Grasses & Sedges from the Ground Cover Up

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Marketing Director

UGA Landscape Planning Short Course
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What We Grow
Prime Time for Grasses & Sedges

- Popularity of native plants
- Move toward green infrastructure and sustainable landscapes
- Progressive planting design

Carex eburnea and Sesleria autumnalis on the High Line, NYC
Native Interest

Total # of plants sold

![Native Interest Graph]

- Native
- Introduced

2006 vs 2017
### Residential Landscape Architecture Trends

<table>
<thead>
<tr>
<th>Rank</th>
<th>Trend</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Native/adapted drought tolerant plants</td>
<td>82.31%</td>
</tr>
<tr>
<td>2</td>
<td>Native plants</td>
<td>81.60%</td>
</tr>
<tr>
<td>3</td>
<td>Low-maintenance landscapes</td>
<td>79.25%</td>
</tr>
<tr>
<td>4</td>
<td>Food/vegetable gardens</td>
<td>76.52%</td>
</tr>
<tr>
<td>5</td>
<td>Permeable paving</td>
<td>76.31%</td>
</tr>
<tr>
<td>6</td>
<td>Reduced lawn area</td>
<td>72.66%</td>
</tr>
<tr>
<td>7</td>
<td>Fire pits/fireplaces</td>
<td>71.51%</td>
</tr>
<tr>
<td>8</td>
<td>Drip/water-efficient irrigation</td>
<td>71.05%</td>
</tr>
<tr>
<td>9</td>
<td>Wireless/internet connectivity</td>
<td>70.77%</td>
</tr>
<tr>
<td>10</td>
<td>Rainwater/graywater harvesting</td>
<td>70.32%</td>
</tr>
</tbody>
</table>
Doing More with Grasses & Sedges

- Require few inputs
- Help suppress weeds
- Support wildlife, including pollinators
- Slow storm water, increase infiltration, and store carbon
- Prevent erosion
“Green Infrastructure uses vegetation, soils, and natural processes to manage water and create healthier urban environments.”
- US EPA

Adding ecological function to new and existing development

North Carolina State University, Raleigh, NC
Photo credit: Jon Blasco
The managed urban landscape is green infrastructure.
North Carolina Stormwater Design Manual

Bioretention Plant List

- 20+ Species
- 40+ Species
- 70+ Species

2015: 8
2018: 22
2018: 26
North Carolina Stormwater Design Manual

Bioretention Plant List

2015

*Carex spp.*

2018

*Carex amphibola*
*Carex cherokeensis*
*Carex comosa*
*Carex crinita*
*Carex grayi*
*Carex lupulina*
*Carex lurida*

*Carex muskingumensis*
*Carex radiata*
*Carex rosea*
*Carex squarrosa*
*Carex stricta*
*Carex vulpinoidea*
*Carex glaucescens*
*Carex intumescens*

+ Stormwater wetlands, infiltration basins
Progressive Planting Design

- Focus on plant community
- Dense, layered
- Stable plantings that use fewer resources and add function
- Biodiversity and resilience

Source: Planting in a Post-Wild World, Rainer & West, 2015, Timber Press
Courtesy of Thomas Rainer
Rose Kennedy Greenway, Boston
Private Estate, Orange Co., NC

Photo: Meadowsweet Gardens
Midtown Sky Garden, New York City
Design by HMWhite Site Architects; photo by Aaron Booher, courtesy of Thomas Rainer
Bioretention Planter in Lancaster, PA
Design and photo by Claudia West, photo courtesy of Thomas Rainer
Versatile and adaptable

WORKING WITH GRASSES & SEDGES
True Grasses

- *Poaceae*
- Widest distribution of all flowering plant families
- Adapted to survive in extreme conditions
- Highly efficient, fibrous root systems
- Many maintain their habit when dormant
Sedges

• Mostly in the genus *Carex*
• Distributed throughout the world
• Groups from North America, Asia, and New Zealand
• Fibrous roots systems
• Range from shade loving to sun tolerant
How They Grow

