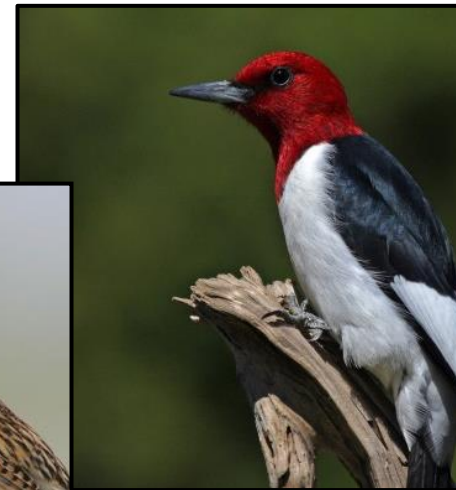


Understanding Grassland Birds



Bill Hogseth, DNR wildlife biologist
WBCI Annual Meeting
Chippewa Falls
March 20, 2015

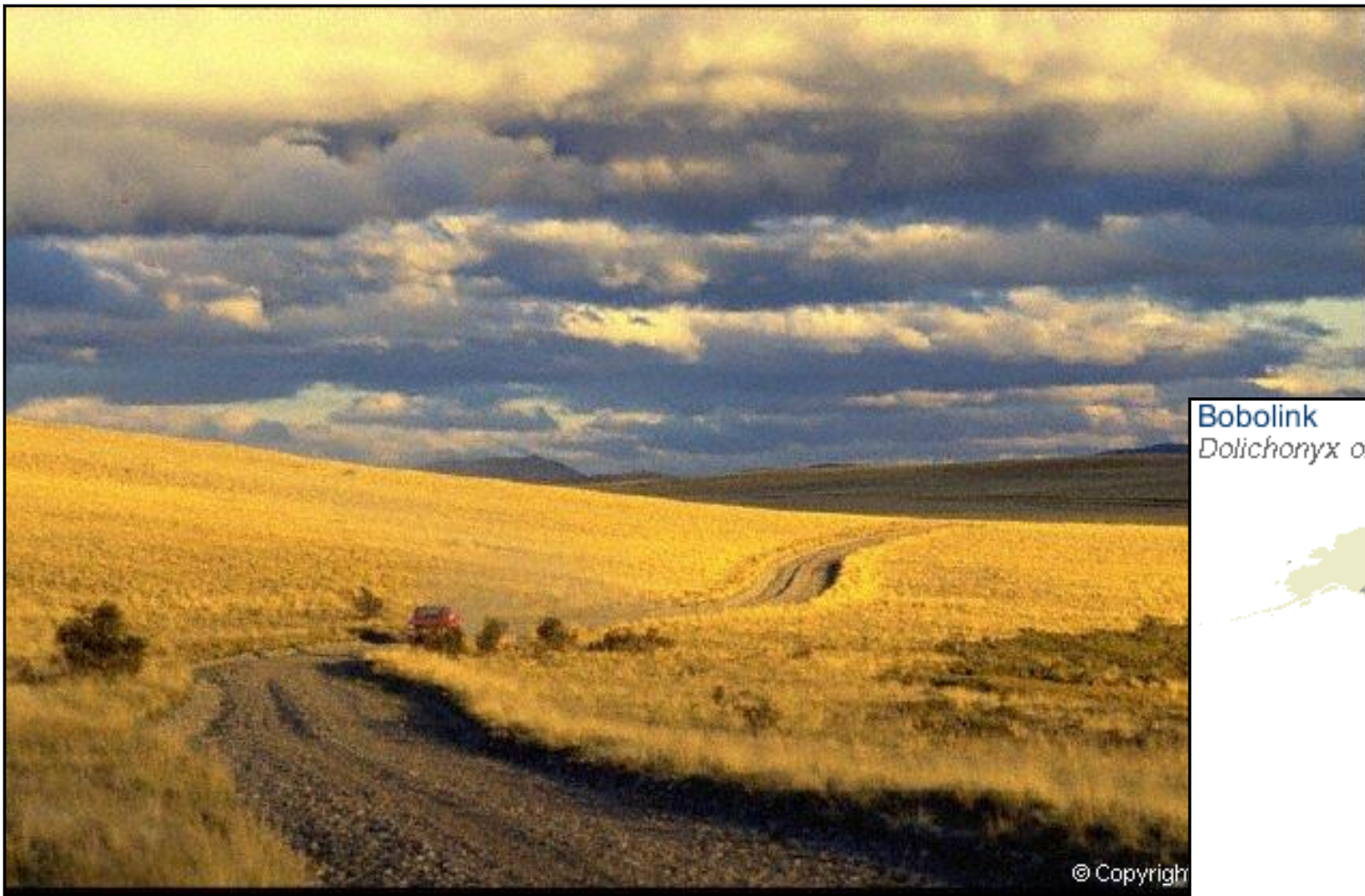
Grassland birds are those species using grassland habitats during the **breeding season** for courtship, nesting, foraging, rearing young, and roosting.



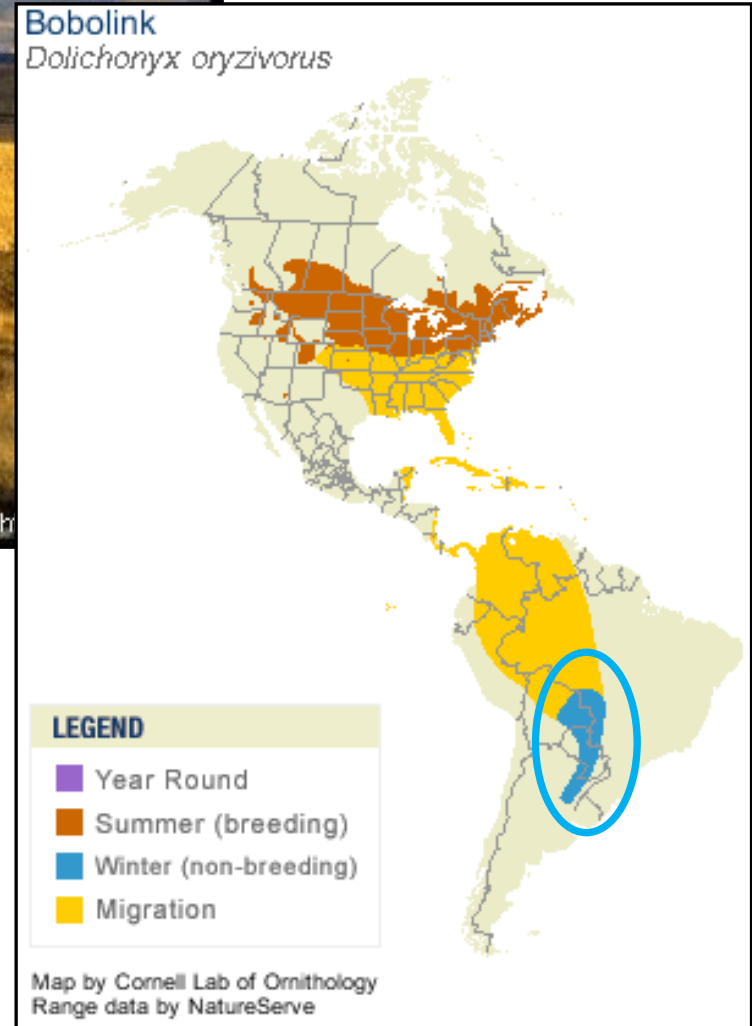
A year in the life of a grassland bird...

