-up photograph of a pink flower with a yellow and black bee on its center. The background is filled with other similar flowers and green foliage, creating a lush garden scene. A semi-transparent circular overlay is positioned on the right side of the image, containing the title text.

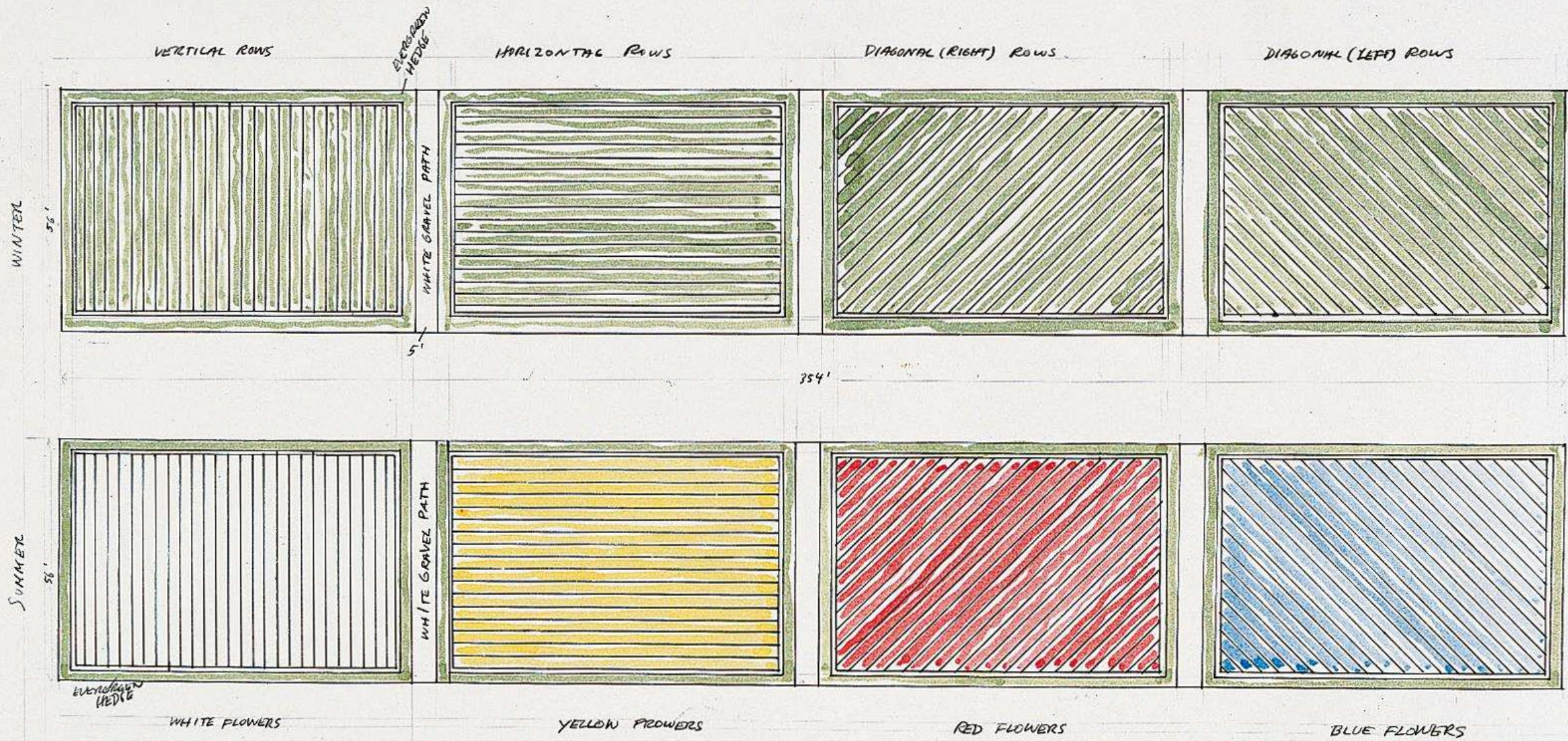
NEW TOOLS FOR
INTEGRATING PLANT
PHYSIOLOGY INTO
ECOLOGICAL
PLANTING DESIGN



Dylan Cole

USING PARAMETRIC MODELING TO ADVANCE ECOLOGICAL PLANTING DESIGN





PROPOSAL: TO PLANT FLOWERS OF FOUR DIFFERENT COLORS (WHITE, YELLOW, RED & BLUE) IN FOUR EQUAL RECTANGULAR AREAS, IN ROWS OF FOUR DIRECTIONS (VERTICAL, HORIZONTAL, DIAGONAL RIGHT & LEFT) FRAMED BY EVERGREEN HEDGES OF ABOUT 2' HEIGHT. IN THE WINTER THE ROWS OF PLANTS WOULD RETAIN THEIR LINEAR DIRECTION, IN THE SUMMER THE FLOWERS WOULD BLOOM AND PROVIDE THE COLOR. THE TYPE OF PLANT, HEIGHT, DISTANCE APART AND PLANTING DETAILS WOULD BE UNDER THE DIRECTION OF A BOTANIST AND THE MAINTENANCE BY A GARDNER.

MAY/JUNE

JUNE/JULY/AUG.

AUG./SEPT./OCT.

WHITE



Campanula 'Chettle Charm', Guara 'So White', Echinacea purpurea 'White Swan',
Physostegia 'Miss Manners', Phlox paniculata 'David'

YELLOW



HEDGE



Achillea 'Coronation Gold', Baptisia 'Carolina Moonlight', Echinacea 'Big Sky Sunrise',
Heliopsis 'Tuscan Sun'

Buxus Green Mountain

RED



Achillea 'Paprika', Geum 'Flames of Passion', Lobelia cardinalis, Salvia greggii 'Lighthouse Red',
Gaillardia 'Gallo Red'

BLUE



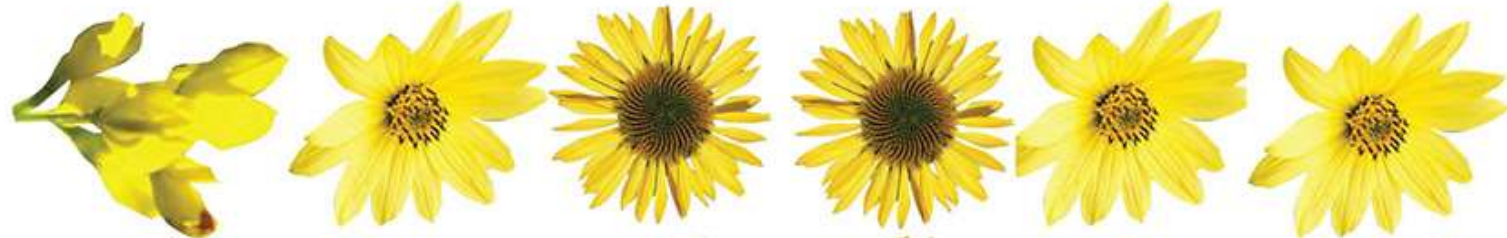
Baptisia 'Midnight Praineblues', Salvia nemerosa 'Blue Hill', Perovskia 'Little Spire', Lobelia siphilitica,
Eryngium 'Big Blue'

