

# Biodiversity in Everyday Settings

## What about St. Louis?

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Photo 3. Taken in an open area.



Photo 4. Taken near an open area.

# North City

<http://www.builtstlouis.net/northside/>



- Majority of residents are Black
- Low median income
- Abandoned buildings
- Vacant lots
- Few jobs
- No grocery stores, few services

# North City



- Largest amount of open space in city
- Important cultural institutions: O'Fallon Park, Calvary Cemetery, Bissell Mansion
- Stable neighborhoods
- Strong institutions: Grace Hill, Freidens Church, Matthew Dickey Boys and Girls Club

# Birds in North City MU and Grace Hill 1997-1999

- How could MU researchers serve their needs?
  - Ecological value of open spaces in North City
  - Recommend management
  - Link to people



# Breeding Birds and Bird Habitats in North City 1998 / 1999



- Description and classification of open spaces in North City study area
- Breeding bird survey of habitat types
- Identified important habitat types
- Identified species for monitoring



- # Bird count
- Buff66\_20
- Study area\_hab
- IIB1b2
- IIB2a
- IIB2a1
- IIB2a2
- IIB2a3
- IIB2b1c
- IIB2c1c
- IIB1c
- IIB2a2
- IIB2a3
- IIBc
- III
- IIIA1
- IIIB1a
- IIIB1b
- IV3a2
- IVA2a
- IVA2b
- IVA2c
- IVA2d
- IVA2e
- IVA2f
- IVA2g
- IVA2i
- IVA3a4
- IVB1c
- Unknown
- Urban
- VD
- VE