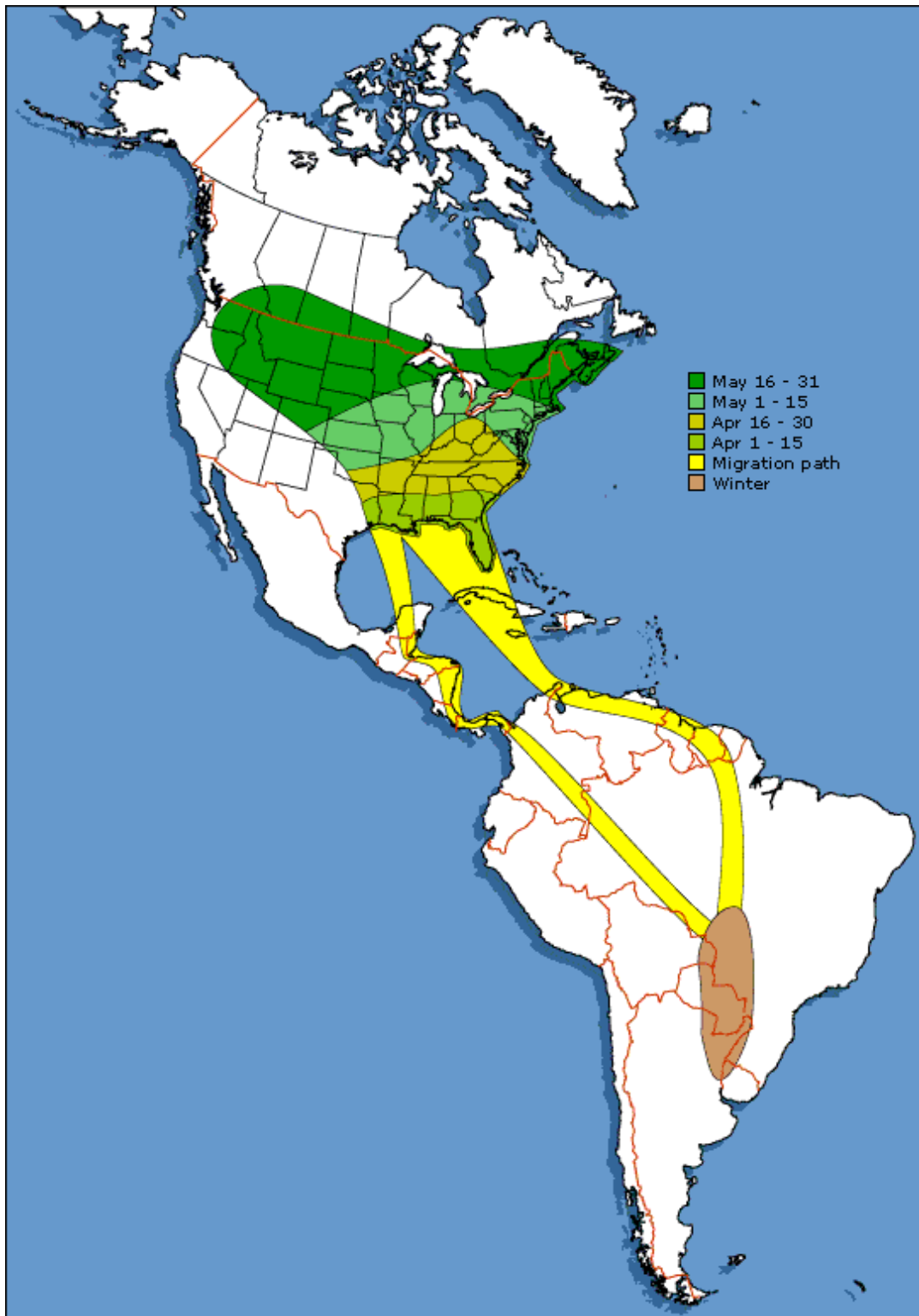


Bobolink



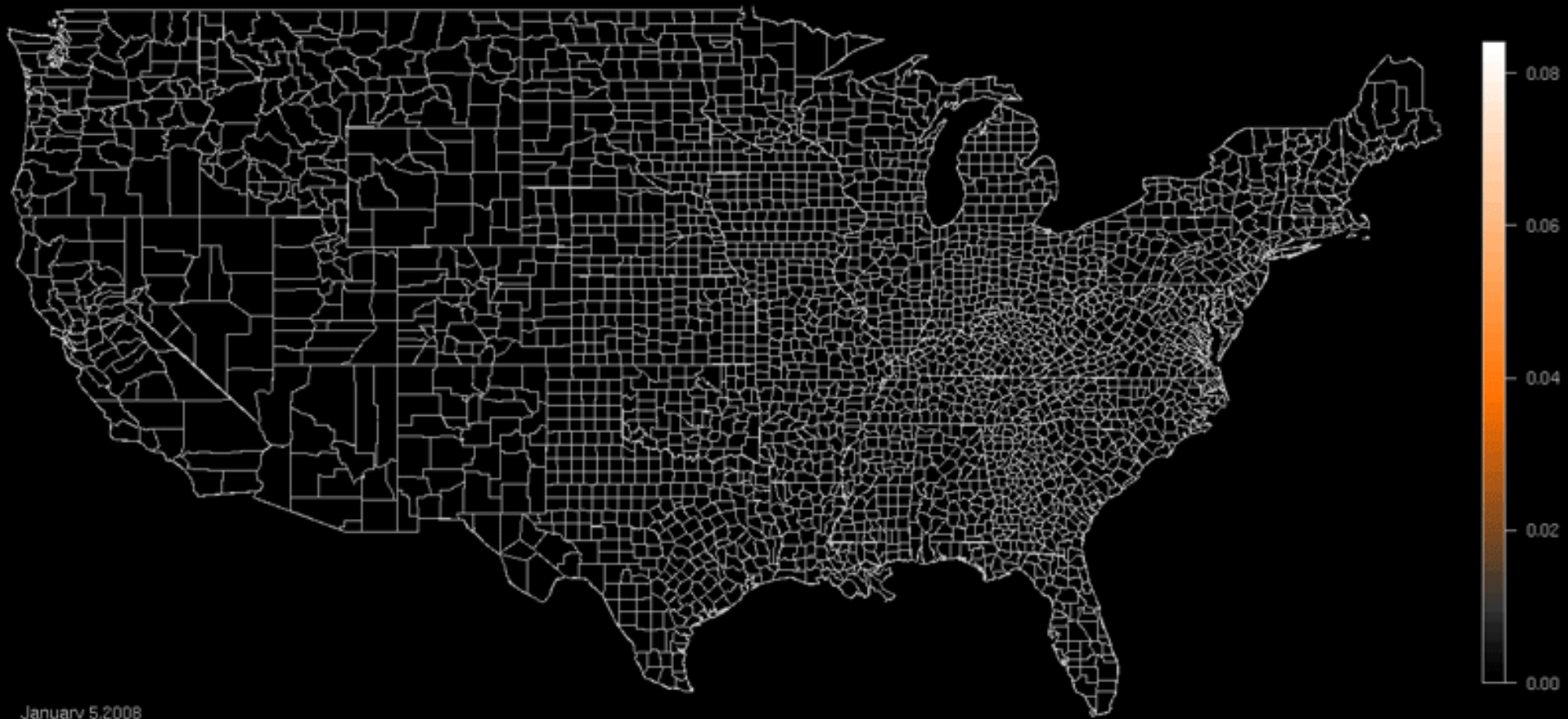
Winter: Argentina & Bolivia





Spring: Northward Migration





Januarv 5.2008



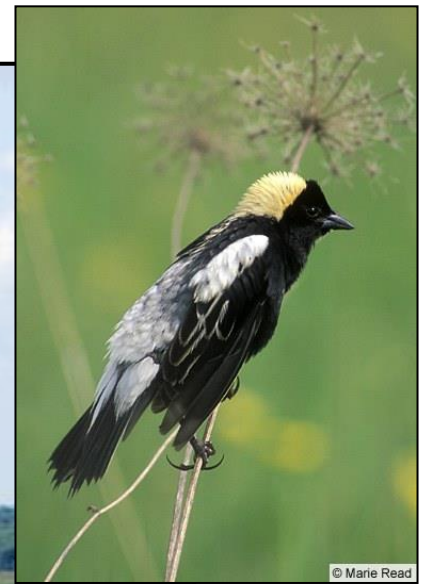
Jan

Apr

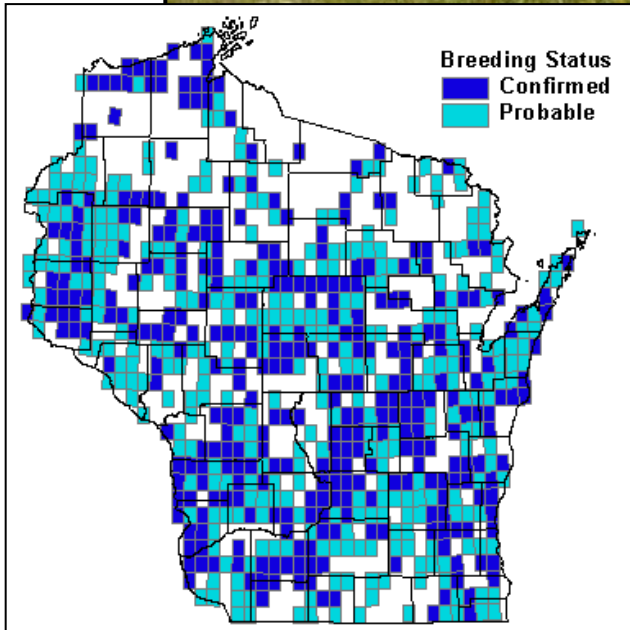
Jun

Sep

Dec

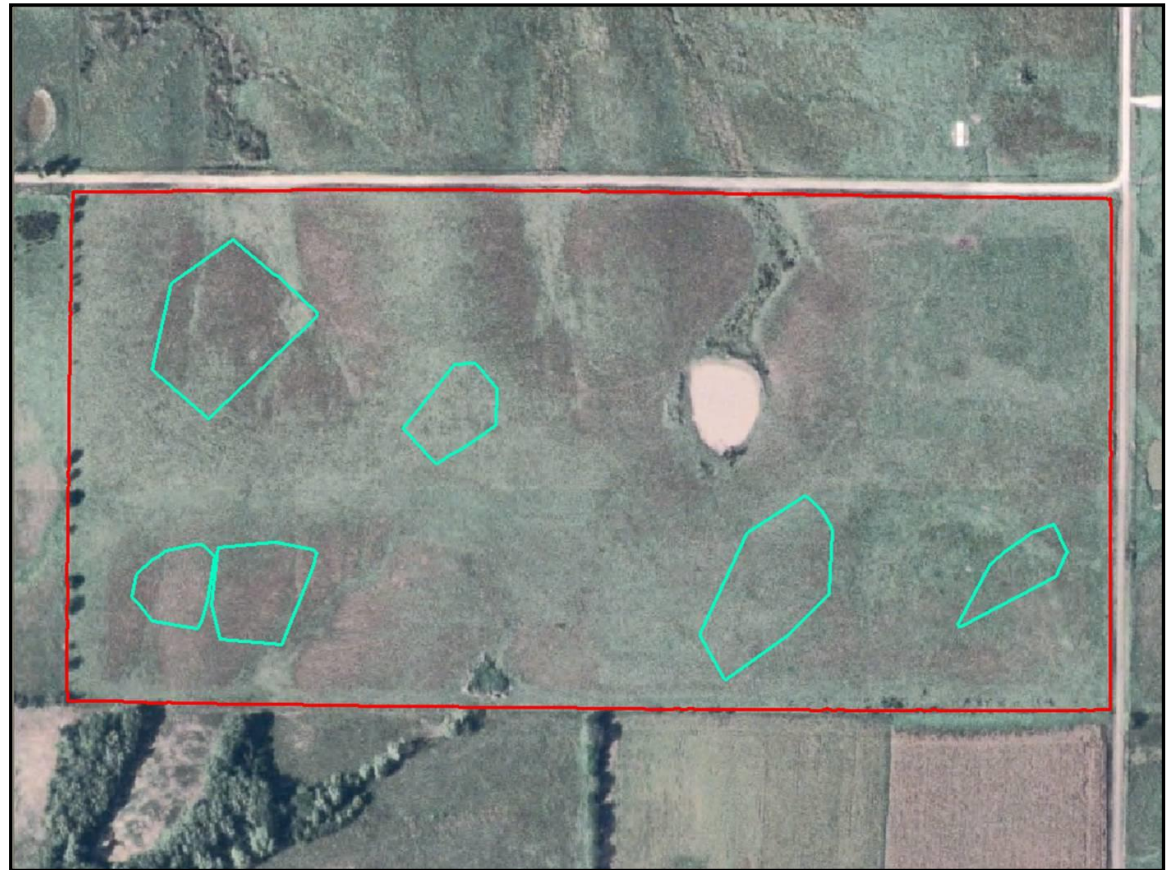


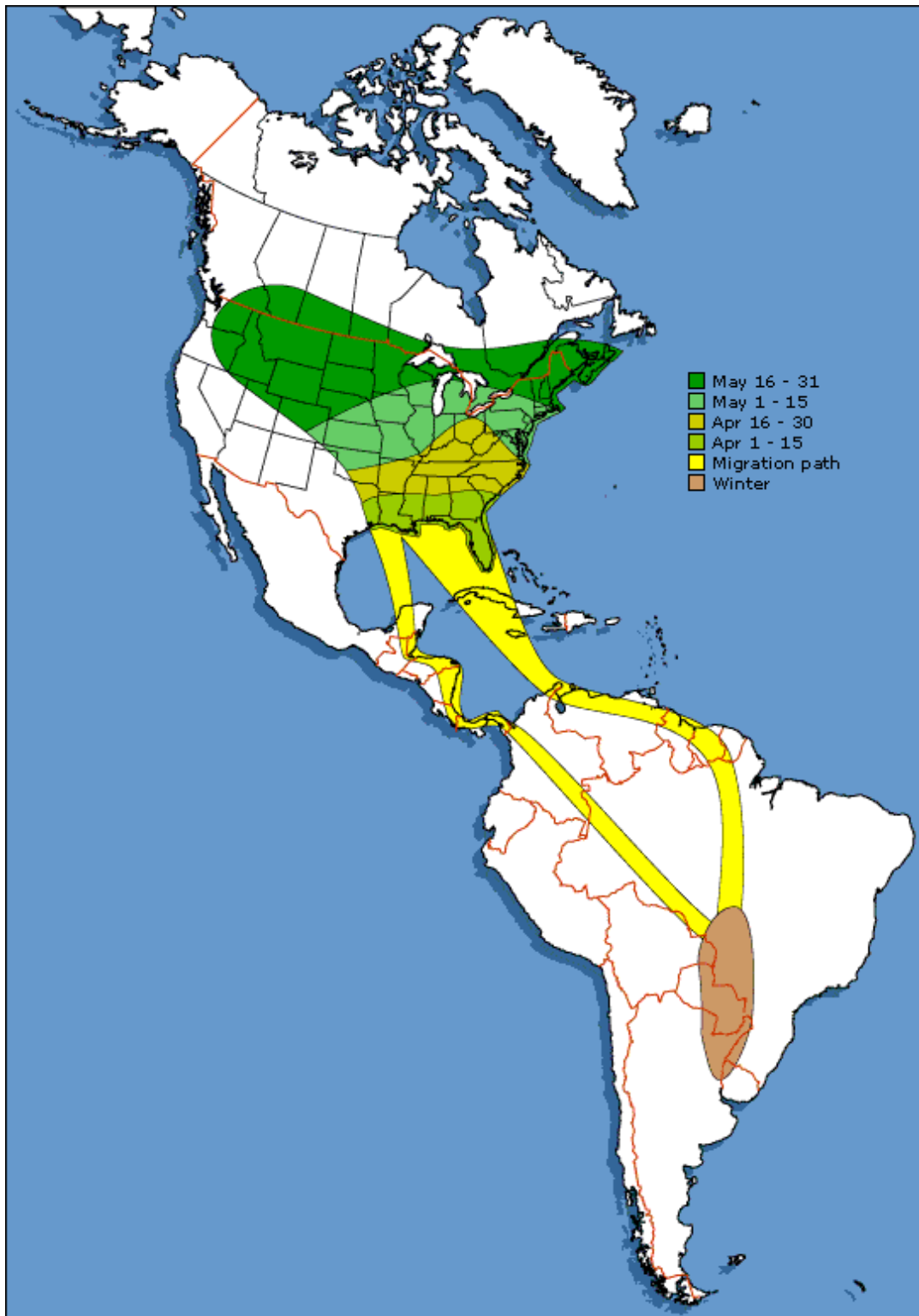
© Marie Read



Summer: Wisconsin

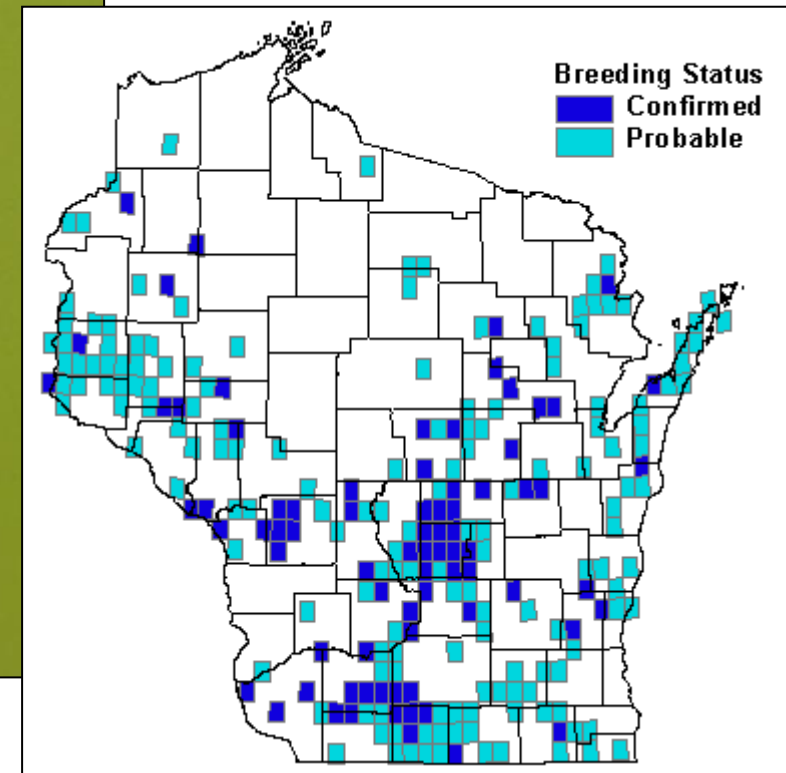
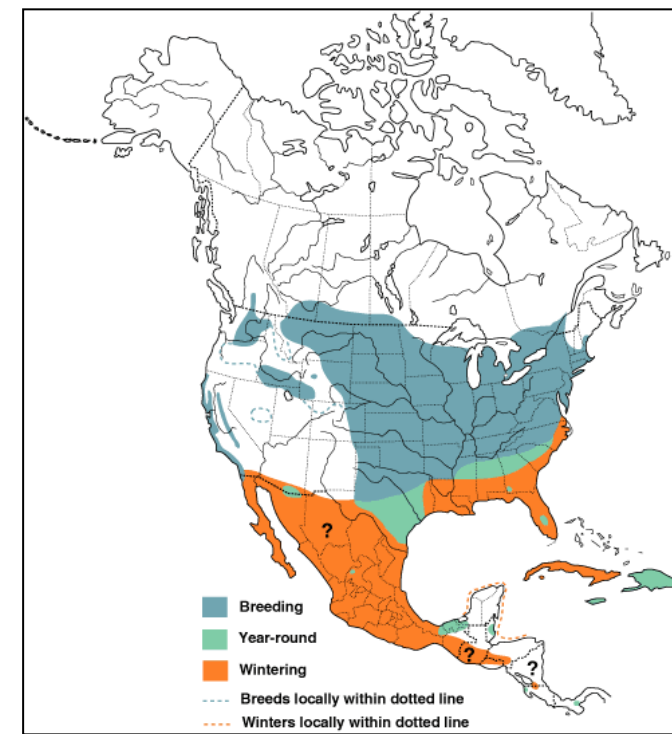






Fall: Southward Migration

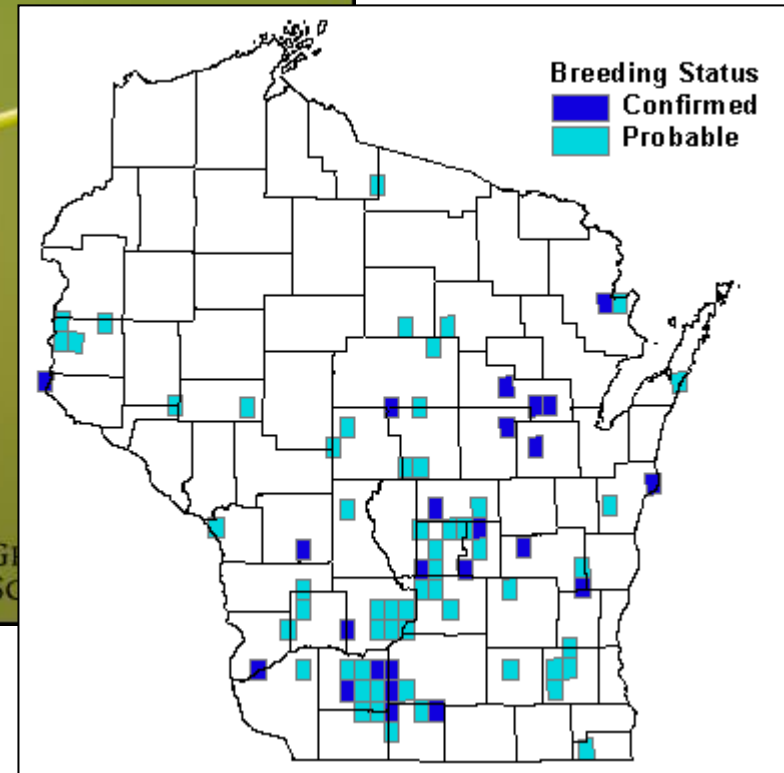
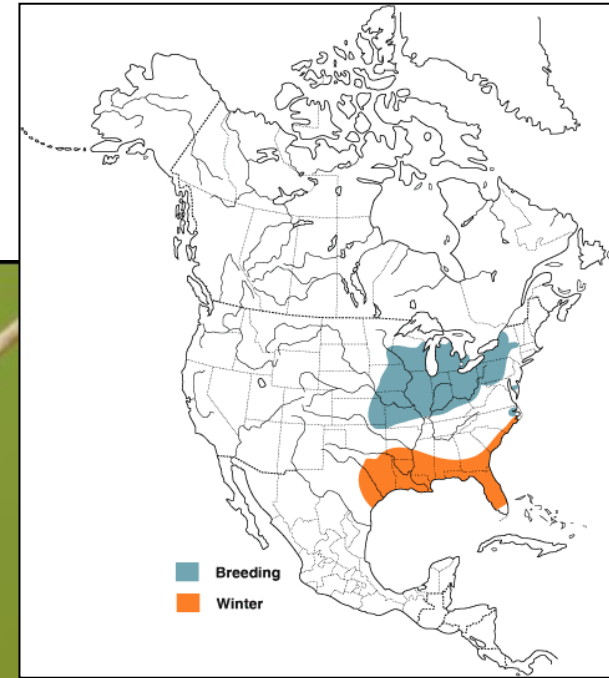
Grasshopper Sparrow