PARAMETRIC MODELING DESIGN

RULE 1:
SHORTEST
PLANTS ON
OUTSIDE ROWS

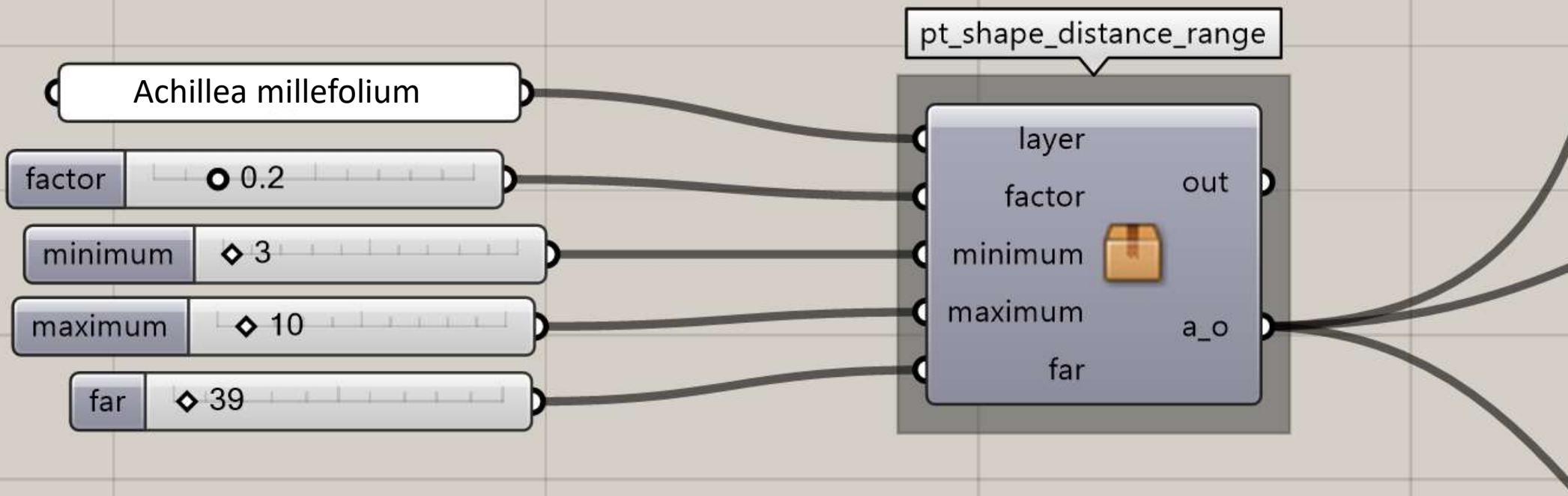


RULE 2:
LONGER-
BLOOMING
PLANTS ARE
USED AT A
HIGHER %

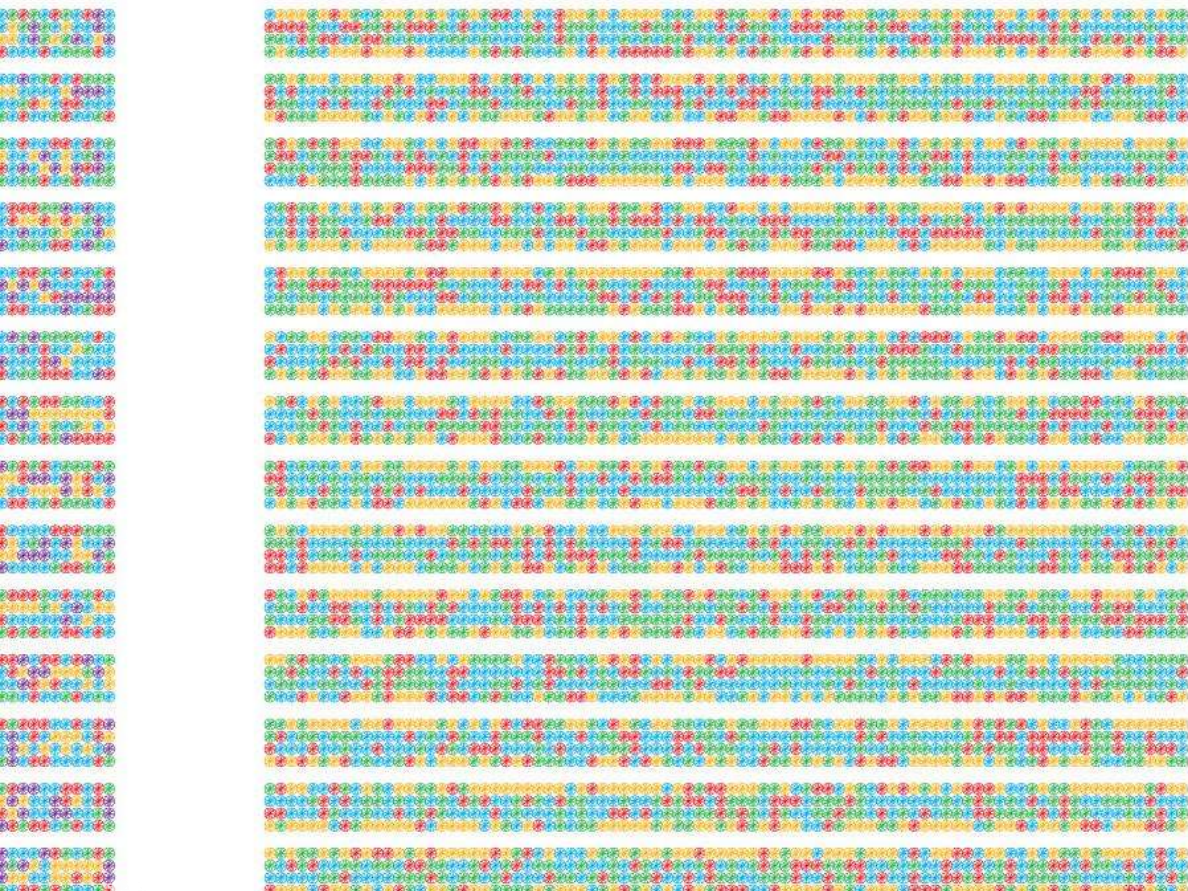


RULE 3:
50% OF BED
MUST BE
IN BLOOM
BETWEEN MAY
THROUGH
SEPTEMBER

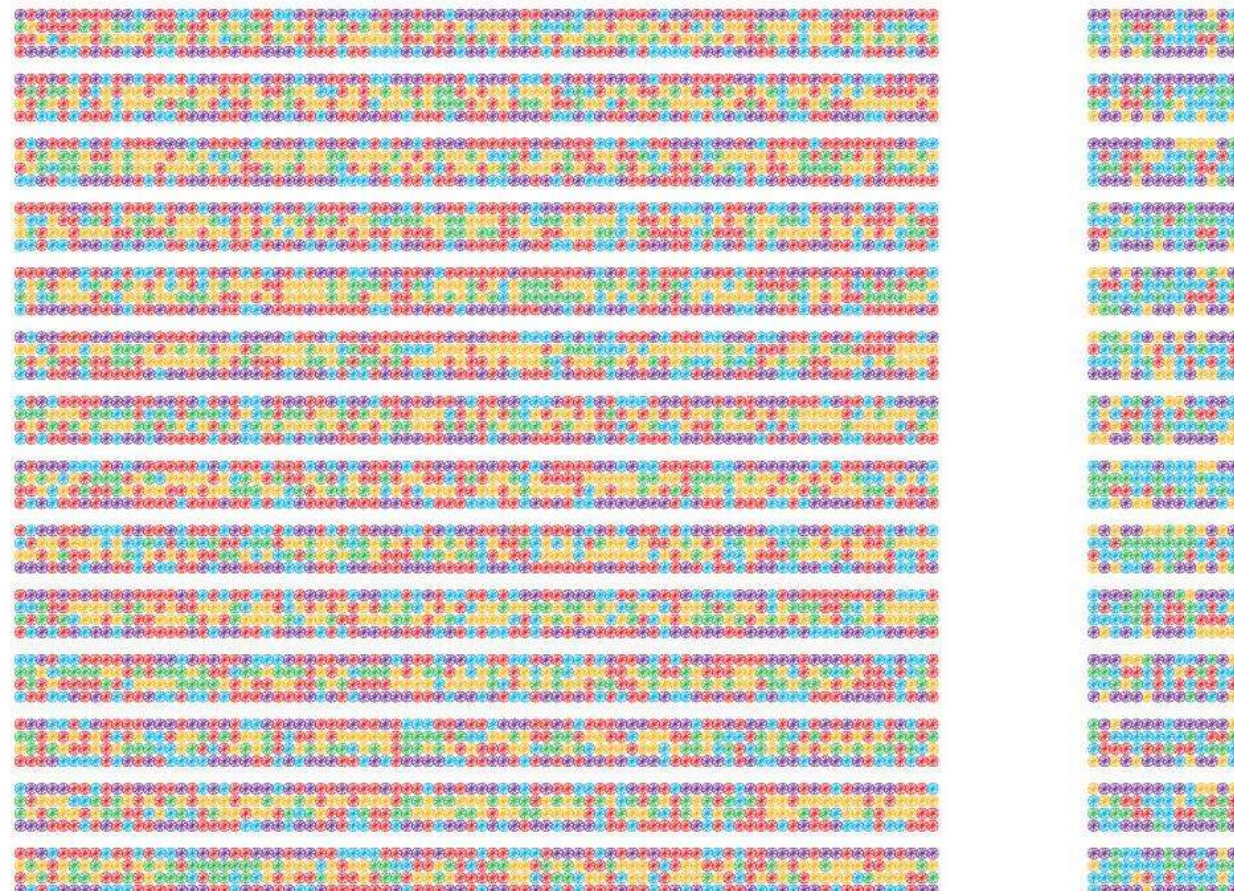




YELLOW



RED



BLU









ECOLOGICAL RULE SET:

BLOOM TIME

LIGHT REQUIREMENTS

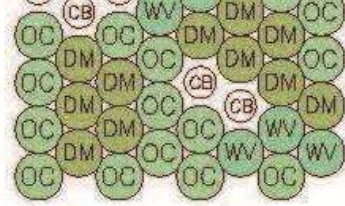
WATER REQUIREMENTS

GROWTH HABIT

SWARTHMORE PROJECT

PLANTING DATA BASE

ZONE	Name	Percent	spacing	Color	January	February	March	April	May	June	July	August	September	October	November	December
1	<i>Lasthenia californica</i>	40	0.5	FFCC33	0.00	0.1	0.5	0.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	<i>Layia fremontii</i>	50	0.5	FFFF33	0.00	0.00	0.3	0.4	0.05	0	0.00	0.00	0.00	0.00	0.00	0.00
2	<i>Nemophila Menziesii</i>	30	2	0066CC	0.00	0.00	0.00	0.3	0.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	<i>Scilla</i>	30	2	6666CC	0.00	0.00	0.00	0.1	0.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	<i>Collinsia</i>	30	2	3333CC	0.00	0.00	0.00	0.2	0.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	<i>Asclepias tuberosa</i>	10	1	FF3300	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.2	0.00	0.00
3	<i>Eschscholzia californica</i>	45	1	FF9900	0.1	0.00	0.2	0.4	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.1
3	<i>Sidalcea</i>	15	1	FF6666	0.00	0.00	0.00	0.2	0.2	0.00	0.00	0.00	0.00	0.1	0.00	0.00
3	<i>Achillea millefolium</i>	15	1	FFFF99	0.00	0.00	0.00	0.00	0.1	0.1	0.00	0.00	0.00	0.00	0.00	0
3	<i>Penstemon</i>	10	1	FF3399	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.2	0.00	0.00
4	<i>Asclepias tuberosa</i>	5	0.5	FF3300	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.25