# Bird Counts

## May-June 1998 and 1999



Jeff Azerrad – MU Grad  
Student

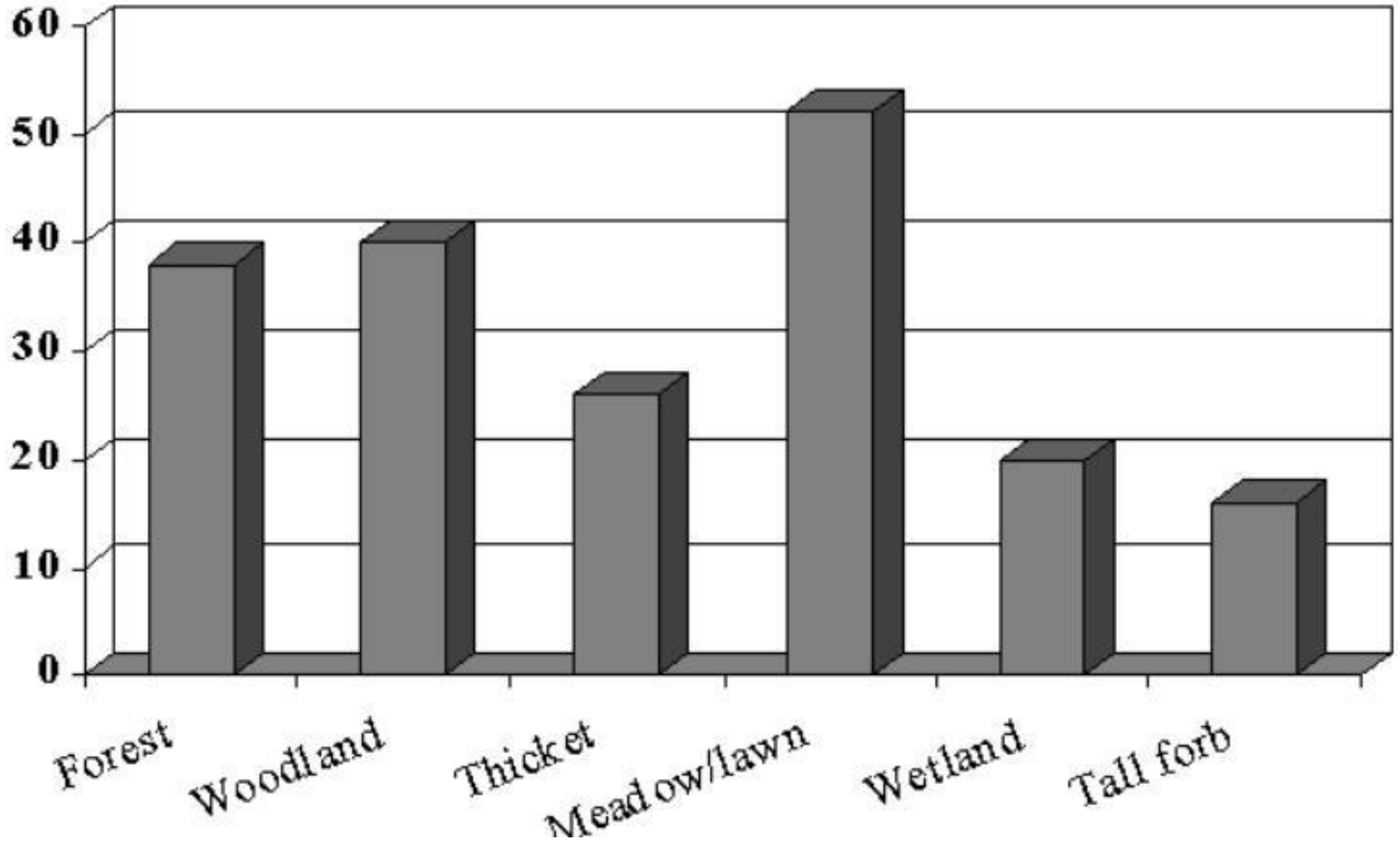
40 bird census points

6 counts per year

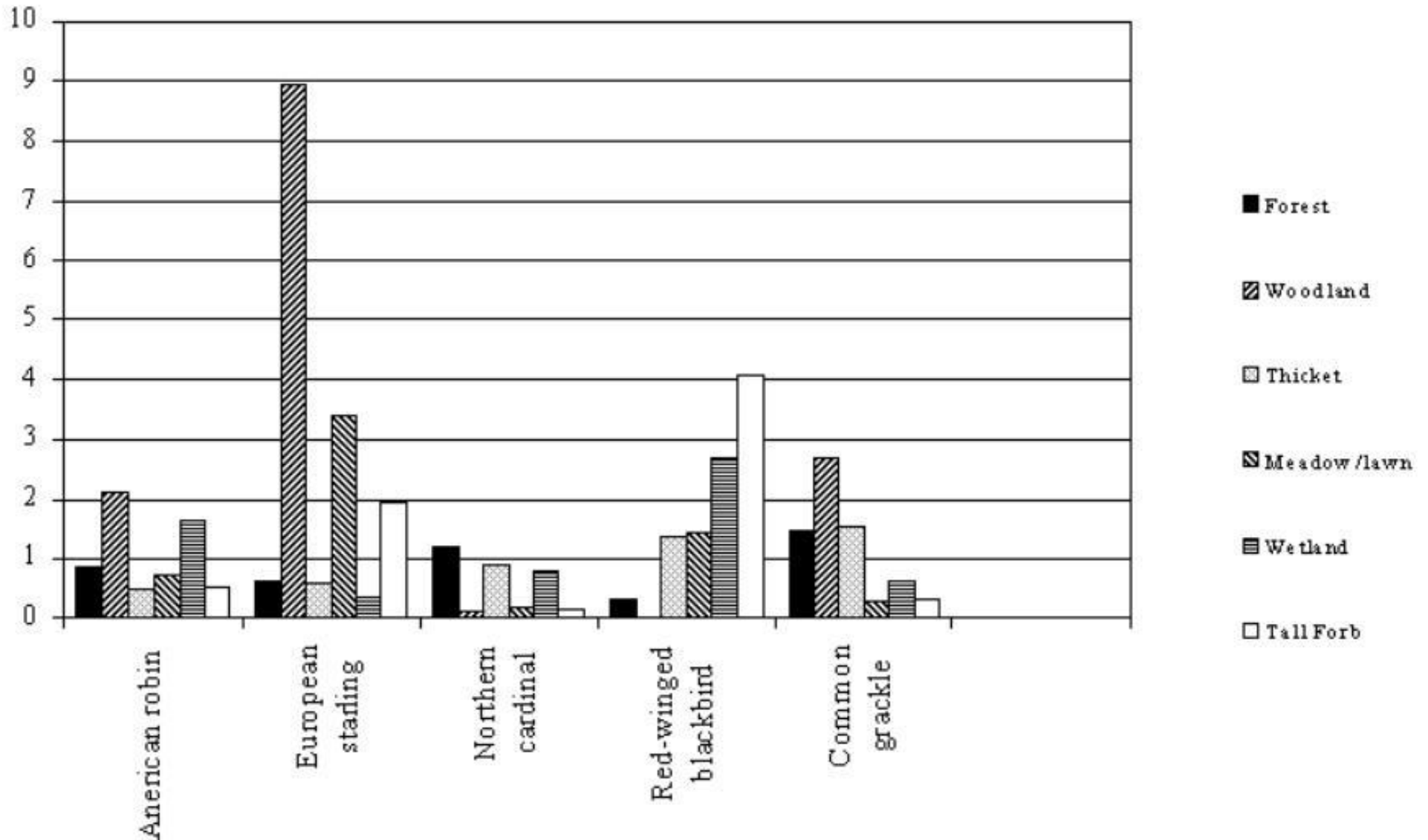
68 species



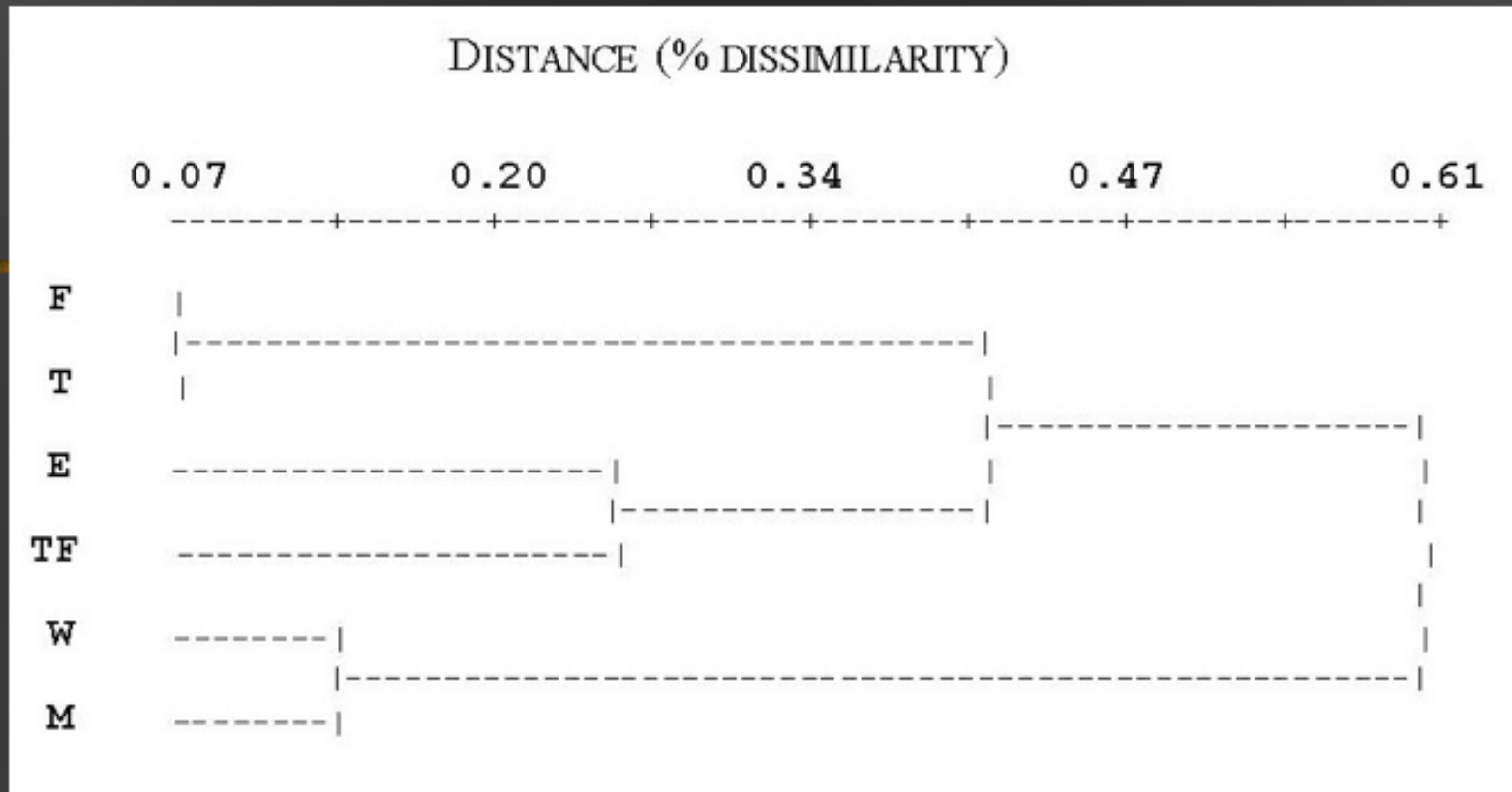
# Number of Bird Species by Habitat



# Number /Count of Most Common Species



# Woodland and Meadow / Lawn Habitats with Unique Birds



Cluster analyses of 67 bird species by habitat type. Habitat types are abbreviated as: Forest (F), Woodland (W), Thicket (T), Meadow/lawn (M), Emergent wetland (E), and Tall/perennial forb (TF).

# Important Habitats (Places Birds Use)



## Open Woodlands

Large contiguous block of park and cemeteries

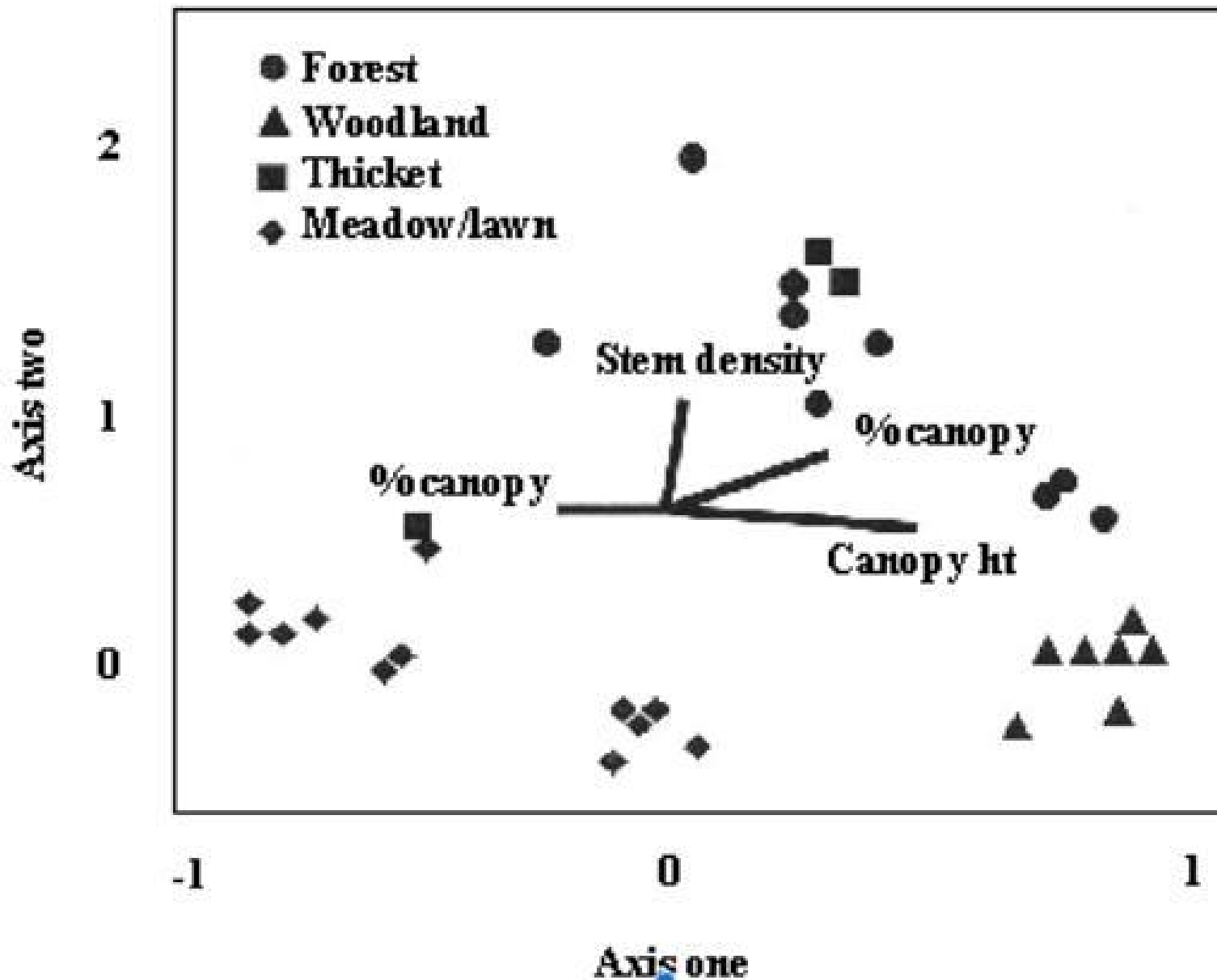
## Grasslands

Lawns / meadows in parks and cemeteries

Mix of remnant prairie (upland sites); areas protected from mowing (adjacent to trail); and ruderal sites (fill, etc.)



# Important Habitat Features (What Birds Use / Respond To)



# Bird Species Associated with Specific Habitats

- Carolina Chickadee - Forest
- Downy Woodpecker – Forest and Woodland
- American Crow – Forest and Woodland
- Warbling Vireo – Forest and Shrub Thicket
- Northern Cardinal – Forest and Shrub Thicket
- Red-Headed Woodpecker – Meadow/Lawn

# Species for Monitoring (Does Management Work?)



# What about Neighborhoods?

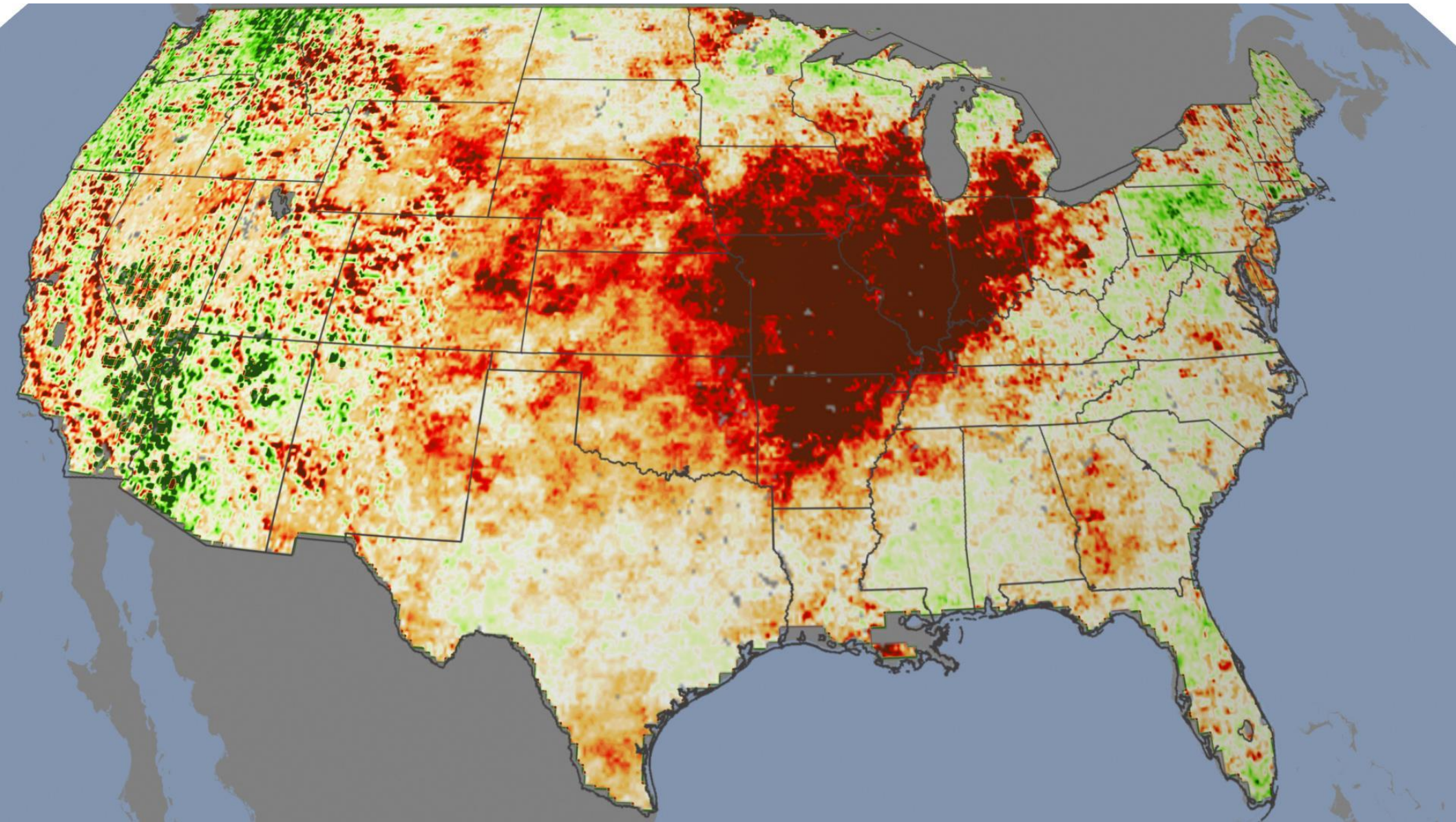




# The Missouri Transect: Climate, Plants, and Community Participants



# The Missouri Transect: Climate, Plants, and Community



Evaporative Stress Index Summer2012

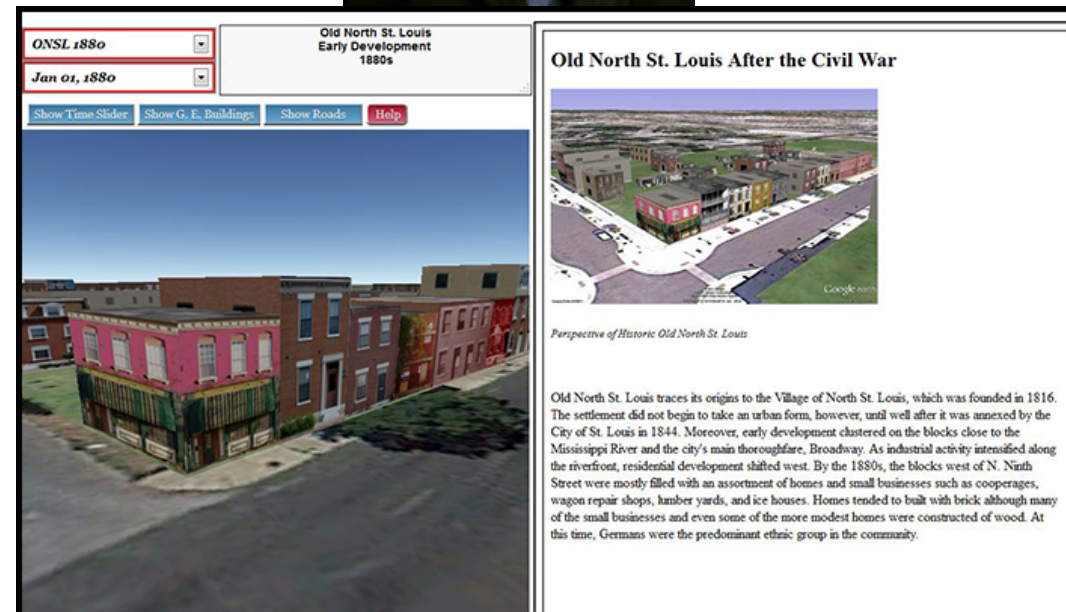
[www.nasa.gov/topics/earth/features/plant-stress.html](http://www.nasa.gov/topics/earth/features/plant-stress.html)

# Resiliency to Climate Change

- **Residents and Institutions in Cities**
- Local Governments and Planners
- **Residents as Land Managers**
- State Lands and their Users

# Historical Research: Resiliency in Cities (A. Hurley, UMSL)

- Improve adaptive capacity among St. Louis communities through historically-informed planning
- Integrate historical research / analysis into public discussion of local climate change impacts and



## Old North St. Louis After the Civil War

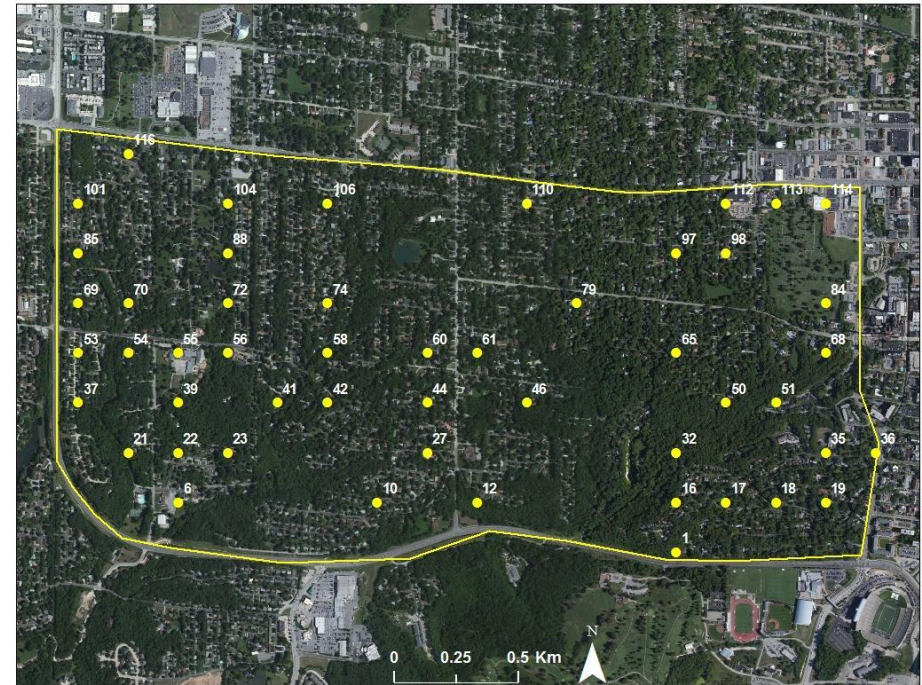


Perspective of Historic Old North St. Louis

Old North St. Louis traces its origins to the Village of North St. Louis, which was founded in 1816. The settlement did not begin to take an urban form, however, until well after it was annexed by the City of St. Louis in 1844. Moreover, early development clustered on the blocks close to the Mississippi River and the city's main thoroughfare, Broadway. As industrial activity intensified along the riverfront, residential development shifted west. By the 1880s, the blocks west of N. Ninth Street were mostly filled with an assortment of homes and small businesses such as cooperages, wagon repair shops, lumber yards, and ice houses. Homes tended to be built with brick although many of the small businesses and even some of the more modest homes were constructed of wood. At this time, Germans were the predominant ethnic group in the community.

# Land Owner Decision Making (C. Nilon and R. Pierce, MU; N. Navarrete-Tindall, LU)

- Assess context for management by studying change in residential land cover in Boone, Cole, and Scott Counties – 1930 – present
- Assess residential land management practices, vegetation and bird



Similar Work in St. Louis?