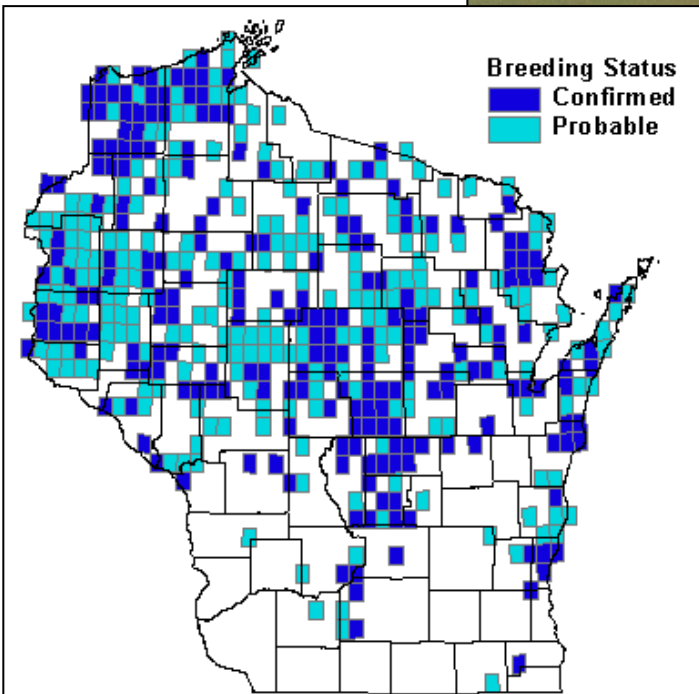
Henslow's Sparrow



© G
WWW.GSC

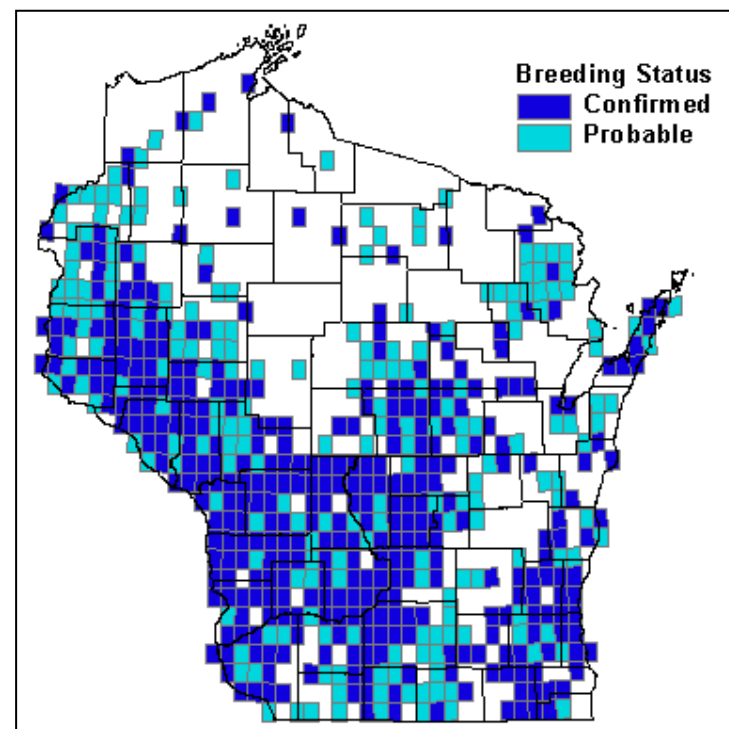
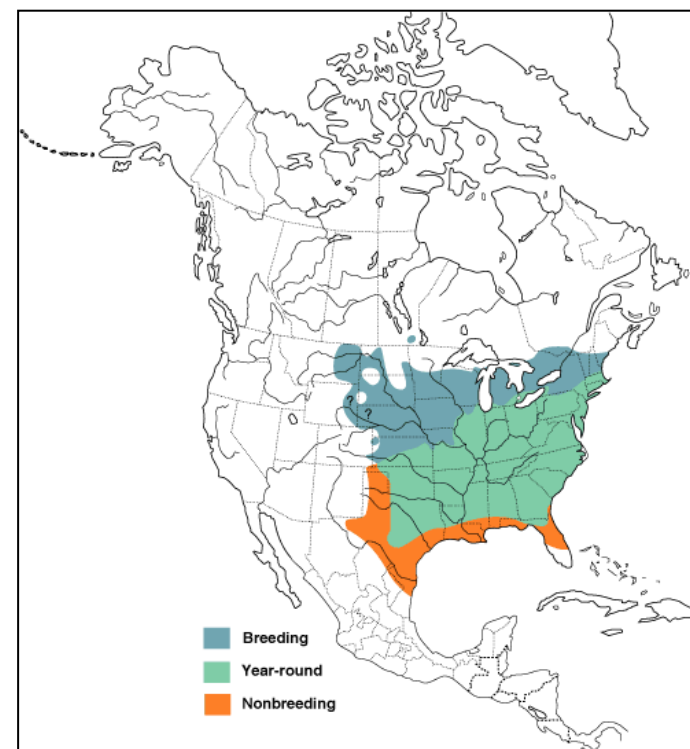


Clay-colored Sparrow

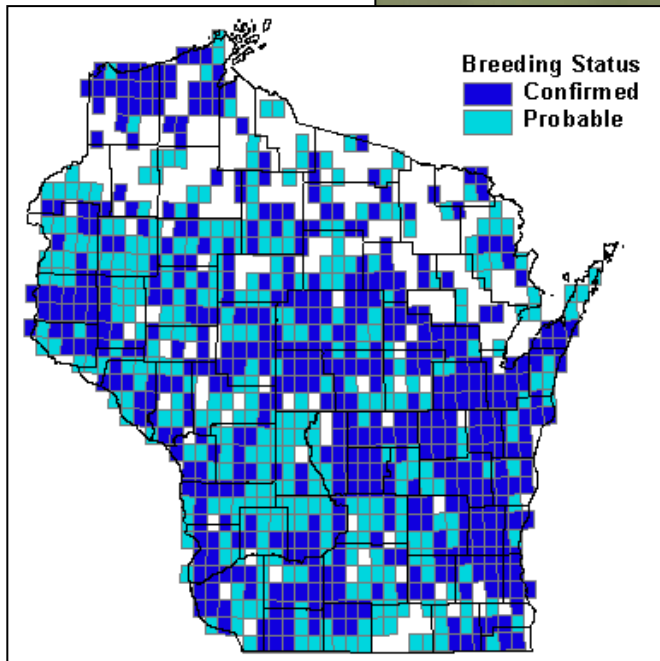


ter 2013

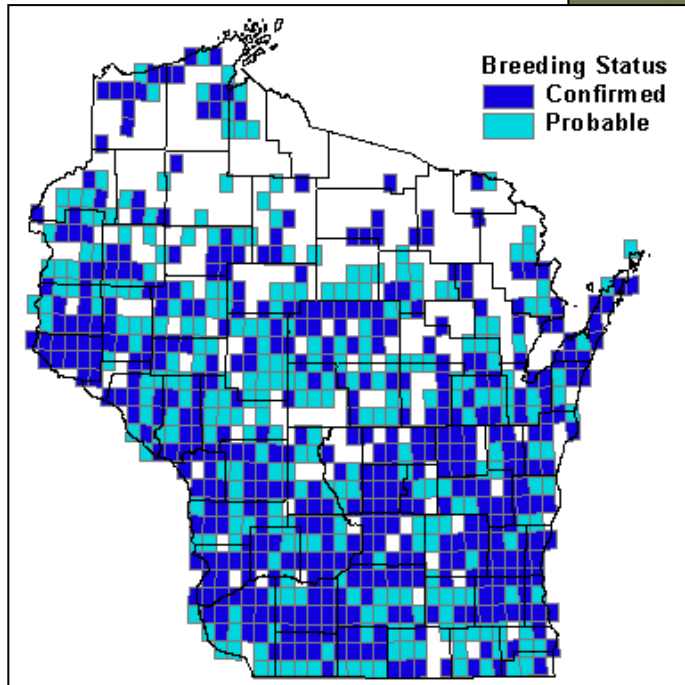
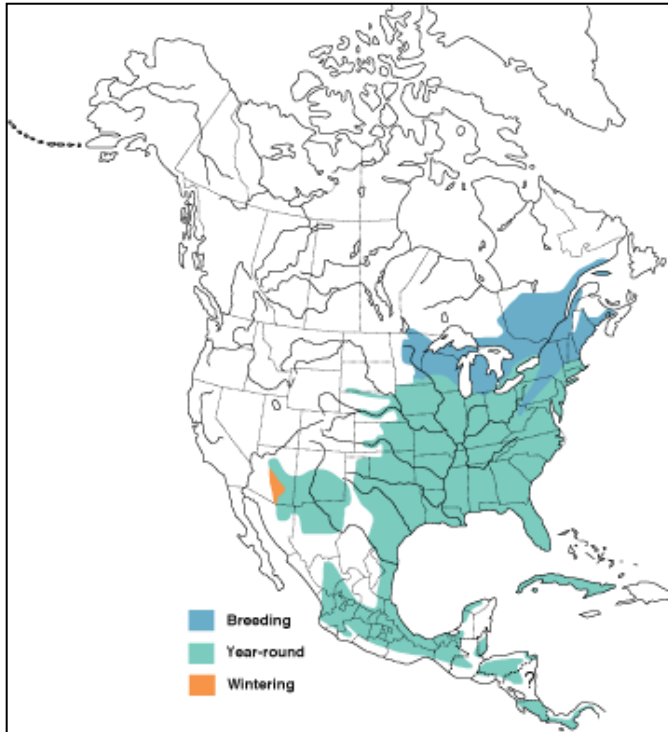
Field Sparrow



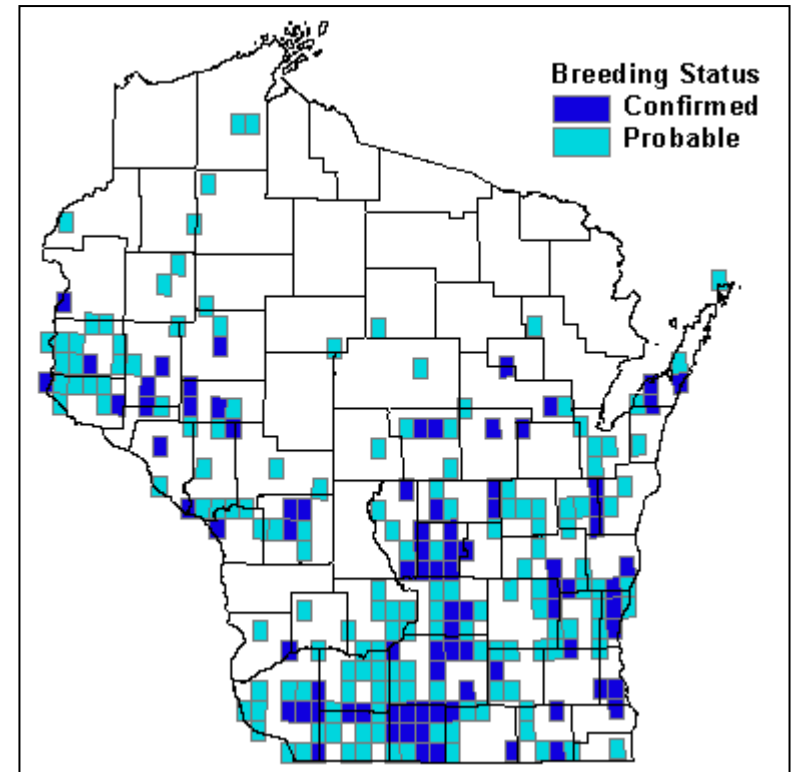
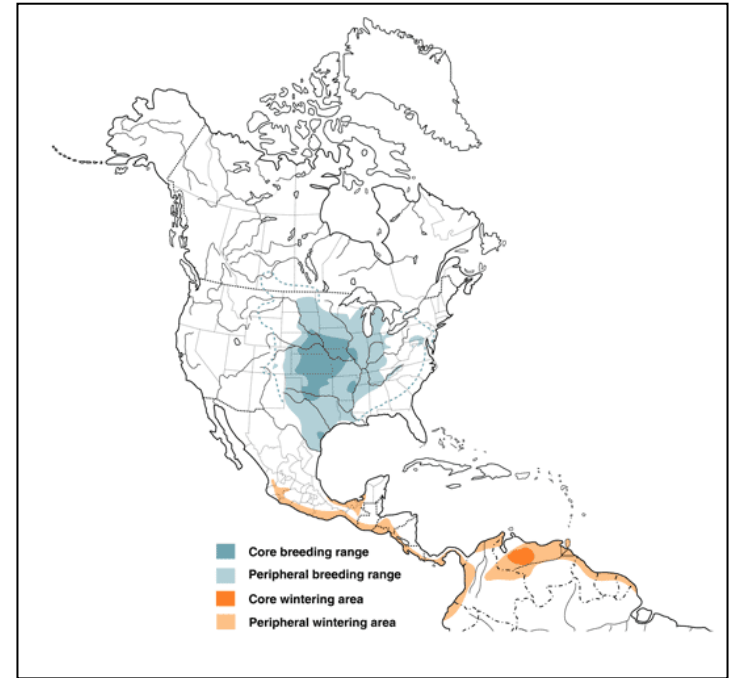
Savannah Sparrow



