GRASSES, SEDGES AND RUSHES: An Introduction

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SJRWMID
Graminoids

• Includes the grass and grass-like plants:
  • Poaceae (Grasses)
  • Juncaceae (Rushes)
  • Cyperaceae (Sedges)

• Herbaceous plants with long, narrow, linear leaves
• Diminutive parts
• Specialized terminology
• Superficially similar
Florida Graminoids

- Account for almost 16% of all species
- 15% of all exotic species
- 14% of all FLEPCC Cat 1 Species
- 12% of Cat 2 Species
- Graminoids are present in every community type and are either dominant or an important component in:
  - Marshes
  - Prairies
  - Flatwoods
  - Sandhills
  - Scrub
## Distinguishing Characters

<table>
<thead>
<tr>
<th>Character</th>
<th>Cyperacea</th>
<th>Juncacea</th>
<th>Poacea</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Habitat</strong></td>
<td>Moist to wet areas</td>
<td>Wet areas</td>
<td>Throughout</td>
</tr>
<tr>
<td><strong>Stems</strong></td>
<td>Triangular in cross section</td>
<td>Terete (round)</td>
<td>Terete to ellipsoid</td>
</tr>
<tr>
<td></td>
<td>Internodes solid</td>
<td>Internodes solid</td>
<td>Internodes mostly hollow</td>
</tr>
<tr>
<td></td>
<td>Nodes not jointed</td>
<td>Nodes not jointed</td>
<td>Nodes jointed</td>
</tr>
<tr>
<td><strong>Leaves</strong></td>
<td>3-ranked</td>
<td>3-ranked</td>
<td>2-ranked</td>
</tr>
<tr>
<td></td>
<td>Flat or v-shaped</td>
<td>Blades flat or round</td>
<td>Blades mostly flat</td>
</tr>
<tr>
<td></td>
<td>Sheath closed</td>
<td>Sheath open</td>
<td>Sheath open</td>
</tr>
<tr>
<td><strong>Subtending Bracts</strong></td>
<td>Present, often prominent</td>
<td>Present, but not prominent</td>
<td>No*</td>
</tr>
<tr>
<td><strong>Fruit</strong></td>
<td>Achene</td>
<td>A capsule with many seeds</td>
<td>Caryopsis (grain)</td>
</tr>
</tbody>
</table>
Vegetative Characteristics
Vegetative Characteristics
Sheath and Ligules

Open Sheath (Grasses and Rushes)
Closed Sheath (Sedges)
Ligules (Grasses)
Vegetative Characteristics
The Spikelet

**Grasses**
A floret (palea + lemma) subtended 2 bracts (glumes).

**Sedges**
A floret is contained by a single scale.

**Rushes**
A flower with sepals, petals and 2-6 stamens.
GRASSES

- 446 species
- 120 Genera
- 9 larger genera:
  - Aristida (22)
  - Andropogon (18)
  - Dichanthelium (24)
  - Digitaria (20)
  - Eragrostis (29)
  - Panicum (16)
  - Paspalum (30)
  - Setaria (15)
  - Urochloa (14)
- Many widespread species distributed across most habitats
- Key Characters:
  - Stems have joints
  - Leaves 2-ranked
  - Stems hollow
  - Sheaths open

Joint (Node)  
Blade (parallel venation) often with prominent midvein  
Internode  
Ligule Hairs  
Sheath open (overlapping)
SEDGES
• 276 Species
• 21 Genera
• Four large genera account for almost 80% of all the species:
  • Carex (73)
  • Cyperus (58)
  • Rhynchospora (56)
  • Eleocharis (30)
• Mostly freshwater or brackish wetland habitats
• Several widespread species
  • Cladium jamaicense
  • C. surinamensis, C. polystachyos
  • R. odorata, R. microcarpa

**Key Characters:**
• Trigonal stems (cross section)
• Inflorescence subtended by bracts
• Three-ranked
• Leaves v- or w-shaped (cross section)
Spike

Involucre (bracts subtending the inflorescence)

Peduncle

Rachis

Culm

Involucre (bracts subtending the inflorescence)
• 24 Species
• 2 Genera
  • Juncus (22)
  • Luzula (2)
• Mostly freshwater wetland species
• Several species are very common throughout the state:
  • Juncus roemerianus
  • Juncus effusus
  • Juncus megacephalus
  • Juncus marginatus

**RUSHES**

**Key Characters:**
• Round stems
• Closed sheath
• Capsule with many seeds

*Figure 3: Juncus genera. 1-4. Inflorescence type. 1. Head-like (globose); 2, 3, 4. Open panicle. 5-8. Capsules. 5,6. Long, tapering to the apex. 7,8 Abruptly pointed or with short-tapered tip. 9-10. Achenes.*
Bracts subtending the inflorescence (not prominent)

Inflorescence (head-like cluster of capsules)

Peduncle

Culm
Bibliography and Web Resources

Bradford, J. and Rogers, G. Grasses and Sedges of Palm Beach and Martin Counties. www.floridagrasses.org


Institute for regional Conservation http://regionalconservation.org/

Flora of North America http://floranorthamerica.org/

Fairchild Botanical Garden Herbarium http://www.virtualherbarium.org/

Grass Manual on the Web http://herbarium.usu.edu/webmanual/

Grasses and Sedges of Palm Beach and Martin Counties www.floridagrasses.org
Photographs and Illustration Credits:

Photographs:

Erick Revuelta; (Juncus effusus), southalabamawildflowers.weebly.com (Juncus polycephalus)

Illustrations:


