

# THE ROADSIDE VEG SURVEY: GUIDING COUNTY PROGRAMS AND SEEING THE BIGGER ECOLOGICAL PICTURE

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LELAND SEARLES  
OWNER & CONSULTANT  
LEEWARD SOLUTIONS, LLC



# THE DITCHES OF MARION COUNTY STARRING *CLINT & MERYL* (??)

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## AFTER ONE & TWO-FIFTHS COUNTIES...

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- MARION COUNTY, May to July 2016
  - 313 Total Species, 230 native Iowa species (74%)
- SCOTT COUNTY, July to September 2016, paved roads only to date
  - 270 Total Species, 180 native Iowa species (66.7%)
- *These two counties each have approximately 10% of Iowa's native vascular plants growing in their ditches!!!!*

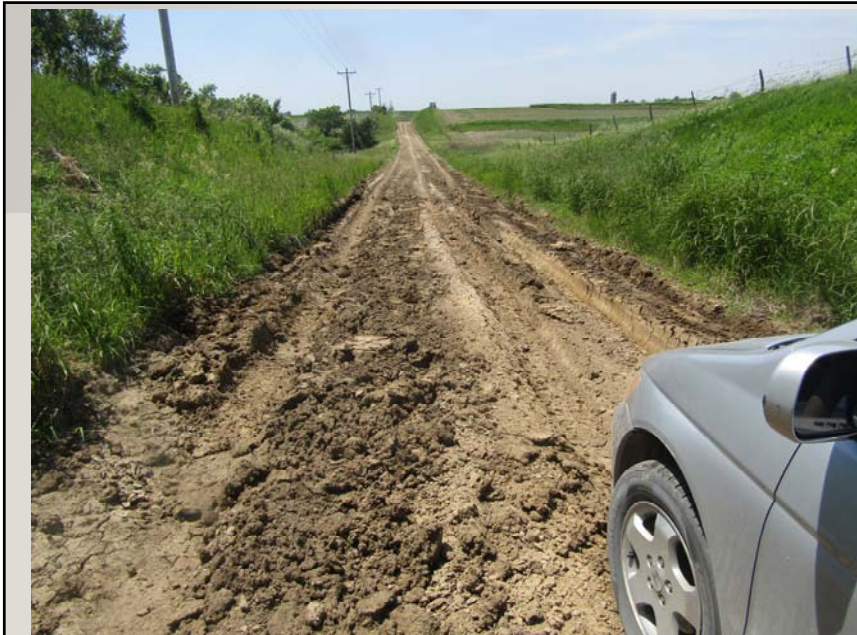
## ... AND GROWING UP IN ANOTHER...

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- My home county: Decatur
  - No idea!! Probably high diversity, based on experience from early 1990s and late 1970s
  - T. Rosburg, summarized in presentation, March 2016, for the Raccoon River Watershed Assoc.
    - One to more than five species scattered in pastures, Decatur & Ringgold Counties (Iowa) & northern Harrison

## ... LEADS TO A TENTATIVE CONCLUSION.

- Native plant biodiversity is relatively high in at least some Iowa county secondary road systems, apart from the IRVM program.
  - Discrete remnant points: prairie, savannah, wetland, & woodland
    - Greater than 5 and up to 30 species
  - Many road segments with one to three very common native species
    - Common Milkweed
    - Tall Goldenrod
    - Jerusalem Artichoke
  - Occasional road segments with 2 to 5 species, varying by ecosystem & other factors
    - Includes relatively rare species



### MARION COUNTY

Jewel Drive, B maintenance level

Northwest of Knoxville, looking West from 75th Ave.

Far west end: high-quality mesic to wet prairie remnant, both sides

South side: 18 species

North side: 14 species

Total Species: 29 species

Prairie Cordgrass, Dark-Green Bulrush, Crested Sedge, Hoary Vervain, Short's Sedge, Allegheny Blackberry, Jerusalem Artichoke, Round-Headed Bush Clover, Little Bluestem, American Germander, Scribner's Panic Grass, Stiff Goldenrod, Hemp Dogbane, Eastern Star Sedge, Heavy Sedge, Woolgrass, Fowl Manna Grass, Pale Dock, Smooth Solomon's Seal, Smooth Rose, Fox Sedge, Shortbeak Sedge, Giant Goldenrod, Tall Goldenrod, Wild Bergamot, Big Bluestem, Path Rush, Red-Footed Spike Rush, Indiangrass





MARION & SCOTT COUNTIES

Numerous locations

Wet ditches, often with cattails or other tall wetland fringe plants

Fringed Loosestrife (*Lysimachia ciliata*)



SCOTT COUNTY

Many ditches

Small to large patches of Tall Dropseed (*Sporobolus asper*)





### SCOTT COUNTY

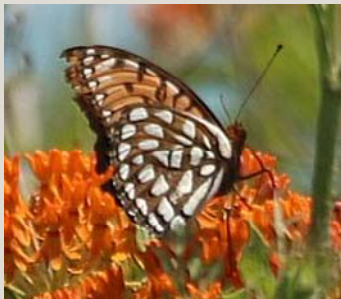
287<sup>th</sup> St, east of Utica Ridge Rd

Wetland fringe plant community

Great Blue Lobelia  
Smooth Scouring-Rush  
Wild Bergamot  
Riverbank Grape  
Gray Dogwood (planted/escaped)  
others

## THE ISSUE: ROADSIDE MANAGEMENT WITH GOOD PLANT DIVERSITY

- Problem 1: common native plant species that could be sacrificed, but...
  - Example: Orange Milkweed (Butterflyweed), hosting the Iowa Endangered species, Regal Fritillary



LEFT: The endangered Regal Fritillary (*Speyeria idaea*) on Orange Milkweed (*Asclepias tuberosa*) in Marion County.

Note the very large silver-white spots on the hind wing.

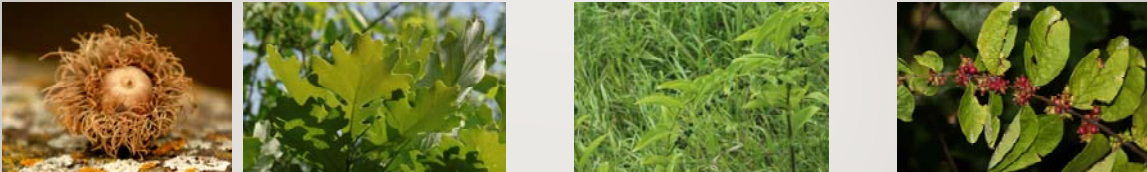
RIGHT: The more common Great Spangled Fritillary (*Speyeria cybele*) for comparison.







- Problem 2: recognizing less common remnant plant communities & individual species
  - Indicator species: learn a few key forb & grass species that indicate or suggest a remnant
  - Shallow wetlands, wetland fringes, & wet prairies
    - Sedges: Fox Sedge (*Carex vulpinoidea*), above far left. Inflated Longbeak Sedge (*Carex vesicaria*), above left. Eastern Star Sedge (*Carex radiata*), center left. Crested Sedge (*Carex cristatella*), center right. Short's Sedge (*Carex shortiana*), above right. Heavy Sedge (*Carex gravida*), above far right.
    - Great Blue Lobelia (*Lobelia siphilitica*)
    - Jerusalem Artichoke (*Helianthus tuberosus*)
    - Sawtooth Sunflower (*Helianthus grosseserratus*)
    - And others: probably 40-75 plants commonly found in a field guide such as Newcomb's Wildflower Guide, plus common grasses and sedges



- Problem 2, continued
  - Savannahs: prairie & open woods with scattered trees & shrubs
    - Bur Oak: THE classic savannah tree species
    - In southern Marion County, Shingle Oak (*Quercus imbricaria*)
    - Smooth Solomon's-Seal (*Polygonatum biflorum*)
    - Buckbrush or Coralberry (*Symphoricarpos orbiculatum*)
    - Wild Plum (*Prunus americana*), "prairie" roses (*Rosa blanda*, *R. arkansana*, *R. carolinense*)
    - Smooth & Staghorn Sumacs (*Rhus glabra*, *R. typhina*)