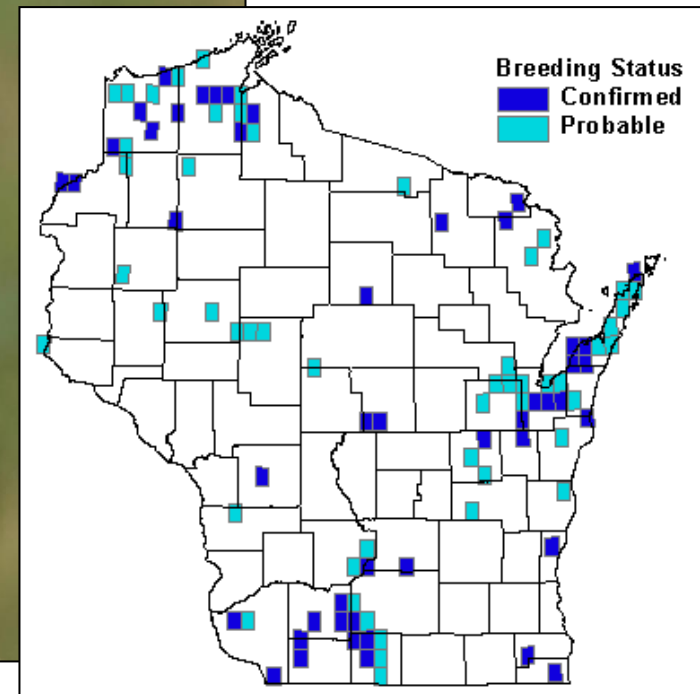
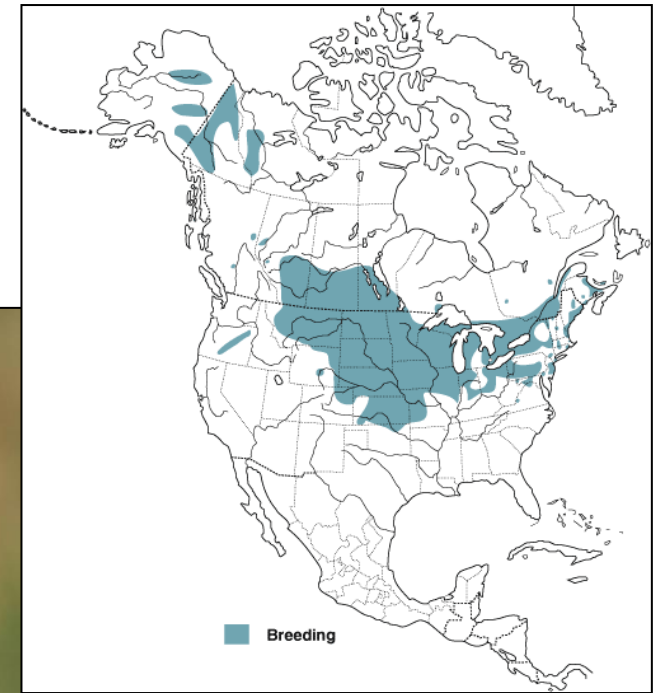
Eastern Meadowlark



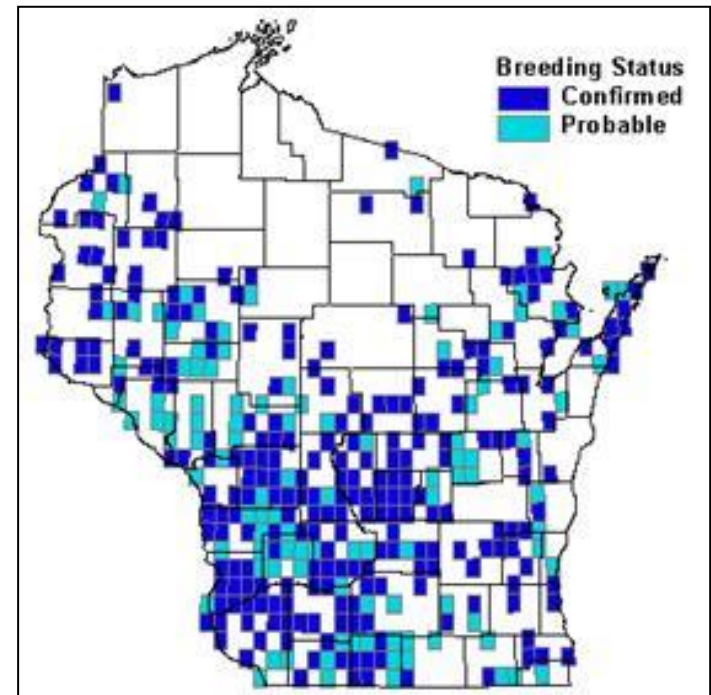
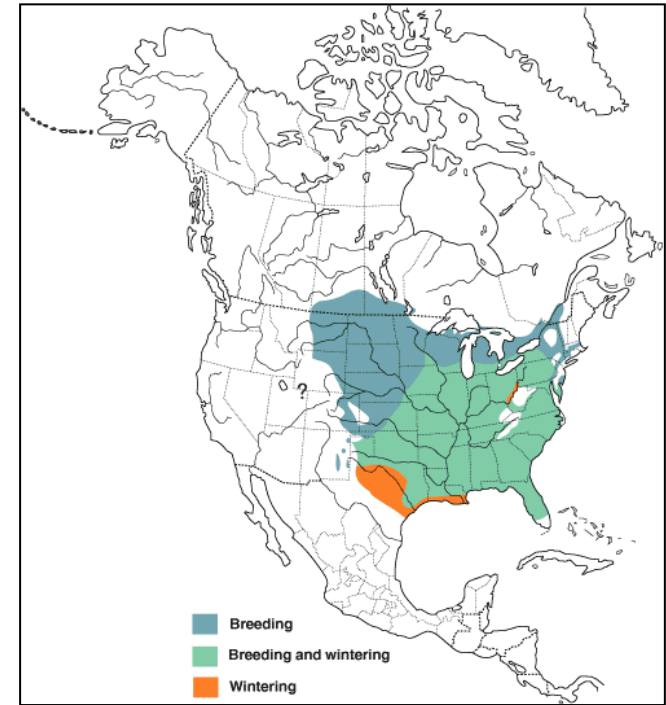
Dickcissel



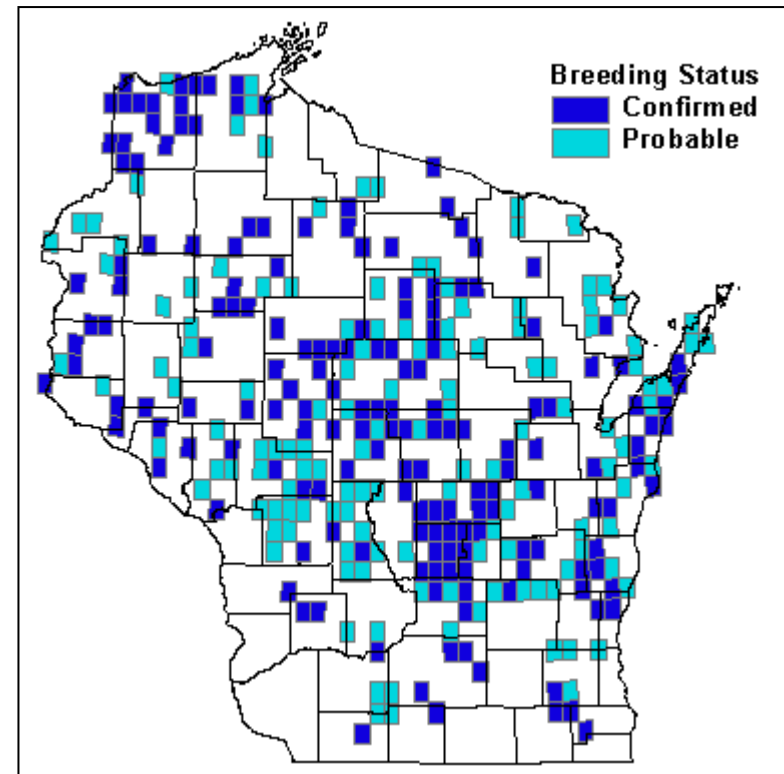
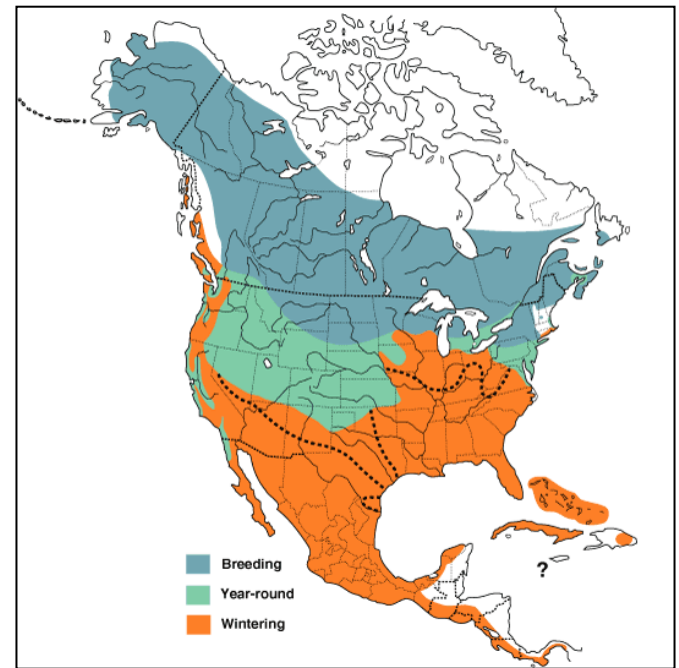
Upland Sandpiper



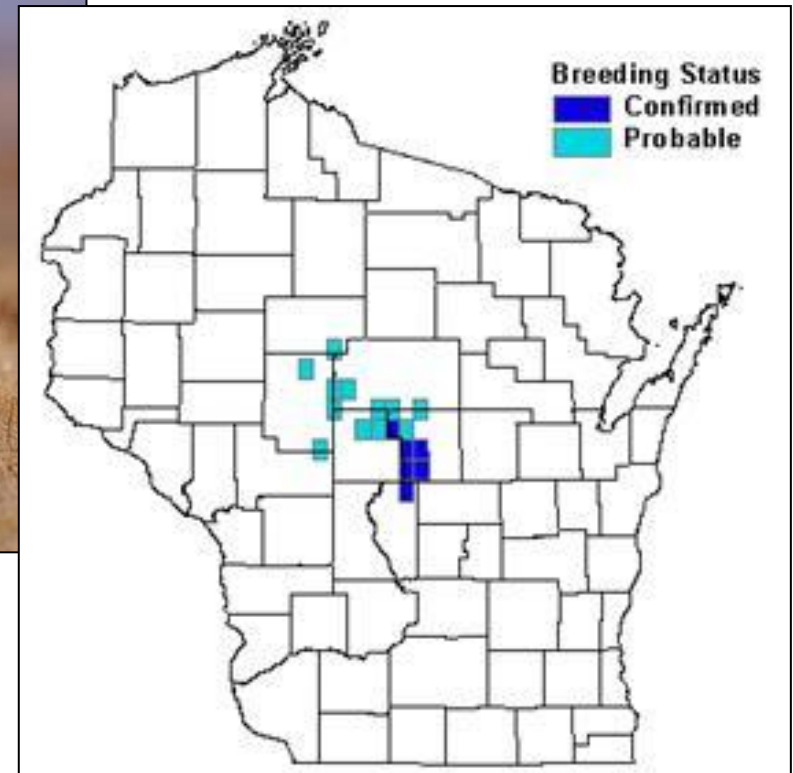
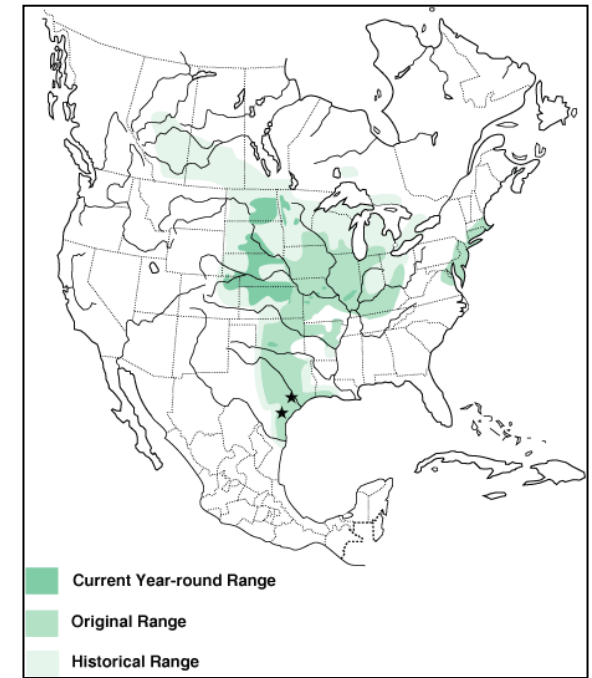
Red-headed Woodpecker



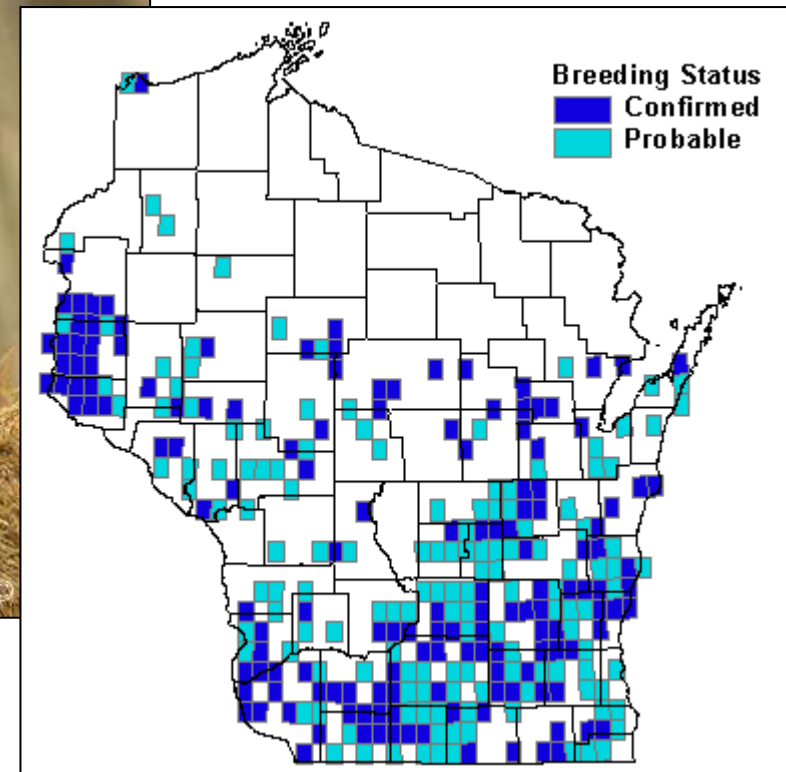
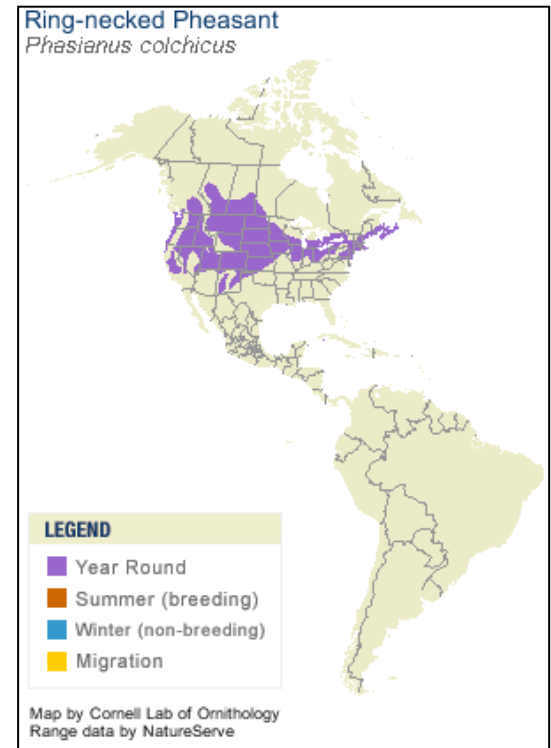
Northern Harrier



Greater Prairie Chicken



Ring-necked Pheasant



The bad news

According to federal breeding bird surveys, between 1966-2004, grassland bird populations declined dramatically in Wisconsin.