Cool Season
- Moderate to high water & nutrient needs
- Utilize 15-30% of sunlight
- Establish rapidly

Warm Season
- Use water and nutrients more efficiently
- Utilize 80% of sunlight
- Initial energy in root growth

Data Source: USDA, East National Support Center
Grasses Improve Soil

- Improve drainage
- Thick crowns and/or rhizomatous growth
- Prevent erosion
- Continue to function during dormancy
- Store carbon
Working with the Soil

• Tolerant of low fertility
• Adaptable to wide pH range
• Often don’t need amendments
• Many grasses need good drainage, especially in winter
Planting

- Soil prep depends on species
- Plant at soil level
- Irrigation to establish
- Avoid late season planting with selected warm season grasses...
Water Use

- Many warm season grasses use water very efficiently
- Minimize use, but readily take up water when present
- Sedge species have a wide range
- Excellent plants for storm water management

Photo: Stephen H. Blake, P.E., Artifex Environmental Design, Inc.
Bioretention Pond at North Carolina Museum of Art, Raleigh, NC
Photo credit: Stephen H. Blake, P.E., Artifex Environmental Design, Inc.
Building a Community

- Nectar and pollen source, larval host for some pollinators
- Cover that allows for movement and foraging
- Nesting material, nesting sites, and food for birds and small mammals
- Deer tend to avoid them!

Photo courtesy of Rocky Cooper
Short To-do List

- For many, no need for fertilization
- Mostly pest- and disease-free
- Cut back grasses once yearly in late winter
- With sedges cut back only if necessary for looks
Building a foundation

COVERING THE GROUND
Ground covers & Lawn Alternatives

- Larger sweeps of same plant
- Ground cover more variable in visual texture
- Lawn alternative more uniform
  - Tolerate mowing 2-3 times per year
  - Some handle light foot traffic
Planting Matrix

- Base layer of a more complex planting
- May include other ground-level species
- Plant taller species into base layer
- Building plant community

Source: Planting in a Post-Wild World, Rainer & West, 2015, Timber Press

Courtesy of Thomas Rainer
The High Line, NYC
Photos courtesy of Pat Cullina
Carex divulsa
Grassland Sedge

- Thrives under established trees
- Tolerates range of soil conditions
- Handles heat and humidity well
- One of the best for dry shade
**Carex pensylvanica**  
Pennsylvania Sedge

- Well-behaved spreader
- Creates fine-textured, lush ground cover
- No foot traffic
- Semi-evergreen in mild climates
C. pensylvanica
C. pensylvanica
**Carex texensis**  
Texas Sedge

- Long, fine-textured foliage
- Tolerates some foot traffic
- Drought tolerant
Carex cherokeensis
Cherokee Sedge

- Medium-textured foliage
- Evergreen in mild climates
- Highly deer resistant
- Pendulous seed spikes on tall scapes
- Reseeds heavily
C. cherokeensis
Eragrostis spectabilis
Purple Love Grass

- Airy, pinkish seed heads float above foliage
- Does best in dry, open areas in full sun
- Handles dry conditions
Bouteloua gracilis
Blue Grama

- Appealing seed heads
- Low-resource lawn alternative; can tolerate light foot traffic
- Tolerates poor soil, full sun, dry conditions
- Underused native grass
Carex oshimensis
EverColor® Series

- Lush, arching habit
- Strong growers
- Perform well in shade conditions
- Evergreen where hardy
Carex oshimensis
EverColor® Series

Everest

‘Eversheen’
Carex oshimensis EverColor® Series

‘Everillo’

‘Everlime’
Carex flacca and C. flacca ‘Blue Zinger’
Blue Sedge

✓ Widely adaptable
✓ Drought tolerant once established
✓ Well-behaved spreader
Building patterns and seasonality

THE MIDDLE
Sporobolus heterolepis
Prairie Dropseed

- Drought-tolerant
- Beautiful fall color
- Fall aroma resembling cilantro or popcorn
- With fall planting, give time to establish
Glenwood Gardens Park, Woodlawn, Ohio
Photo credit: Ben Ackerley
**Bouteloua gracilis**
‘Blonde Ambition’ PP22048
Blue Grama

- Tough, adaptable
- Tolerates poor soil and drought
- Abundant seed heads
- Long-lasting attractiveness
**Eragrostis elliottii**
‘Wind Dancer’
Wind Dancer Love Grass

- Blue green foliage and airy seed heads
- Excellent for erosion control
- Tolerates dry conditions once established
- Does well in sandy soil
**Pennisetum orientale**  
‘Karley Rose’ PP12909  
Oriental Fountain Grass

- Drought tolerant
- Long-lasting, soft pink plumes (from June to Fall)
- Easy maintenance
Little Bluestem: 
*Schizachyrium scoparium* cvs.

- Native bunchgrass of prairies and open woods in North America
- Tolerates a wide range of soil conditions (but not wet)
- Supports birds, small mammals, and pollinators
Schizachyrium scoparium
‘The Blues’

- Bright blue foliage with pink highlights
- Outstanding fall color
- Stunning in broad sweeps or masses
‘The Blues’
Schizachyrium scoparium
‘Standing Ovation’ PP25202

✓ Green-blue-purple foliage
✓ Stands upright; no flopping
✓ Thick blades
✓ Brilliant oranges and reds in fall
Schizachyrium scoparium
‘Twilight Zone’ PP27432

✓ Full, upright columnar shape
✓ Pastel tones that develop bright purple highlights in fall
✓ Unique, iridescent foliage
Building structure with height and form

GOING BIGGER
**Muhlenbergia capillaris**
Pink Muhly Grass

- Vibrant, pink plumes
- Heat and drought tolerant
- Plant no later than early fall for best overwintering
- Attracts beneficial insects, and clumping habit good wildlife cover
Muhlenbergia capillaris
‘White Cloud’
White Cloud Muhly Grass

- Dense, white plumes
- Heat and drought tolerant
- Plant no later than early fall for best overwintering
- More upright, blooms later than Pink Muhly Grass
Switchgrass: *Panicum virgatum* & cvs.

- North American native
- Heat and drought tolerant
- Adapt to a wide variety of conditions
- Provide nesting, cover, and food for birds and small mammals
P. virgatum ‘Shenandoah’

P. virgatum ‘Northwind’
Panicum virgatum
‘Thundercloud’ PP20665

✓ Upright, arching habit
✓ Maintains shape
✓ Brings height and statuesque look
*Panicum virgatum*  
‘Cape Breeze’  PP24895  

- Compact cultivar  
- Stays green longer into fall  
- Salt tolerant  
- Heavy bloom set
Panicum virgatum
‘Purple Tears’ PP28518

- New introduction from Piet Oudolf
- Flowering spikes with soft gray color at the top
- Splendid, purple seed heads
- 4’ height and narrow, upright habit

New!
Panicum virgatum
‘Purple Tears’ PP28518
Panicum virgatum
‘Summer Sunrise’

- Upright, compact habit (4.5’)
- Cloud of soft-pink seed heads
- Arching foliage and slightly wider blade

New!
Andropogon gerardii
Big Bluestem

- Drought tolerant
- Does well in low fertility soils
- Interesting “turkey foot” seed heads
- Shelter for nesting birds and food for songbirds
**Sorghastrum nutans**
‘Indian Steel’
Blue Indian Grass

- Blue-green foliage
- Drought tolerant prairie grass
- Intricate flower structures
- Bunch grass with tall blooms
And a little something extra...