4	<i>Eschscholzia californica</i>	20	0.5	FF9900	0.00	0.00	0.1	0.3	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.1
4	<i>Sidalcea</i>	5	0.5	FFCCFF	0.00	0.00	0.00	0.2	0.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	<i>Achillea millefolium</i>	10	0.5	FFFF99	0.00	0.00	0.00	0.00	0.1	0.1	0.00	0.00	0.10	0.10	0.00	0.00
4	<i>Penstemon</i>	10	0.5	FF3399	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.1	0.00	0.00
4	<i>Dianthus sp.</i>	10	0.5	FF9999	0.00	0.00	0.00	0.1	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	<i>Verbena bonariensis</i>	50	2	9966CC	0.00	0.00	0.00	0.00	0.00	0.5	0.1	0.00	0.00	0.00	0.00	0.00
5	<i>Muscari</i>	20	2	6633CC	0.00	0.00	0.00	0.00	0.1	0.2	0.1	0.00	0.00	0.00	0.00	0.00
5	<i>Bellis perenne</i>	20	2	FFFFFF	0.00	0.00	0.00	0.00	0.1	0.1	0.00	0.00	0.00	0.00	0.00	0.00
5	<i>Melissa officinalis</i>	10	2	FFFF99	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00
6	<i>Bellis perenne</i>	20	2	FFFFFF	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0	0	0

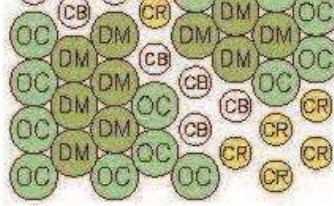


1 MIX 12
12' x 14'

(CB) GARDY BUCKWELL 100

NOTES:

1. GROUP PLANTS IN CLUSTERS OF 3, 5, OR 7 TO EXTENT POSSIBLE, AS SHOWN.
2. TRIANGULAR SPACING AND SHOWN FOR REFERENCE ONLY. PLANT LAYOUT IS TO BE NATURALISTIC IN NATURE. REFER DETAIL 6/L-933 FOR LAYOUT DESIGN INTENT.

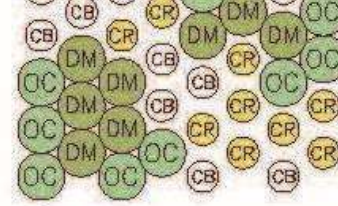


2 MIX 13-A
12' x 14'

(CB) GARDY BUCKWELL 100

NOTES:

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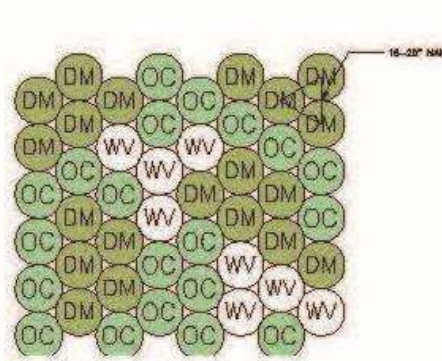


3 MIX 13-B
12' x 14'

(CB) GARDY BUCKWELL 100

NOTES:

1. GROUP PLANTS IN CLUSTERS OF 3, 5, OR 7 TO EXTENT POSSIBLE, AS SHOWN.
2. TRIANGULAR SPACING AND SHOWN FOR REFERENCE ONLY. PLANT LAYOUT IS TO BE NATURALISTIC IN NATURE. REFER DETAIL 6/L-933 FOR LAYOUT DESIGN INTENT.