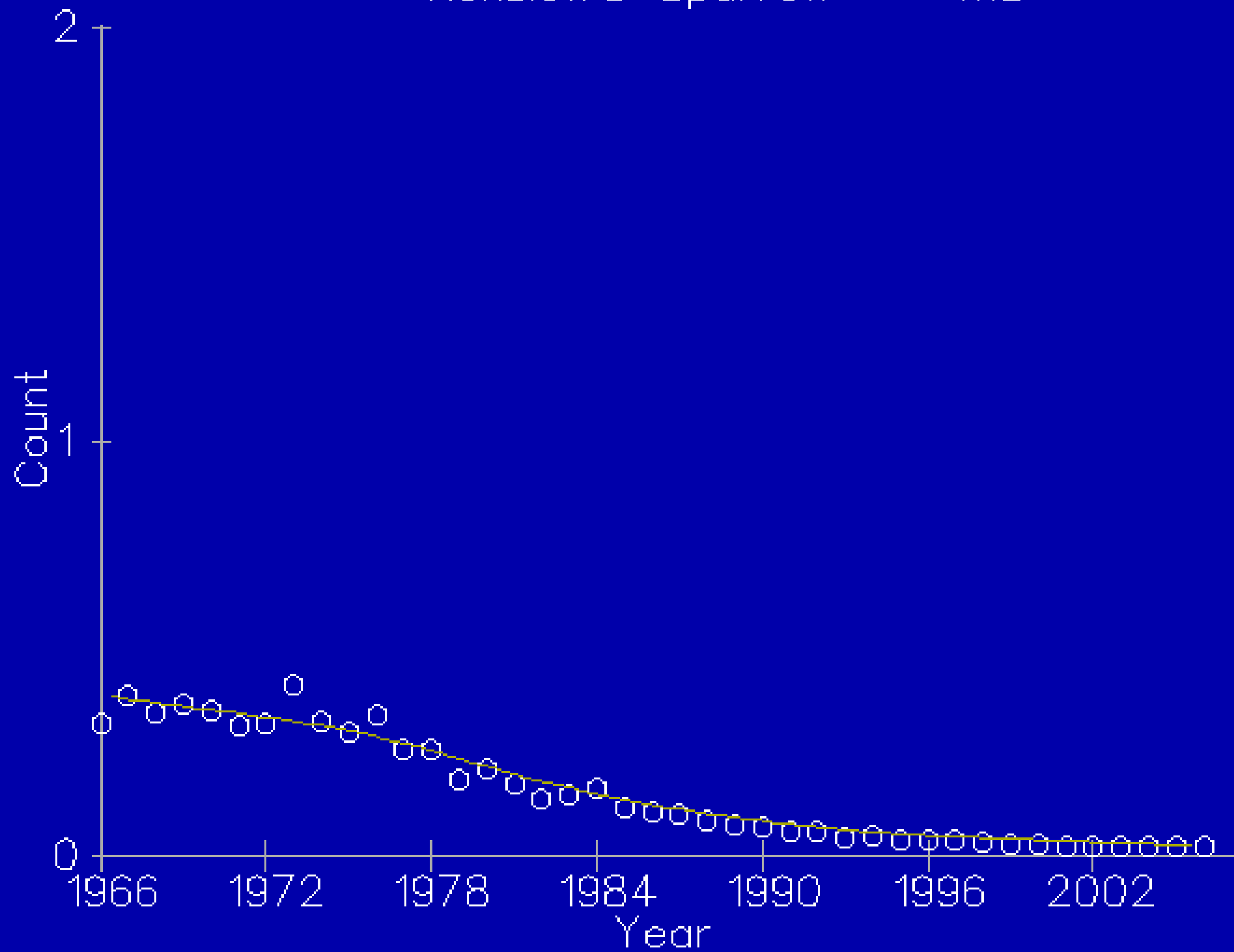
Of those grassland species surveyed...