WHAT’S NEW?
Panicum virgatum
‘Purple Tears’ PP28518

Panicum virgatum
‘Summer Sunrise’
Carex scaposa
Cherry Blossom Sedge

- Bright pink flowers
- Repeat bloomer—spring and fall
- Wide, deep green foliage
- Collected in China by USNA
Pennisetum alopecuroides
Lumen Gold ('JS Jommenik') PP27435
Lumen Gold Fountain Grass

- Fountain grass look with bright gold foliage
- Similar to ‘Hameln’
- Pop of color in spring
- Transitions to lime green by early summer
Others in the Pipeline

- Smaller, more compact *Andropogon ternarius*
- Hardier Muhly Grass—*Muhlenbergia reverchonii*
- *Andropogon gerardii* ‘Blackhawks’
- Little Bluestems from UGA
- More native sedges
Learn and do more

RESOURCES
Hoffman Nursery Website

[Website Screenshots]

hoffmannursery.com
Current Availability
Hoffman Nursery
Catalog of Grasses
### Plants for Green Infrastructure

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Features &amp; Attributes</th>
<th>Size</th>
<th>Plant Type</th>
<th>Water Needs</th>
<th>Growth Rate</th>
<th>Uses &amp; Practical Applications</th>
<th>Quick Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centaurea cyanus</td>
<td>Cornflower</td>
<td>Easy to grow, attracts butterflies</td>
<td>2-ft</td>
<td>Annual</td>
<td>Moderate</td>
<td>Slow</td>
<td>Border, Cutting Garden</td>
<td>*</td>
</tr>
<tr>
<td>Delphinium belladonna</td>
<td>Bluebeard</td>
<td>Drought tolerant, attracts butterflies</td>
<td>4-ft</td>
<td>Perennial</td>
<td>Low</td>
<td>Medium</td>
<td>Border, Cut Flowers</td>
<td>*</td>
</tr>
<tr>
<td>Echinacea purpurea</td>
<td>Purple Coneflower</td>
<td>Pollinator-friendly, deer-resistant</td>
<td>2-ft</td>
<td>Perennial</td>
<td>Low</td>
<td>Rapid</td>
<td>Border, Cut Flowers</td>
<td>*</td>
</tr>
<tr>
<td>Helianthus annuus</td>
<td>Sunflower</td>
<td>Requires full sun, easy to grow</td>
<td>8-ft</td>
<td>Annual</td>
<td>Moderate</td>
<td>Slow</td>
<td>Cut Flowers</td>
<td>*</td>
</tr>
<tr>
<td>Iris germanica</td>
<td>German Iris</td>
<td>Requires full sun, easy to grow</td>
<td>3-ft</td>
<td>Perennial</td>
<td>Low</td>
<td>Slow</td>
<td>Border, Cut Flowers</td>
<td>*</td>
</tr>
</tbody>
</table>

*Introduced plant

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<th>Quick Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paeonia lactiflora</td>
<td>tree peony</td>
<td>Hardy, attractive flowers</td>
<td>5-ft</td>
<td>Perennial</td>
<td>Low</td>
<td>Rapid</td>
<td>Border, Ornamental</td>
<td>*</td>
</tr>
<tr>
<td>Rhododendron hybrida</td>
<td>Mountain laurel</td>
<td>Requires partial shade, attracts butterflies</td>
<td>6-ft</td>
<td>Perennial</td>
<td>Moderate</td>
<td>Slow</td>
<td>Border, Cut Flowers</td>
<td>*</td>
</tr>
<tr>
<td>Vaccinium corymbosum</td>
<td>Highbush blueberry</td>
<td>Requires full sun, high yield</td>
<td>5-ft</td>
<td>Perennial</td>
<td>Moderate</td>
<td>Rapid</td>
<td>Fruit production</td>
<td>*</td>
</tr>
<tr>
<td>Viburnum opulus</td>
<td>Crampbark viburnum</td>
<td>Requires partial shade, attracts birds</td>
<td>8-ft</td>
<td>Shrub</td>
<td>Moderate</td>
<td>Slow</td>
<td>Border, ornamental</td>
<td>*</td>
</tr>
<tr>
<td>Spiraea japonica</td>
<td>Shrubby spirea</td>
<td>Requires full sun, easy to grow</td>
<td>6-ft</td>
<td>Shrub</td>
<td>Moderate</td>
<td>Slow</td>
<td>Border, cut flowers</td>
<td>*</td>
</tr>
</tbody>
</table>