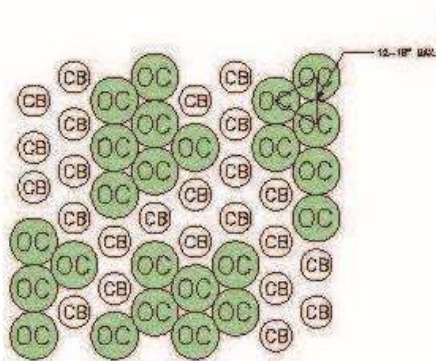


4 MIX 14
12' x 14'

(OC) OSMUNDRA CYNICEREA 400
(DM) OSMUNDRA REGULAR 400
(WV) HYDRANGEA VIRENS 400

NOTES:

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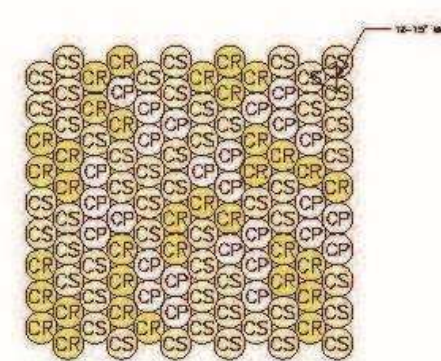


5 MIX 15
12' x 14'

(OC) OSMUNDRA CYNICEREA 400
(CB) GARDY BUCKWELL 100

NOTES:

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2. TRIANGULAR SPACING AND SHOWN FOR REFERENCE ONLY. PLANT LAYOUT IS TO BE NATURALISTIC IN NATURE. REFER DETAIL 6/L-933 FOR LAYOUT DESIGN INTENT.

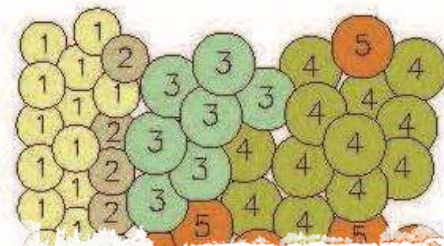


6 MIX 16
12' x 14'

(CR) GARDY ROSEA 200
(CP) GARDY POUSSUREA 200
(CS) GARDY STERNA 200

NOTES:

1. GROUP PLANTS IN CLUSTERS OF 3, 5, OR 7 TO EXTENT POSSIBLE, AS SHOWN.
2. TRIANGULAR SPACING AND SHOWN FOR REFERENCE ONLY. PLANT LAYOUT IS TO BE NATURALISTIC IN NATURE. REFER DETAIL 6/L-933 FOR LAYOUT DESIGN INTENT.



(#) GROUNDCOVER PLANT SPECIES NUMBER
(WV, REF. DETAILS ON L-931, L-932, & L-933)

NOTES:

1. PLANTING SHALL REFLECT AN ORGANIC AND FLUID FORM - NOT A RIGID GRID. PLANTS SHALL BE CLUSTERED IN GROUPS OF 3, 5, OR 7.
2. FOR GROUNDCOVER MIX PLANT SPECIES AND PERCENTAGES REFER TO DETAILS ON L-931, L-932, AND L-933.
3. REFER TO SPECIFIC GROUNDCOVER MIX DETAILS FOR SPACING REQUIREMENTS, TYP.



(#) GROUNDCOVER PLANT SPECIES NUMBER
(WV, REF. DETAILS ON L-931, L-932, & L-933)

NOTES:

1. PLANTING SHALL REFLECT AN ORGANIC AND FLUID FORM - NOT A RIGID GRID. PLANTS SHALL BE CLUSTERED IN GROUPS OF 3, 5, OR 7.
2. FOR GROUNDCOVER MIX PLANT SPECIES AND PERCENTAGES REFER TO DETAILS ON L-931, L-932, AND L-933.
3. REFER TO SPECIFIC GROUNDCOVER MIX DETAILS FOR SPACING REQUIREMENTS, TYP.

ANIMATION



ECOLOGICAL PLANT DATEBASE

How to use this spreadsheet

HARDINESS ZONES: USDA Hardiness Zone / Sunset Climate Zones

LIGHT REQUIREMENTS: **Full Sun** (6 hours or more of direct sun) **Part Sun** (some direct sun in morning, midday, or afternoon) **Dappled Shade** (Under trees with high branches) **Part Full Shade** (North side of building or under trees with no direct sunlight) **NOTE:** Ephemeral plants break dormancy early in spring, flower quickly, and recede before they are shaded out

WATER REQUIREMENTS: **High, Medium, Low** / California WUCHOLS Water Use Classification

SPACING RANGE: Base selection on installation size and desire for plants to quickly knit together (ex: groundcover plugs can be planted closer than eventual mature width of plant)

GROWTH HABIT: **Vertical/Upright** (noticably taller than wide), **Vertical/Mounding** (slightly taller than wide), **Mounding** (wider than tall)

ROOT HABIT: **Shallow and fibrous** (including bulbs and tubers), **Deep/tap roots**

LONGEVITY: **Annual, Biennial, Perennial** - (long vs. short lived)

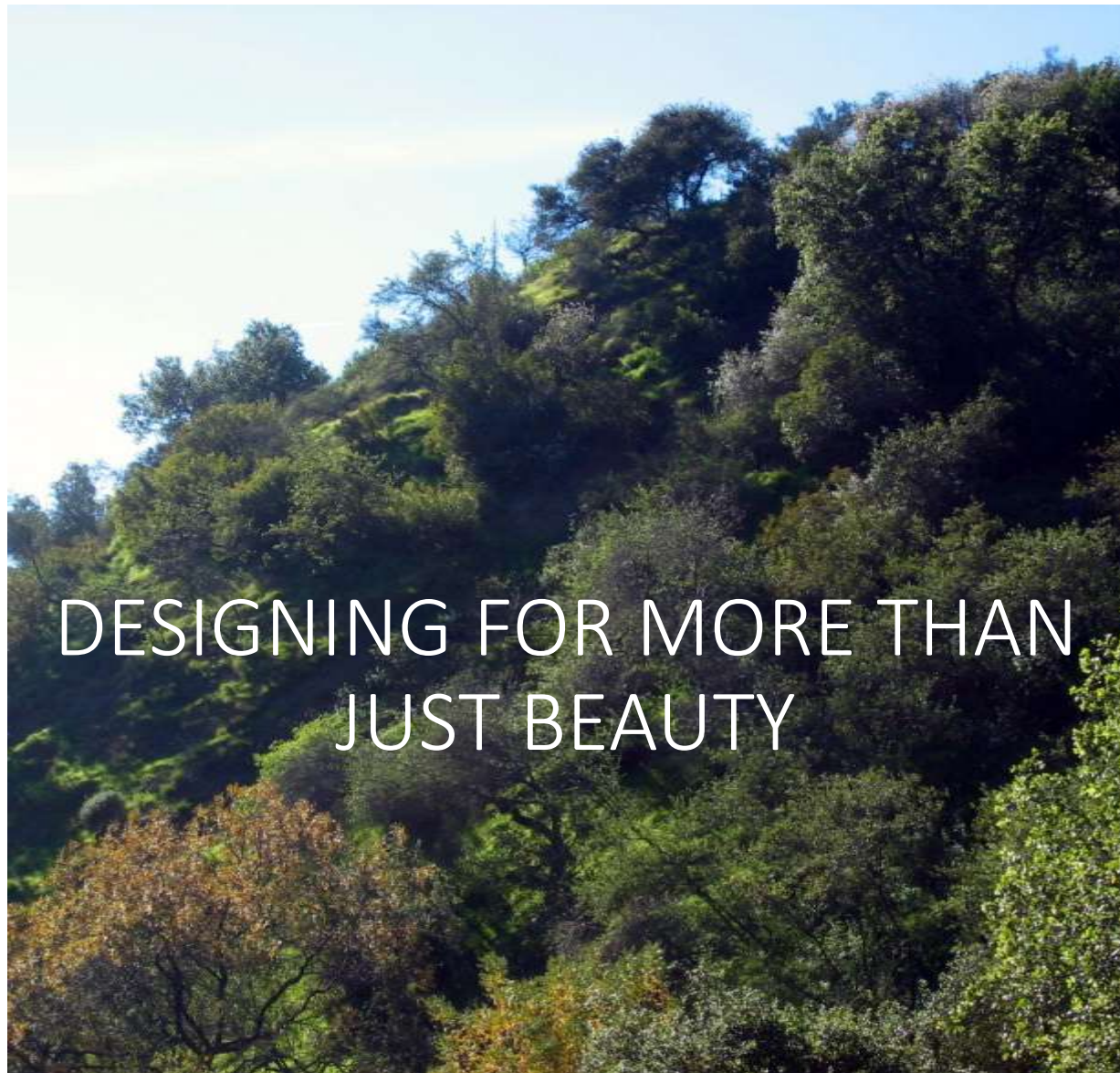
COMPETITIVE STRATEGY: **Rhizomatous, Stoloniferous, Self-Seeding, Ephemeral, Aleopothy**

DESIGN TYPOLOGY: **Structural Layer** (shape and form persist for most of year), **Seasonal Theme Layer** (specific bloom or textural dominance for shorter periods), **Filler Layer** (fast growing), **Ground Cover Layer** (ground hugging, prevent erosion, suppress weeds, cool soil)

SOIL REQUIREMENTS: pH levels, Drainage, Organic Content

SALT TOLERANCE: **None, Some Tolerance, Tolerant**

Scientific Name	Common Name	Hardiness Zones	Light Requirements	Water Requirements	Mature Height	Sp
A						
Acalypha hispida						





ECOLOGICAL RULE SET:

SUN / SHADE TOLERANCE

SLOPE / DROUGHT TOLERANCE

HEIGHT / PROXIMITY TO PATH

LIVE OAK UNDERSTORY COMMUNITY

MIMICKING OF SEED DISPERSAL

POLLINATOR VALUE

LIFESPAN / LONGEVITY

RHIZOMOTOUS / CLUMP FORMING

ALLOPATHY

ANIMATION

User group:

Government

Scientist / Academic

Naturalists

Landscape Architects
and Designers

Gardener / Homeowner

Growers / Retailers

COMPETITIVE STRATEGY

LONGEVITY

POLLINATOR VALUE

COMMERCIAL AVAILABILITY

NATIVE RANGE

SUN / SHADE TOLERANCE

PLANT FORM

SPACING RANGE

SOIL REQUIREMENTS

ROOT HABIT

GROWTH RATE

BLOOM TIME / COLOR

FIRE TOLERANCE

HARDINESS ZONE

LEAF RETENTION

WATER REQUIREMENTS

DESIGN TYPOLOGY

**UNIFIED NATIONAL
PLANT DATABASE**

User group:

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SOIL REQUIREMENTS

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BLOOM TIME / COLOR

FIRE TOLERANCE

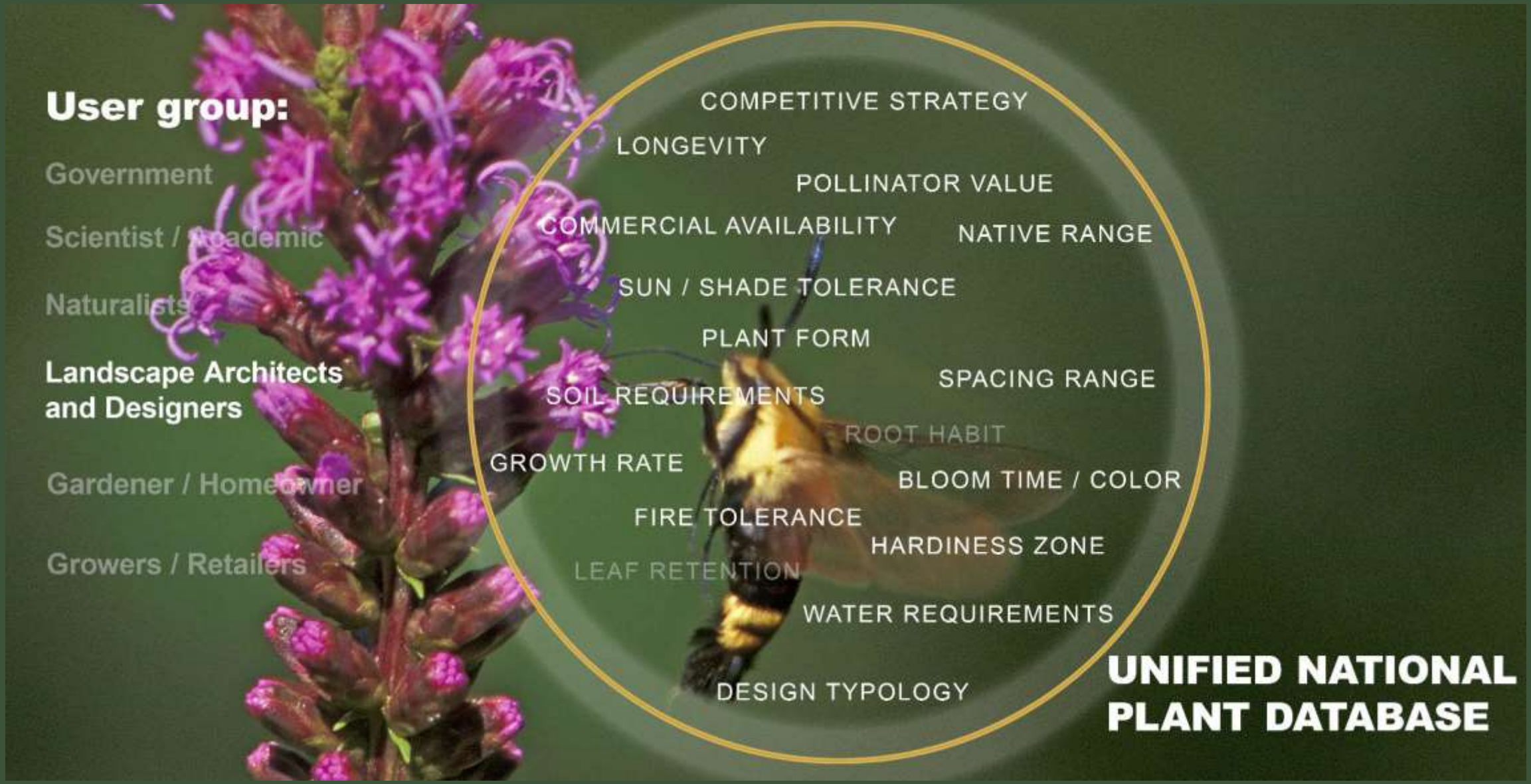
HARDINESS ZONE

LEAF RETENTION

WATER REQUIREMENTS

DESIGN TYPOLOGY

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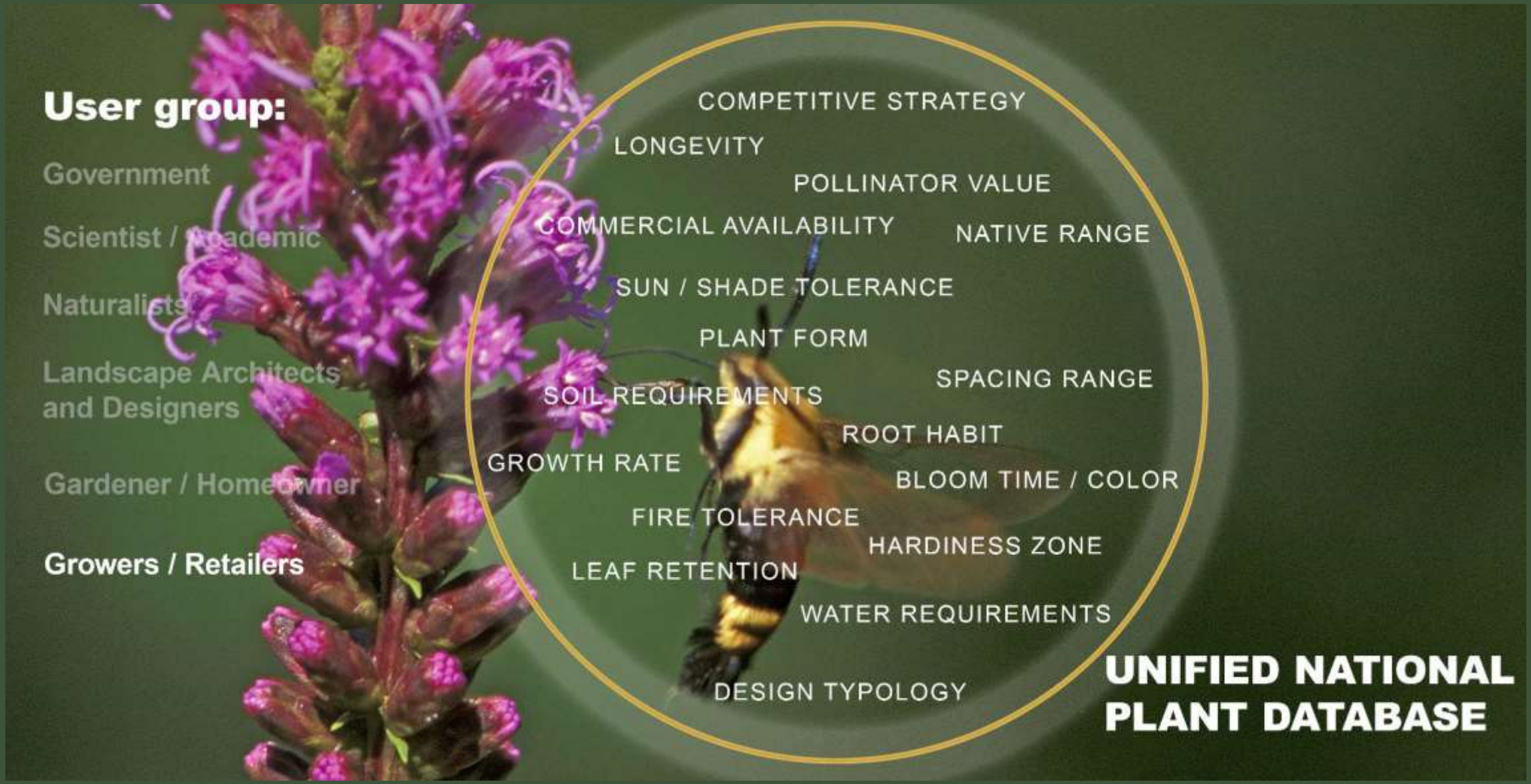
HARDINESS ZONE

LEAF RETENTION

WATER REQUIREMENTS

DESIGN TYPOLOGY

**UNIFIED NATIONAL
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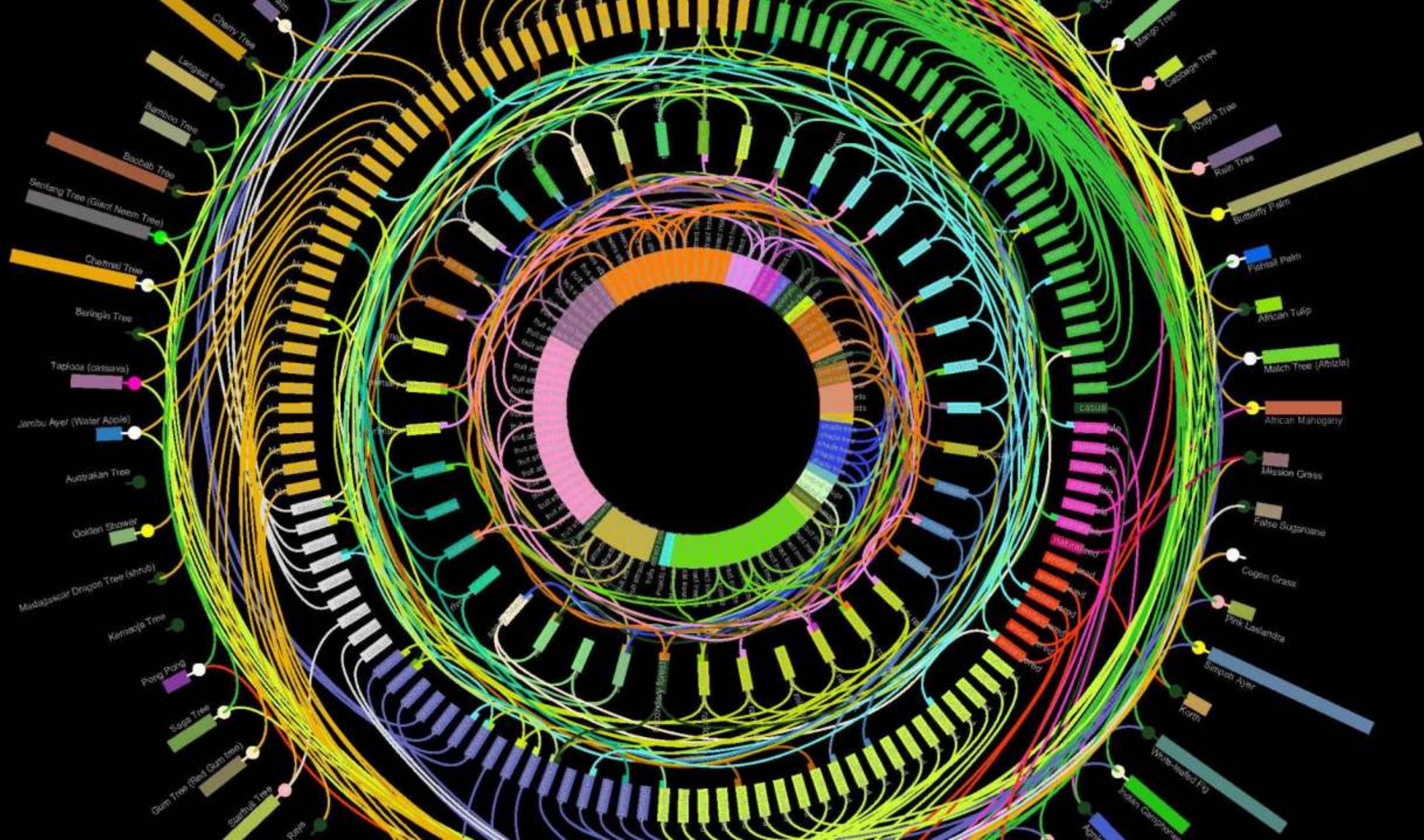
HARDINESS ZONE