- Problem 2, continued
  - Prairies: dry (xeric) on uplands, mesic (moderate soil moisture) on uplands & slopes, wet on low slopes, stream terraces
    - Dry prairies: nearly all gone because of cropping. Uplands, upper slopes. Includes many typical “tallgrass” species
    - Mesic prairies: some remaining remnants & plants in roadsides. Uplands, slopes. Many are mid-height & short species.
    - Wet prairies: somewhat more common because of pasturing & “waste” ground. Low slopes, stream terraces.
    - Indicators: Big Bluestem, Little Bluestem, Indiangrass, Scribner’s Panic Grass, Flowering Spurge, Jerusalem Artichoke, Giant Goldenrod, Sawtooth Sunflower, Tall Dropseed, Wirestem Muhly, Prairie Sage, others
    - NOTE: some common species aren’t good indicators: Common Milkweed, Tall Goldenrod, Field Thistle. Also avoid species in planting mixes as indicators: Wild Bergamot, Black-Eyed Susan, Switchgrass, Sideoats Grama,

- Problem 3: recording locations
  - GPS locations accurate to under 30 in. preferable for later relocation
  - County GIS mapping of remnant locations
  - GIS department: if an ArcGIS shop, use ESRI Collector software on a tablet. Program Collector with:
    - Road segments,
    - Capability for data point capture
    - Expectable species list
    - Data fields for: multiple species (three-tiered dominance), plant communities, invasive species, invasive communities, woody growth (ranked severity), encroachments, erosion (ranked severity)
    - Scott County

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- Problem 4: erosion, encroachments, & woody growth
    - Erosion in identified remnant locations should be controlled with care
      - Use natural restoration methods if possible
    - Landowner & resident encroachments should be addressed with an attempt to inform
    - Spraying for invasives & woody growth: target only the invasives or woody species, if practical
      - Some invasives such as plumegrass (*Miscanthus*) crowd out almost all other plants
      - Other invasives such as hybrid & narrow-leaved cattail (*Typha latifolia* & *T. x glauca*) do not discourage native species such as Blue Vervain, Fringed Loosestrife, Spotted Joepyweed, Tall Boneset, and others
      - Avoid spraying near standing water: chemical transport, toxic to less common aquatic plants

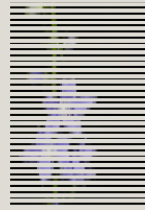
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- Problem 5: locating IRVM plantings away from remnants & conservative species in roadsides
    - Again, good GPS data & GIS mapping needed
    - County vegetation manager & replanting crews need to be alert to locations
    - Augment some remnants with interseeding (broadcasting) but:
      - Avoid Switchgrass (*Panicum virgatum*) and Tall and Giant Goldenrod (*Solidago altissimus*, *S. gigantea*) because they can overwhelm shorter vegetation, including rarer species
    - Be aware that many surviving native species are short- to mid-height species, not tallgrass species.



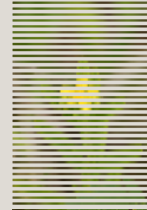


LEFT: Flowering Spurge,  
Tapered Rosette  
Grass, Sawtooth Sunflower

- Good news: these plants & remnants have survived 50 years of chemical agriculture & roadside management!
  - With some effort at careful management, they should survive
  - Efforts by county employees, undergraduate & high school students, volunteers to further document, aid in protection, & collect & distribute seed



LEFT: Panicked Tick-  
Trefoil, Prairie  
Coreopsis, Pitcher's  
Clematis, American  
Bellflower. RIGHT:  
Pale St. John's-wort.



## QUESTIONS? TESTIMONIES? FUNNY STORIES?

- Dirty jokes? (I didn't ask for those. Really.)