*Introduced plant

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Harness the power of grasses and sedges.  
1-800-203-6590  buffumnursery.com
## CAREX COMPARISON CHART

<table>
<thead>
<tr>
<th>Carex</th>
<th>Range</th>
<th>Blade Width</th>
<th>Zone</th>
<th>Reed Habit</th>
<th>Code</th>
<th>Characteristics/Habit</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. amplexicaulis</td>
<td>1.5' - 3'</td>
<td>Fine</td>
<td>5-9</td>
<td>Green</td>
<td>Bunching habit, widely adaptable</td>
<td></td>
</tr>
<tr>
<td>C. appalachica</td>
<td>1' - 3'</td>
<td>Fine</td>
<td>3-8</td>
<td>Green</td>
<td>Similar to C. sempervirens but has bunching habit</td>
<td></td>
</tr>
<tr>
<td>C. dickii</td>
<td>3' - 3'</td>
<td>Medium</td>
<td>7-9</td>
<td>Green</td>
<td>Bunching habit, very tolerant of dry sites than other Carex</td>
<td></td>
</tr>
<tr>
<td>C. echinata ‘Red Rondelle’</td>
<td>2' - 3'</td>
<td>Medium</td>
<td>7-9</td>
<td>Copper-bronze</td>
<td>Bunching, upright habit with arching foliage</td>
<td></td>
</tr>
<tr>
<td>C. eruciformis</td>
<td>1.5' - 6'</td>
<td>Medium</td>
<td>9-9</td>
<td>Green</td>
<td>Bunching, spreads via rhizomes, resists heavy frost, mostly evergreen</td>
<td></td>
</tr>
<tr>
<td>C. foliosissima</td>
<td>4' - 4'</td>
<td>Medium</td>
<td>9-9</td>
<td>Green</td>
<td>Bunching, with short rhizomes, showy seed heads similar to C. arvensis, blue-green</td>
<td></td>
</tr>
<tr>
<td>C. nebraskensis</td>
<td>4' - 4'</td>
<td>Medium</td>
<td>9-9</td>
<td>Green</td>
<td>Bunching, resists oven to form colonies, hanging seed heads</td>
<td></td>
</tr>
<tr>
<td>C. platyphylla</td>
<td>1.5' - 5'</td>
<td>Medium</td>
<td>9-9</td>
<td>Green</td>
<td>Bunching habit, performs well under shade trees, widely adaptable</td>
<td></td>
</tr>
<tr>
<td>C. tussilaginea ‘Kaga Nishiki’</td>
<td>1' - 5'</td>
<td>Medium</td>
<td>9-9</td>
<td>Green</td>
<td>Bunching habit, needs moist soil in sun</td>
<td></td>
</tr>
<tr>
<td>C. alpina</td>
<td>1' - 2'</td>
<td>Medium</td>
<td>6-9</td>
<td>Green</td>
<td>Slowly rhizomatous, will spread lightly, takes drier conditions than shade</td>
<td></td>
</tr>
<tr>
<td>C. eburnea ‘Aurea’</td>
<td>2' - 5'</td>
<td>Medium</td>
<td>3'</td>
<td>Green-gold variegated</td>
<td>Bunching habit, thrives in up to 3' of water</td>
<td></td>
</tr>
<tr>
<td>C. acutata ‘Blue Zinger’</td>
<td>10' - 2'</td>
<td>Medium</td>
<td>4-8</td>
<td>Blue gray</td>
<td>Somewhat bunching; forms colonies via rhizomes, more upright than species</td>
<td></td>
</tr>
<tr>
<td>C. acutata ‘Blue Zinger’</td>
<td>1' - 4'</td>
<td>Medium</td>
<td>4-8</td>
<td>Blue-green</td>
<td>Forms colonies via rhizomes, more upright than species</td>
<td></td>
</tr>
</tbody>
</table>

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**North American Native**

**We grow good grass!**

{[Sam Hall Nursery](https://www.samhallnursery.com)}

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shannoncurrey@hoffmannursery.com

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