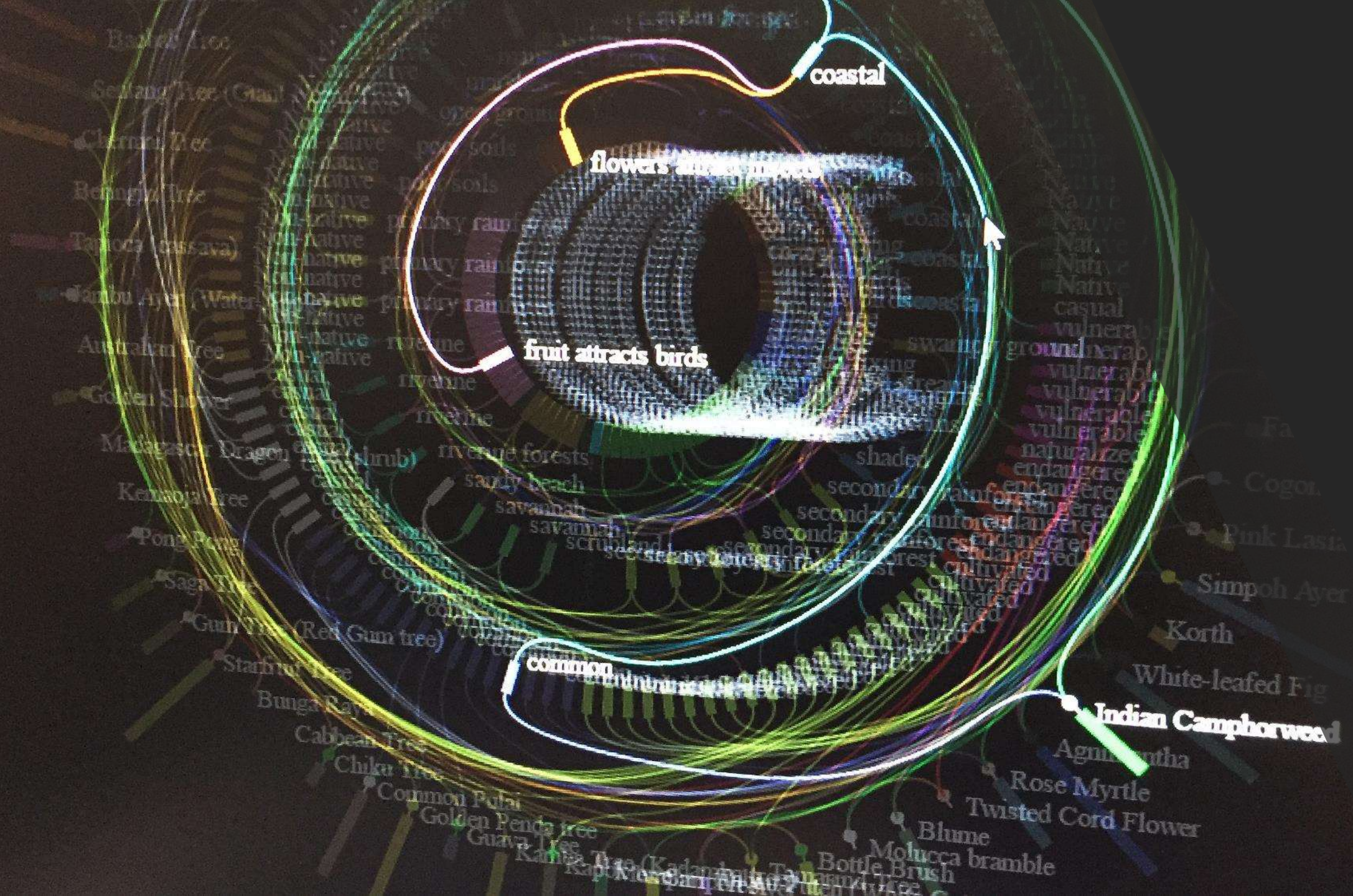
LEAF RETENTION

WATER REQUIREMENTS

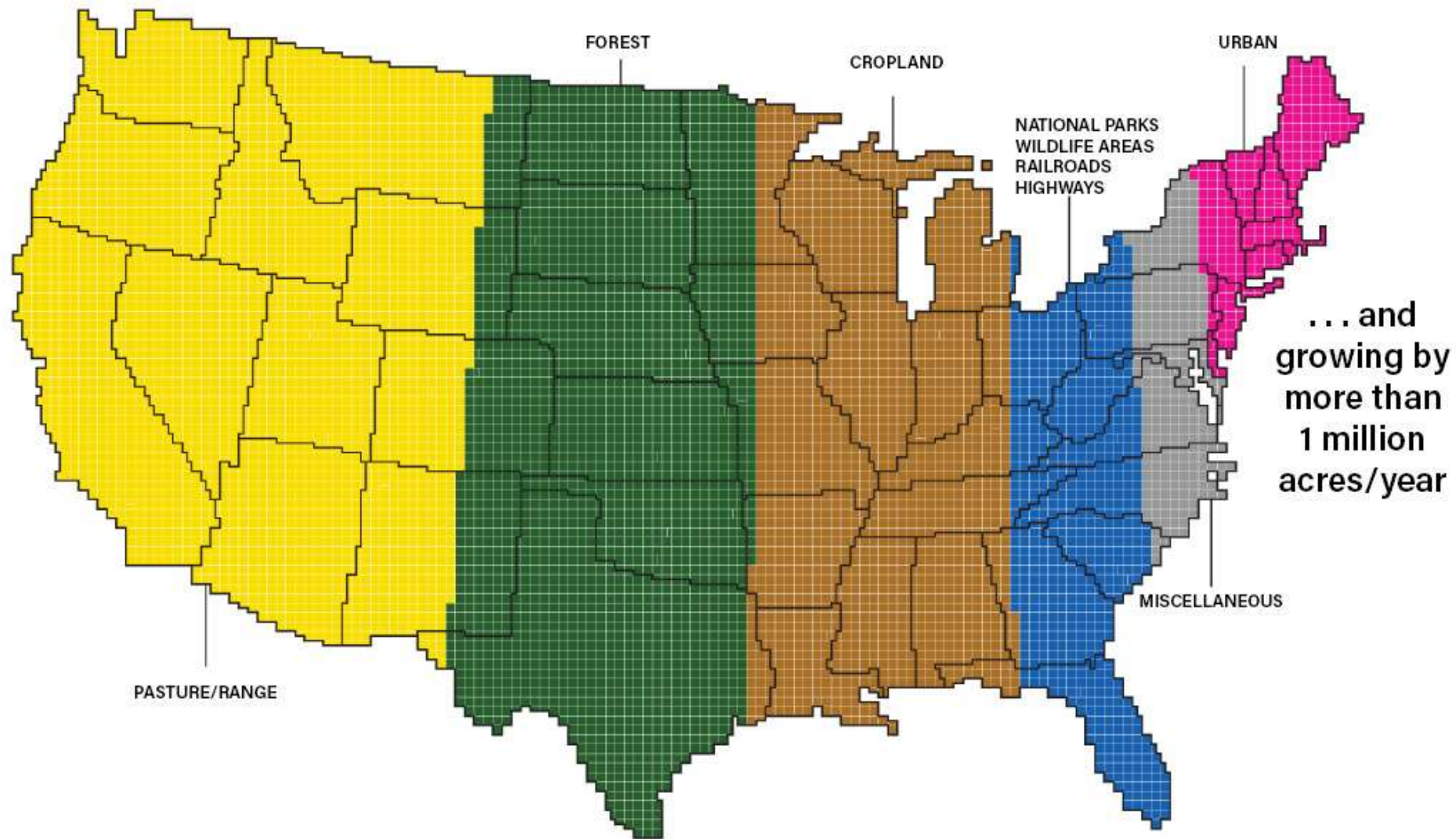
DESIGN TYPOLOGY

**UNIFIED NATIONAL
PLANT DATABASE**





Even though urban areas make up just 3.6 percent of the total size of the 48 contiguous states, four in five Americans live, work and plant there.



An aerial photograph of the Boston skyline, showing a dense cluster of skyscrapers and buildings. The Rose Kennedy Greenway is visible as a green, landscaped area in the foreground, adjacent to the water. The image is tilted at an angle, giving it a dynamic feel. A dark, semi-transparent triangular overlay is in the top right corner, containing the text.

Rose Kennedy Greenway, Boston, MA 2022



The Highline, New York, NY 2009

A scenic view of a bayou with a paved path, a bridge, and people walking. The foreground is filled with lush green vegetation and yellow wildflowers. A paved path curves through the middle ground, where three people are walking. In the background, a wooden bridge spans the water, and more people are visible on the path. The water is calm and reflects the surrounding greenery.

Bayou Greenways, Houston, TX 2020

A photograph of an art installation along the Atlanta Beltline. In the foreground, a large, rusted metal sculpture of a skeleton stands in a grassy field. In the background, a concrete wall with a metal railing runs along the path, with trees and a building visible in the distance. A paved path leads towards the background where a few people are walking. A dark grey diagonal overlay covers the top right corner of the image.

Atlanta Beltline, Atlanta, GA 2030

A photograph of a wooden boardwalk path in Hudson River Park, NYC. The path is made of light-colored wooden planks and curves gently to the right. It is flanked by lush green grass and various shrubs. In the background, a dense urban skyline is visible under a clear blue sky. A yellow taxi is parked on the left side of the path. A dark, semi-transparent diagonal overlay covers the right side of the image, containing the title text.

Hudson River Park, NYC 2020

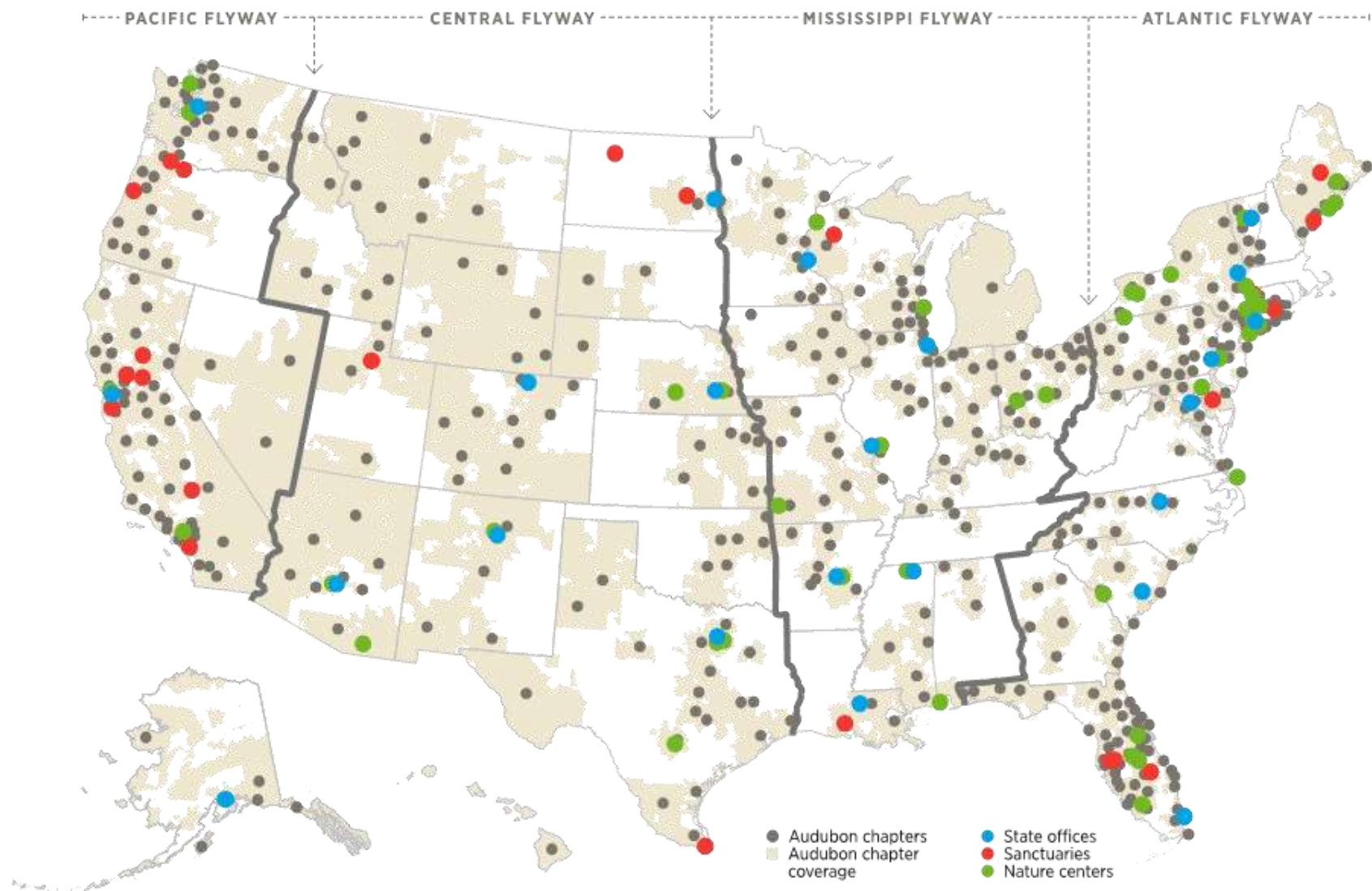
11th Street Bridge Park, Washington, DC 2019



A photograph of a bird, likely a species of sparrow or finch, perched on a branch. The bird has a yellow beak, a white eye-ring, and a body with orange-brown and white streaked plumage. It is holding a small red berry in its beak. The background is a blurred brick wall. The foreground shows several branches with clusters of small, round, red berries.

Audubon's Plants for Birds program and database

**JOHN ROWDEN, DIRECTOR OF
COMMUNITY CONSERVATION**





Bird-Friendly Communities

Food
Shelter
Safe passage
Places to raise young



Plants for Birds program development

Summer 2015



Agreement with BONAP signed

Working group from around Audubon formed

Spring 2016



Test version of database initiated

Refining data layers added to backend

Supporting resources developed

Fall 2016



Native plants database pilot phase launched

Series of training webinars for Audubon network

Plants for Birds program development

Spring/Summer 2017



Database public launch

Audubon national convention; multiple sessions on native plants

Fall 2017



Native plants database 2.0 launched with updates based on feedback from internal and external users/stakeholders

Spring/summer 2018



Development of UI for fine tuning of backend results

Programmatic focus on change at scale

Questions?



Questions?





If you are interested in supporting this working group or want to keep apprised of the working group, please contact:

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Chair, Mountain Brook Board of Landscape Design
simeonjohnson@msn.com
Cell 205.215.8621
Instagram @simswjohnson