**77% declined significantly,
23% were stable,
and none showed an increase.**



Henslow's Sparrow

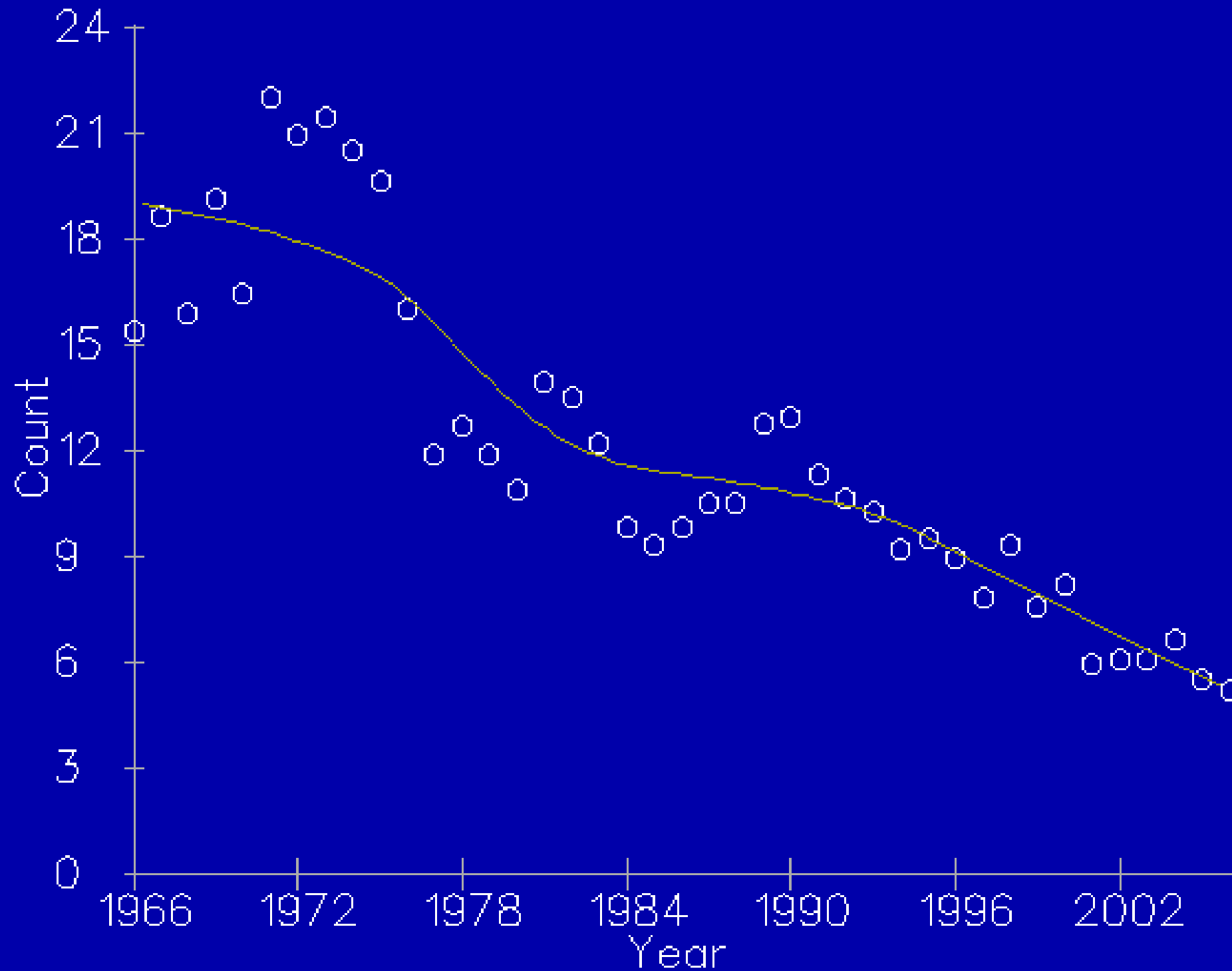
WIS





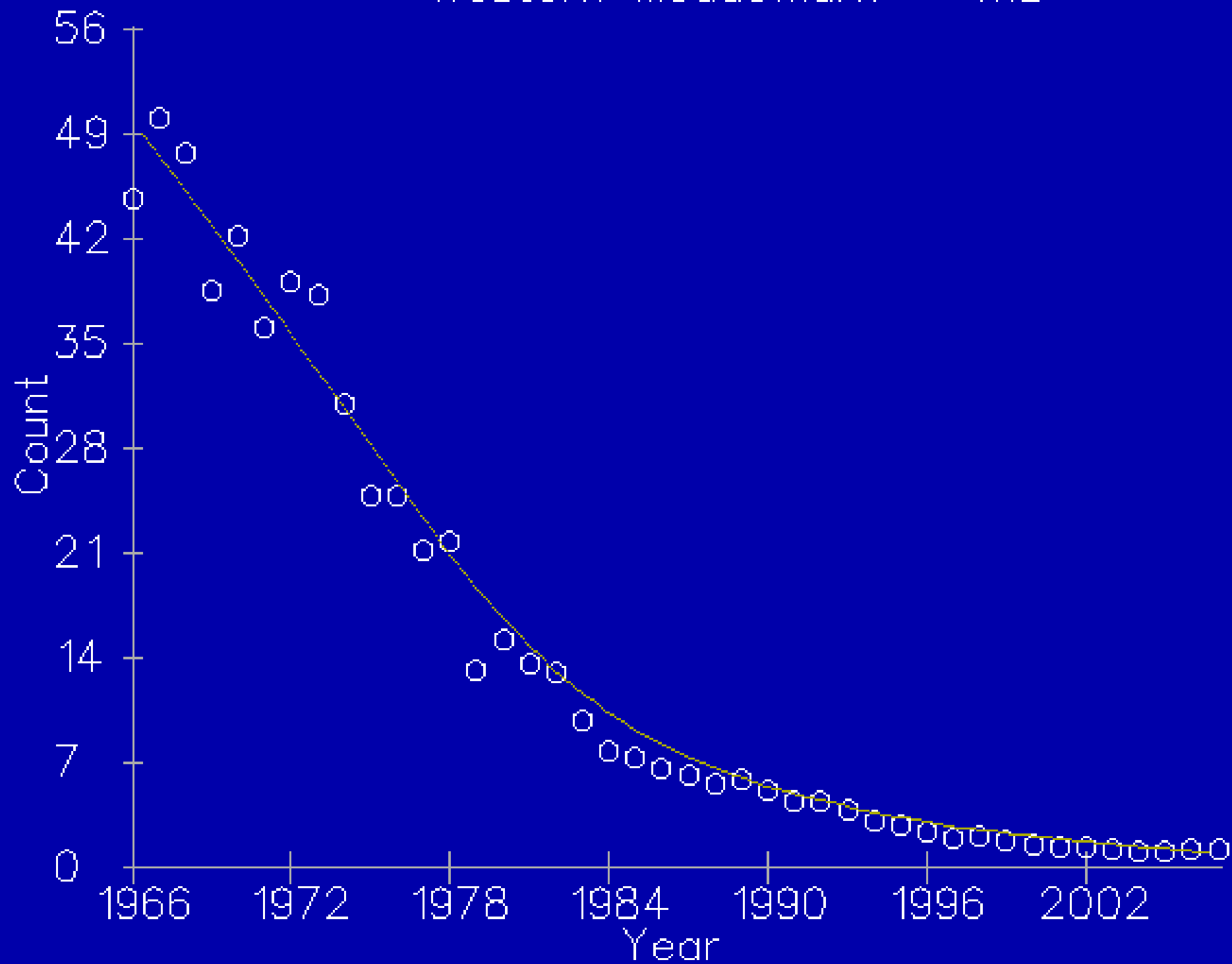
Eastern Meadowlark

WIS



Western Meadowlark

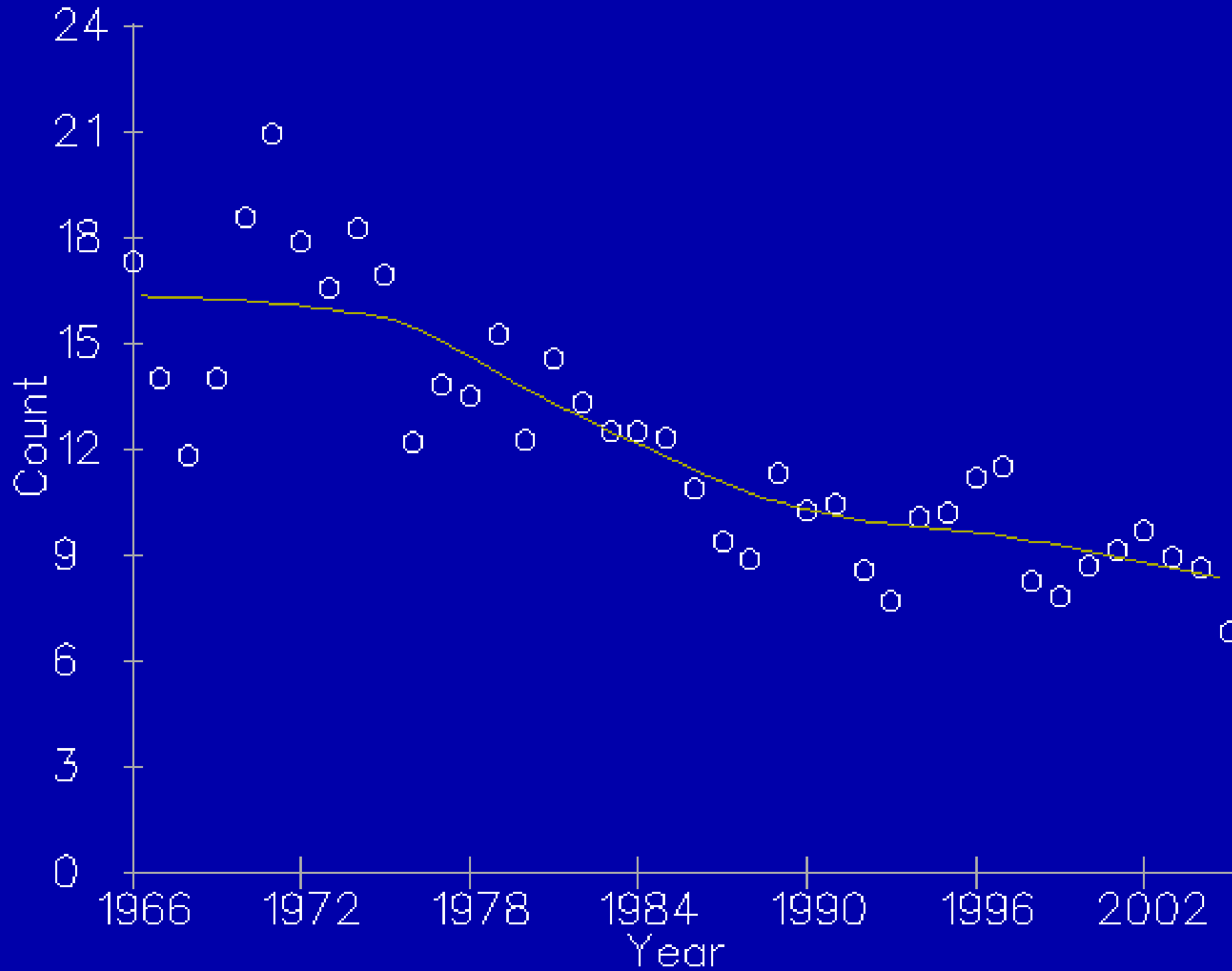
WIS





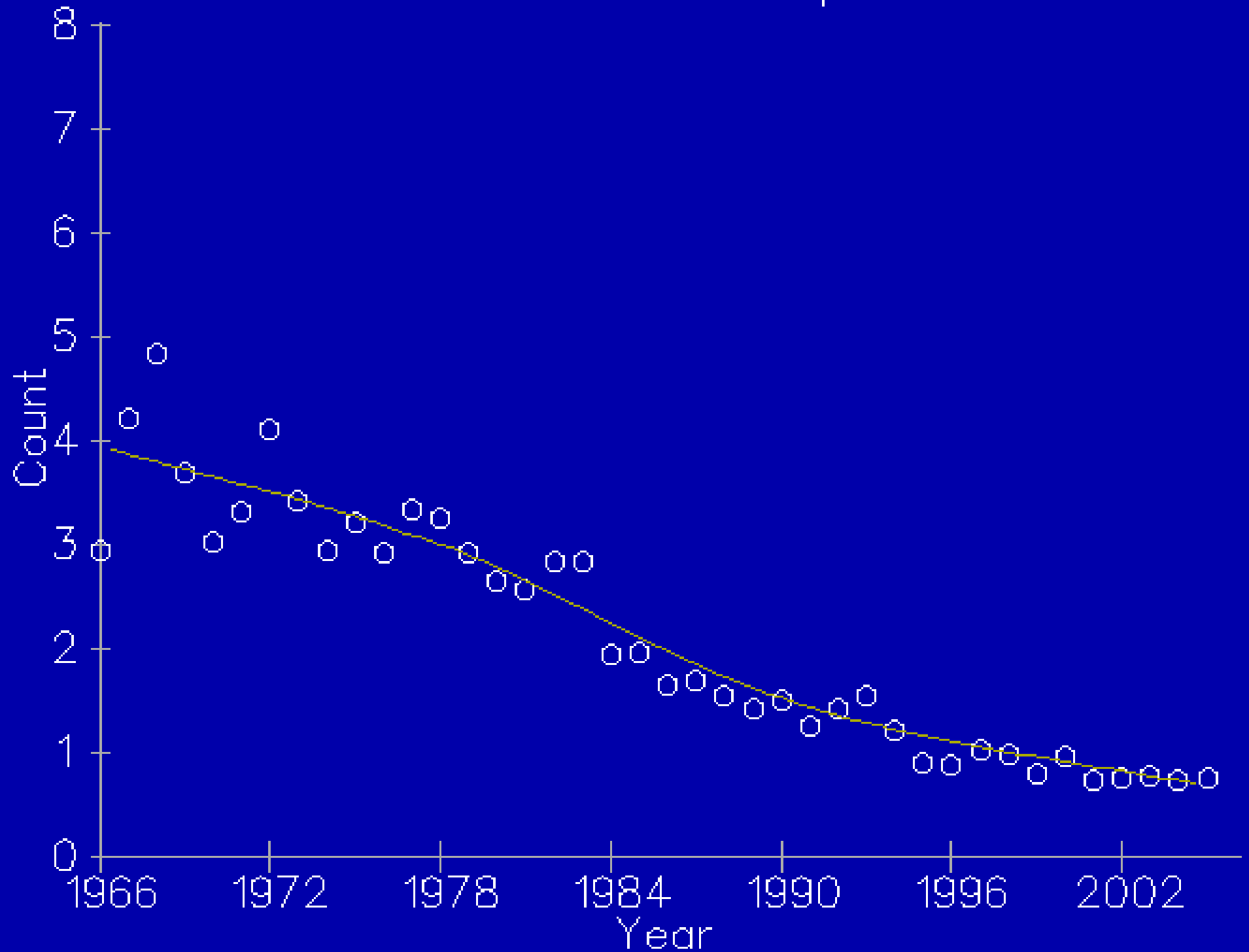
Bobolink

WIS





Red-headed Woodpecker WIS

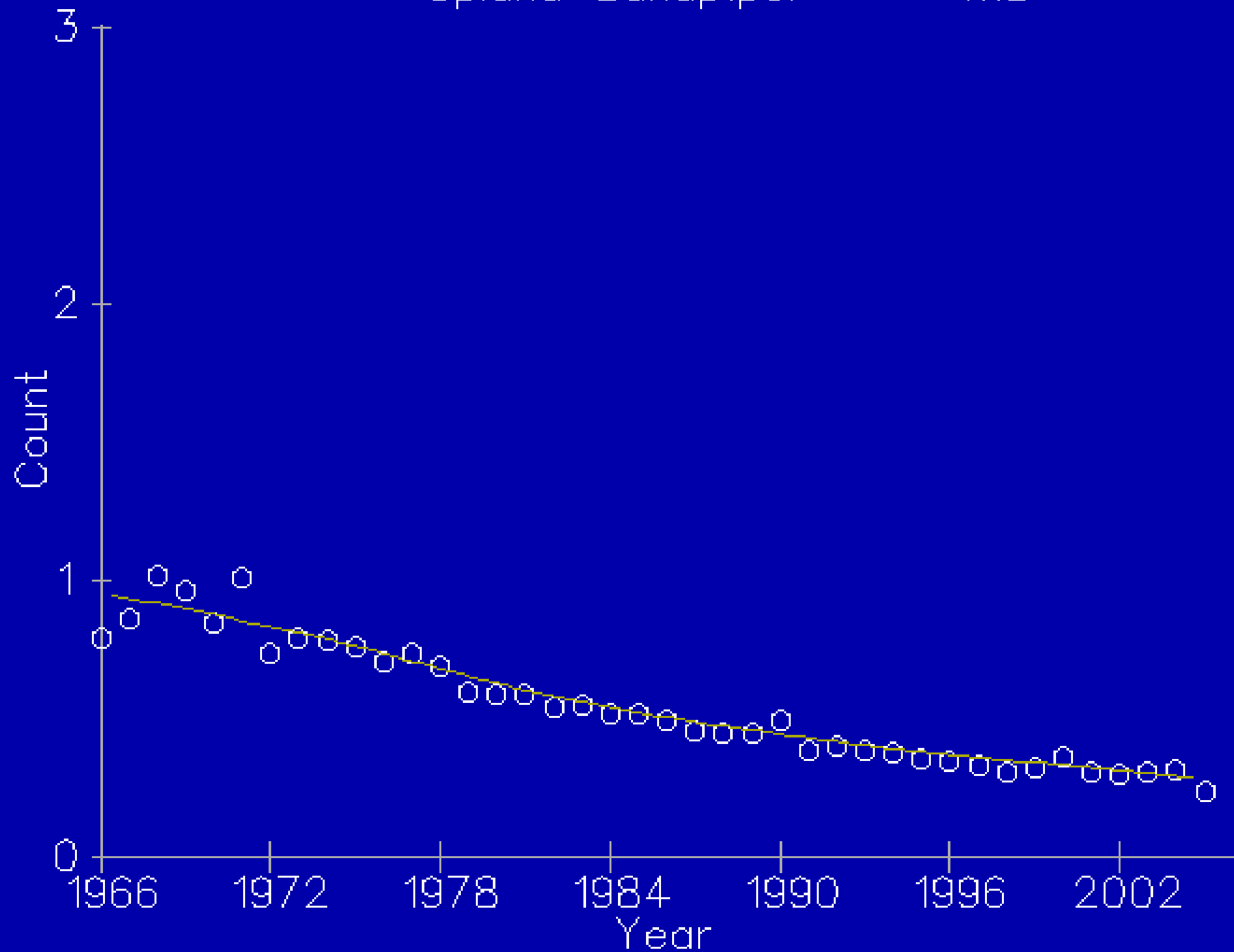




© Fred Walsh

Upland Sandpiper

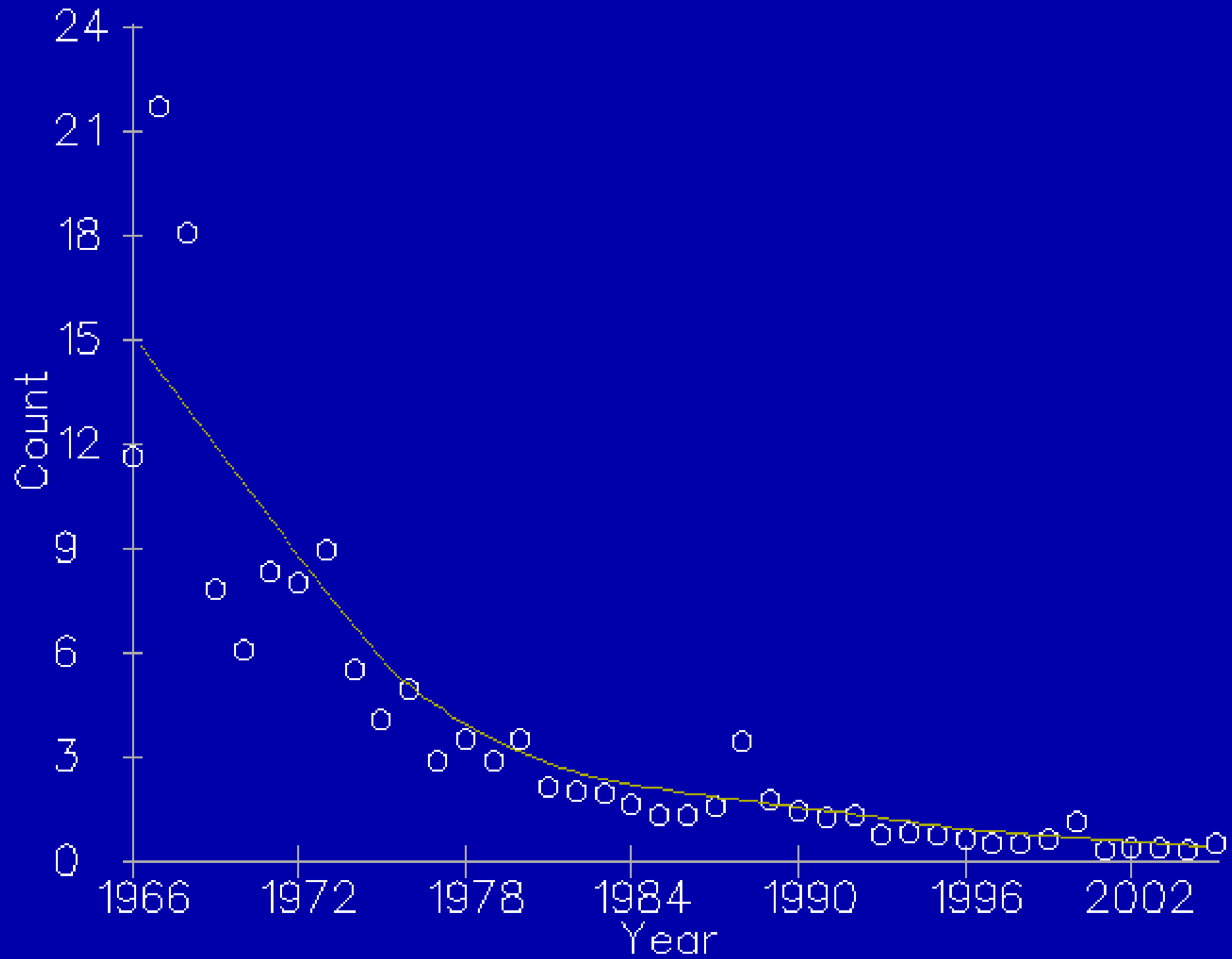
WIS





Dickcissel

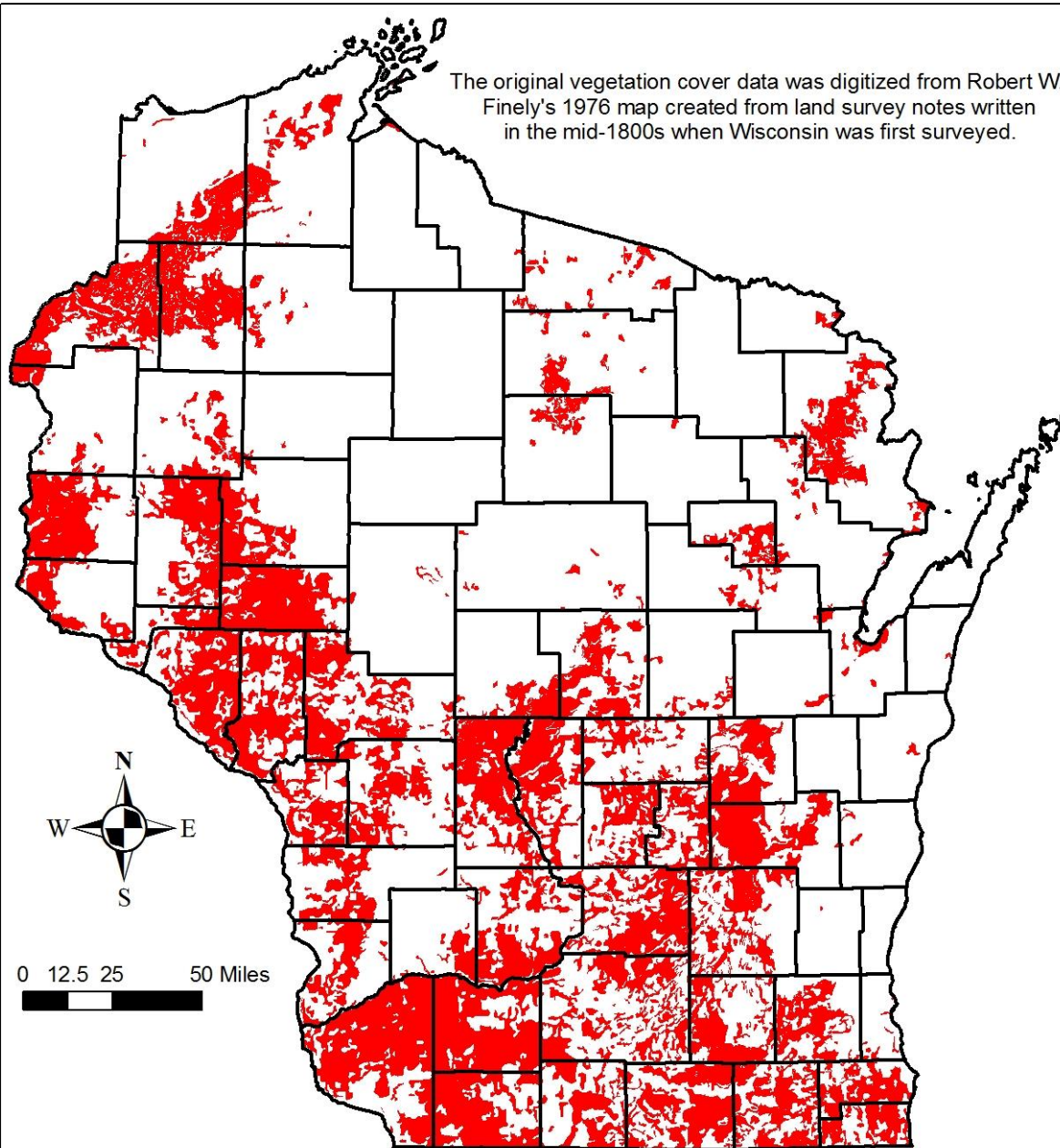
WIS







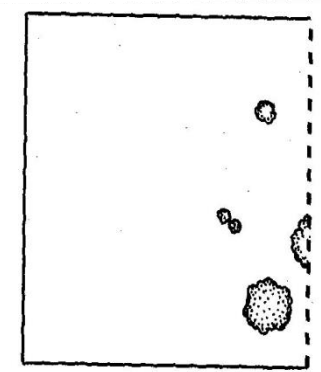
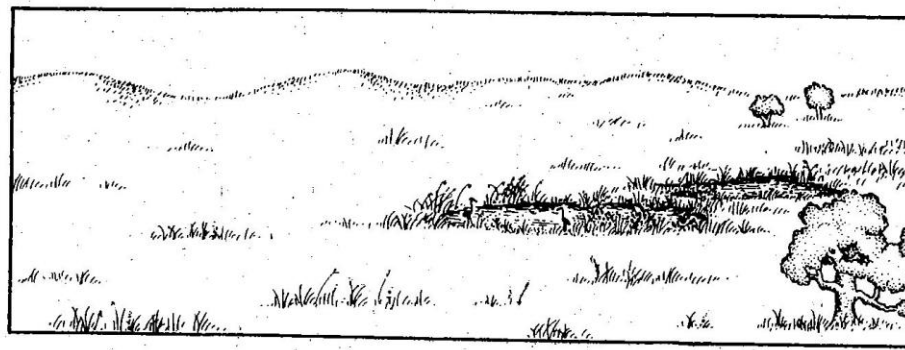
The original vegetation cover data was digitized from Robert W. Finely's 1976 map created from land survey notes written in the mid-1800s when Wisconsin was first surveyed.



Original Range of Prairie, Savanna, and Barrens Habitats of Wisconsin

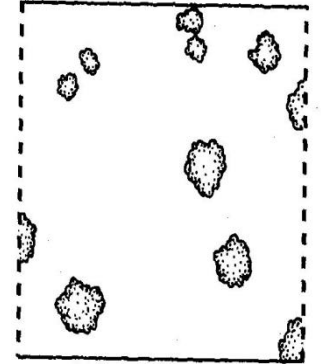
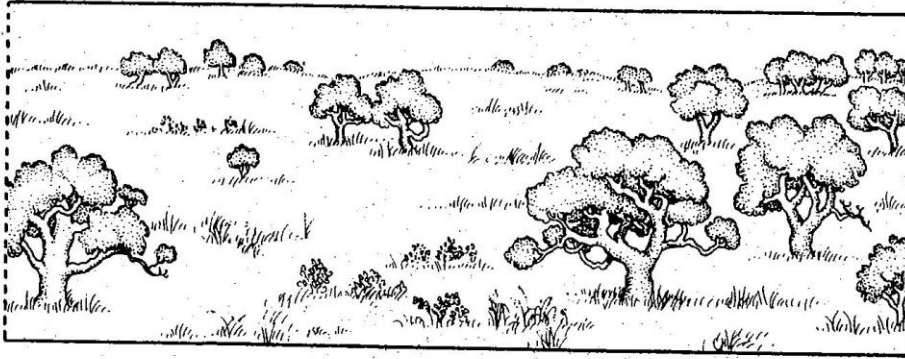
Prairie

(0-5% canopy closure)



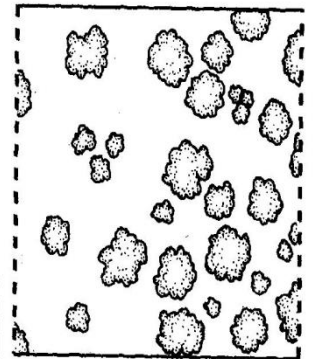
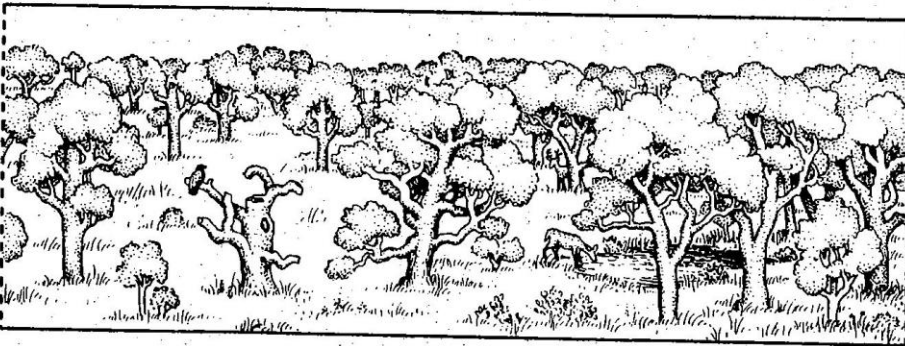
Savanna

(5-50% canopy closure)



Woodland

(50-80% canopy closure)



Forest

(80-100% canopy closure)

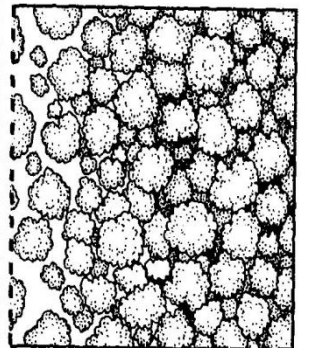
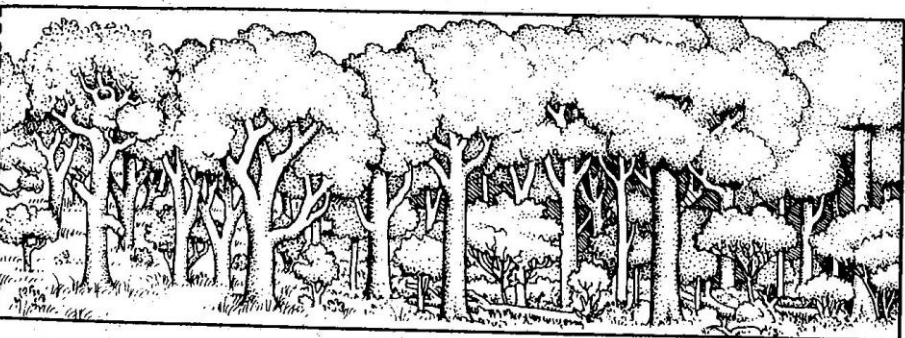
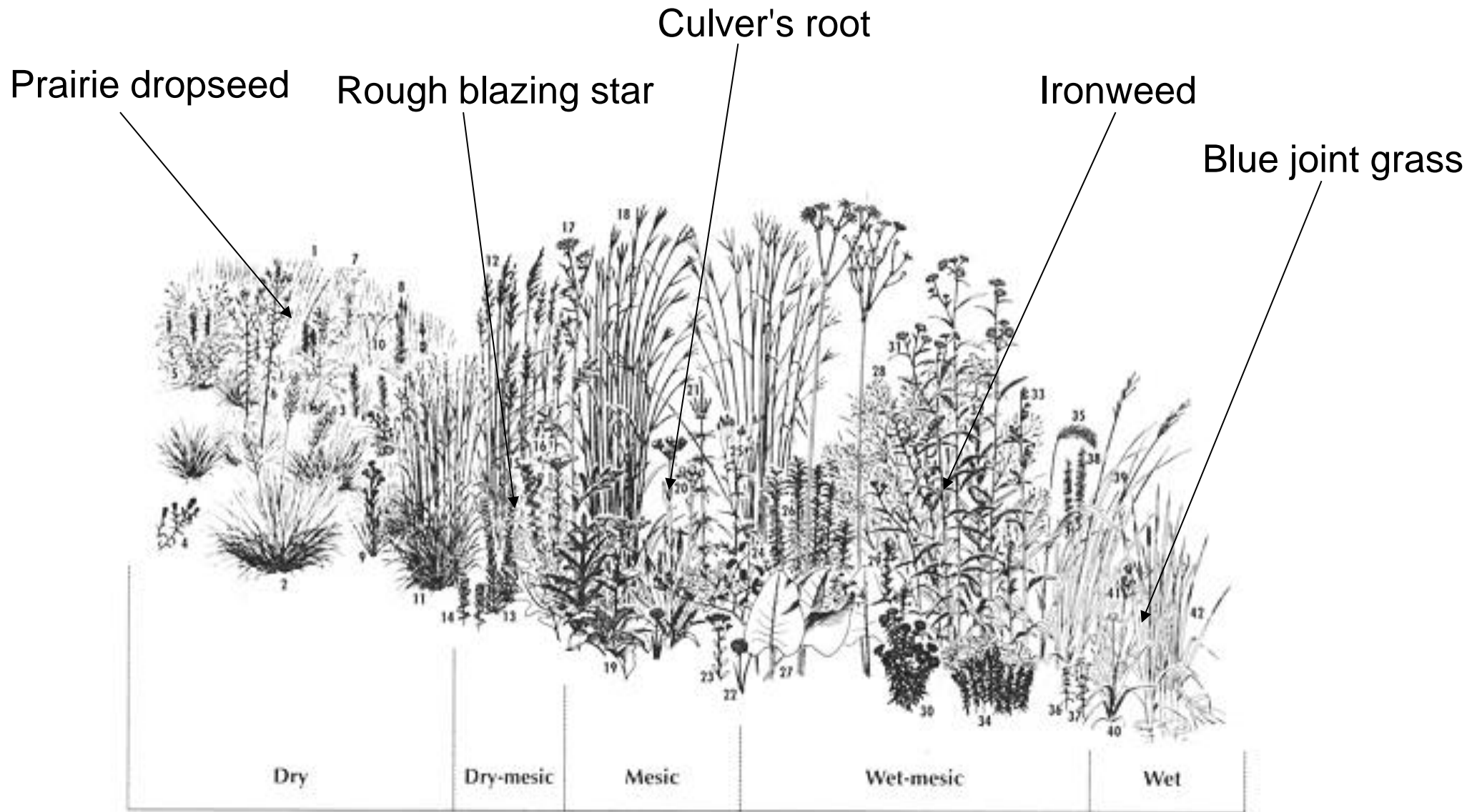


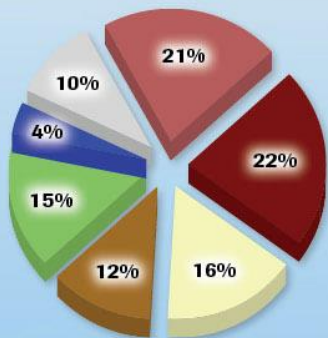
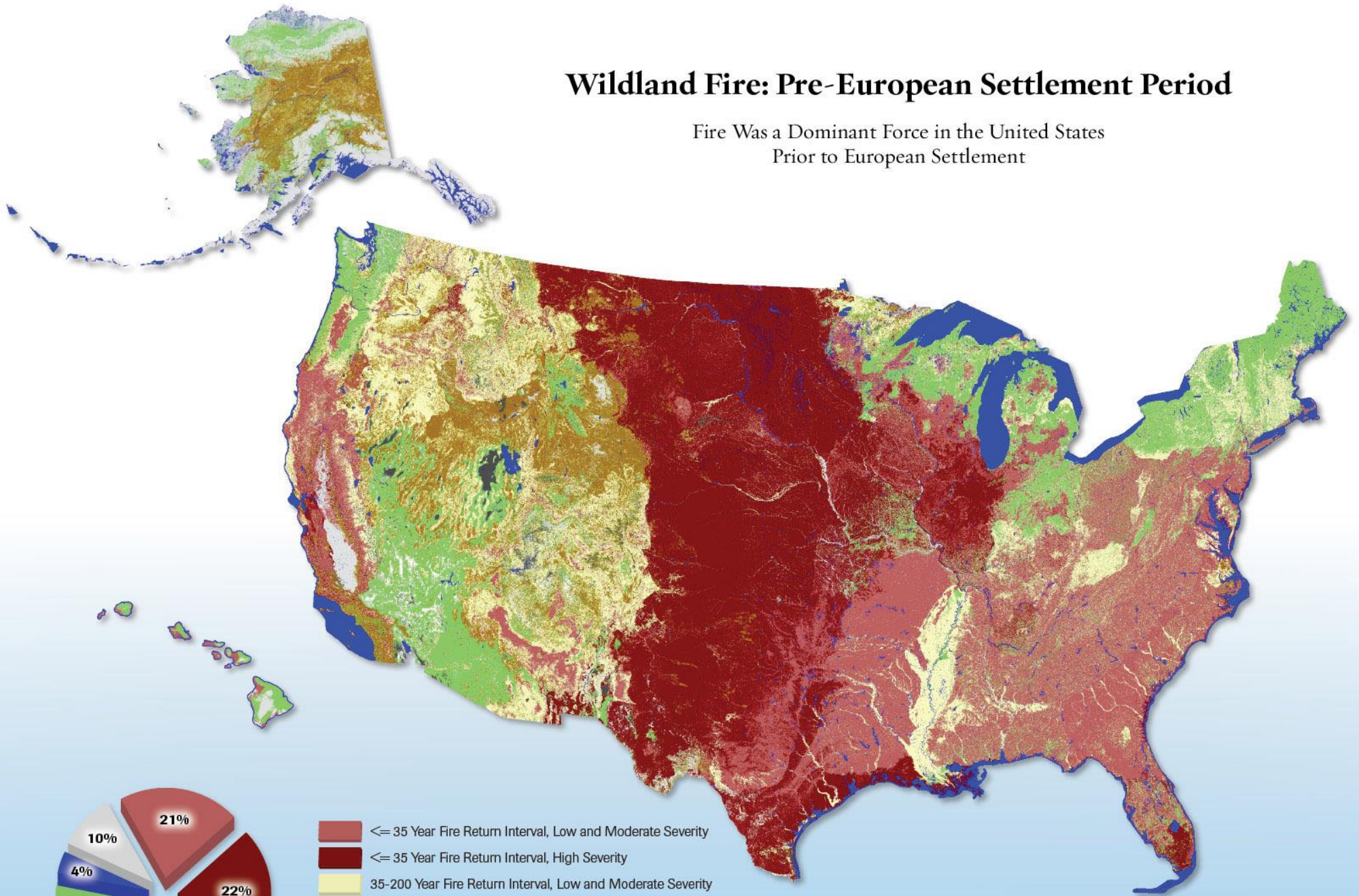
Figure 4.1. Prairie-forest continuum.



Soil moisture gradient leads to differences in structure and species composition

Wildland Fire: Pre-European Settlement Period

Fire Was a Dominant Force in the United States
Prior to European Settlement



- <= 35 Year Fire Return Interval, Low and Moderate Severity
- <= 35 Year Fire Return Interval, High Severity
- 35-200 Year Fire Return Interval, Low and Moderate Severity
- 35-200 Year Fire Return Interval, High Severity
- >200 Year Fire Return Interval, Any Severity
- Water
- Other



Fire



No fire





plantation at Point Creek, Manitowoc Co. October 30, 2003 Gary Fewless









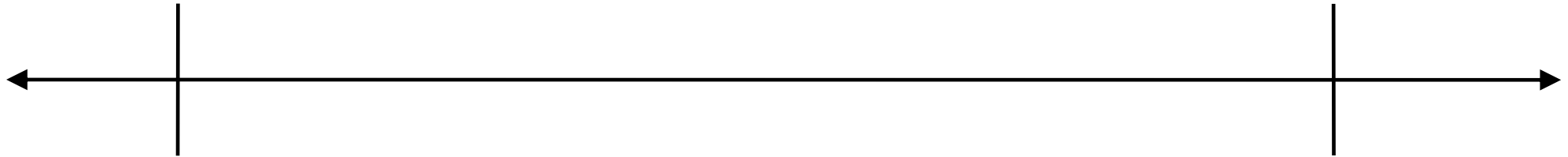


Habitat Structure

Bare dirt

Grass

Shrubs <25%



Vegetation height

*Time since last disturbance
(fire, mowing, haying, grazing)*



Horned lark
Killdeer

Vesper sparrow
Grasshopper sparrow
Upland sandpiper
Western meadowlark

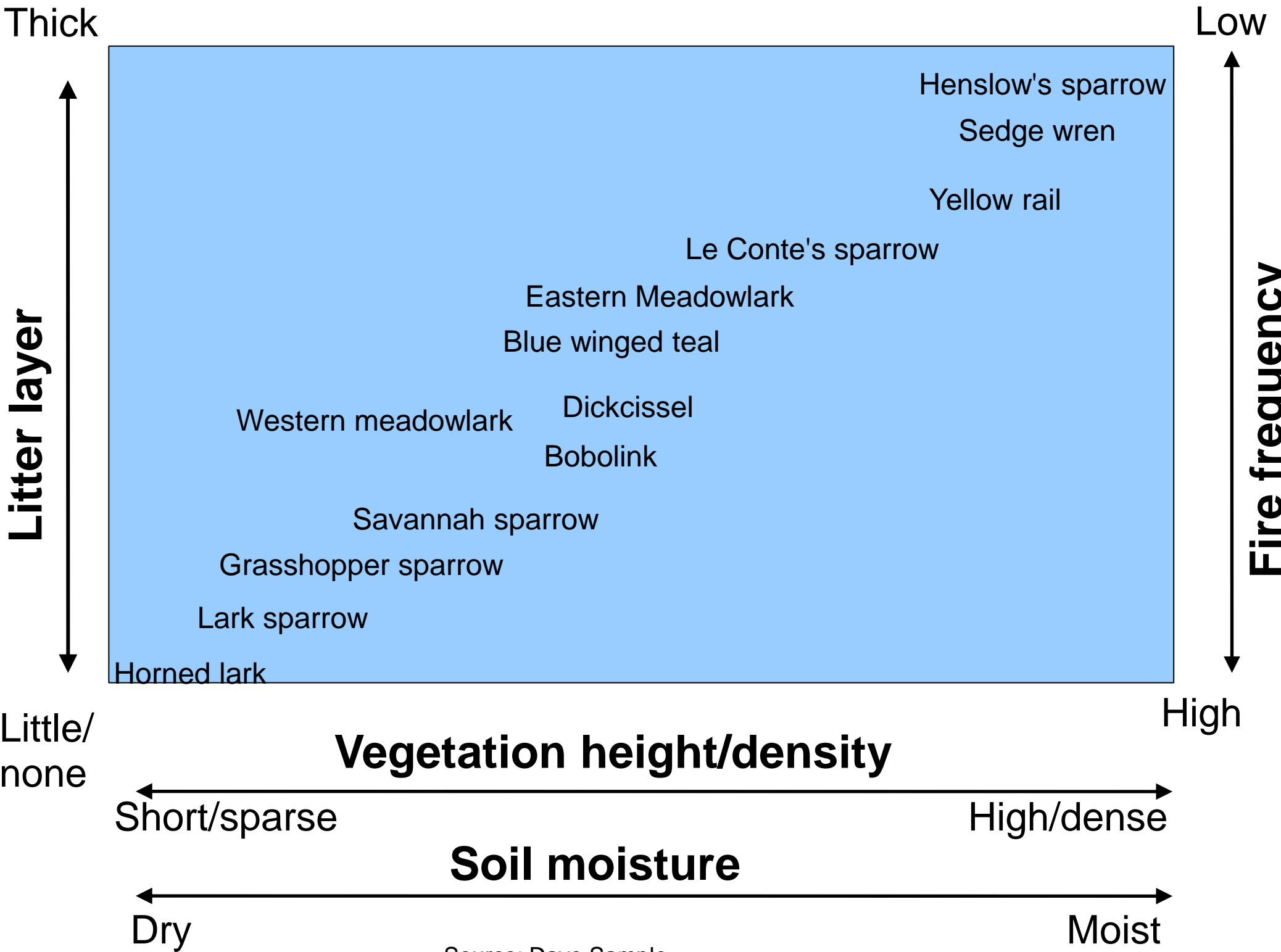
Savannah sparrow
Eastern meadowlark
Bobolink
Dickcissel

Henslow's sparrow
Sedge wren

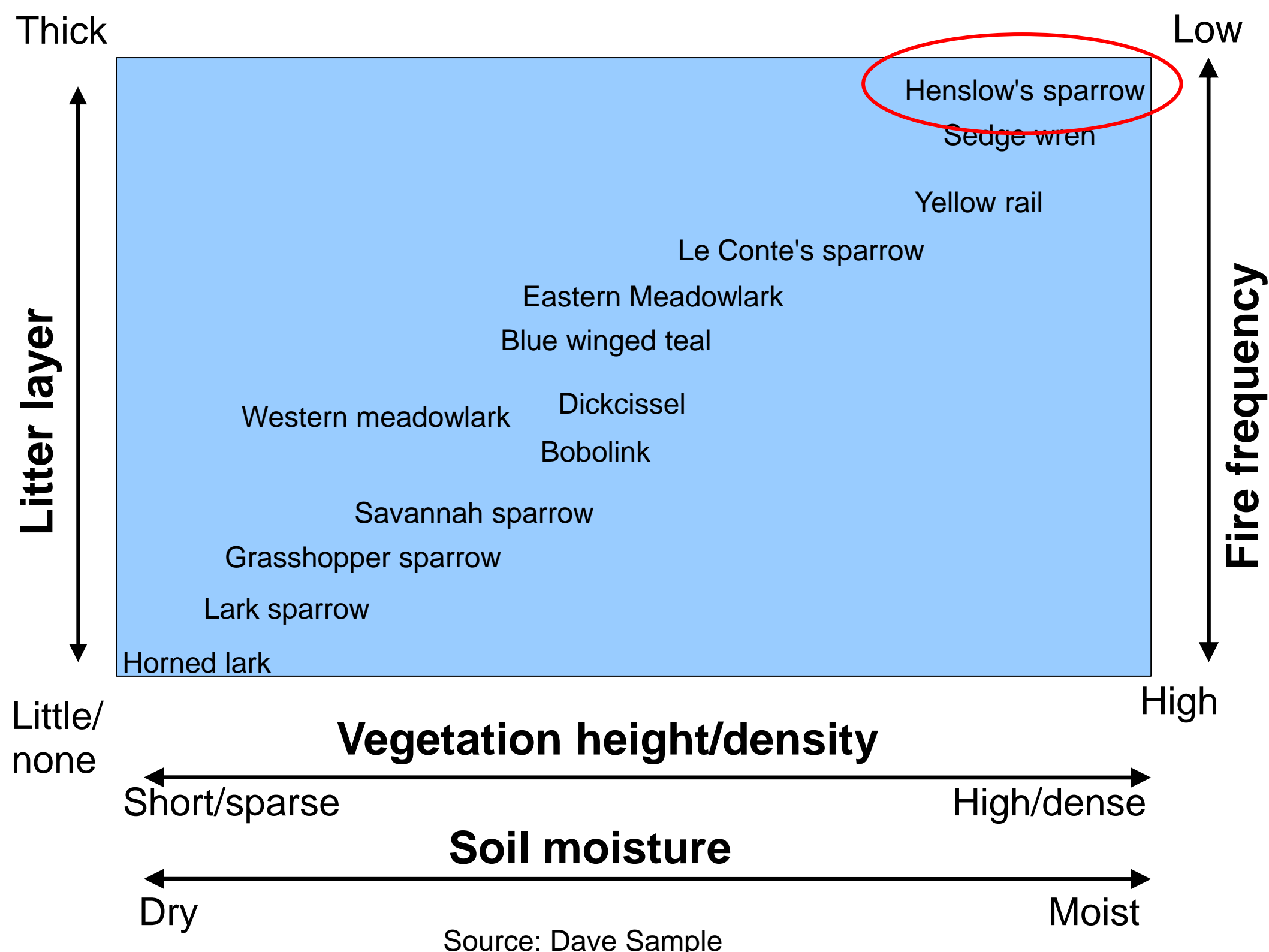
Clay-colored
sparrow
Field sparrow

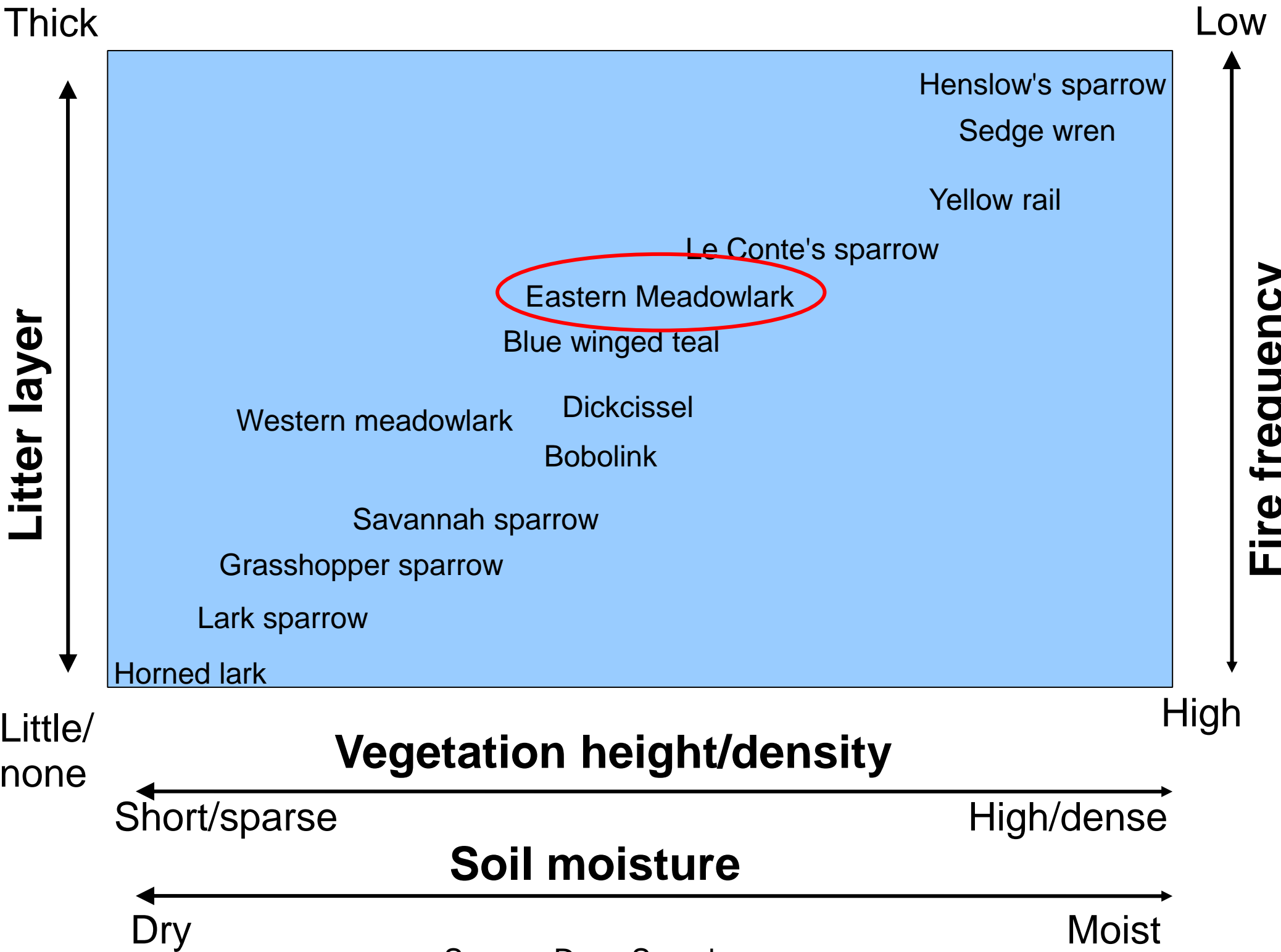


Greater prairie chicken & Northern harrier
(Umbrella species)



Source: Dave Sample





Source: Dave Sample

Thick

Low

Litter layer

Fire frequency



Little/
none

High

Vegetation height/density

Short/sparse

High/dense

Soil moisture

Dry

Moist

Source: Dave Sample

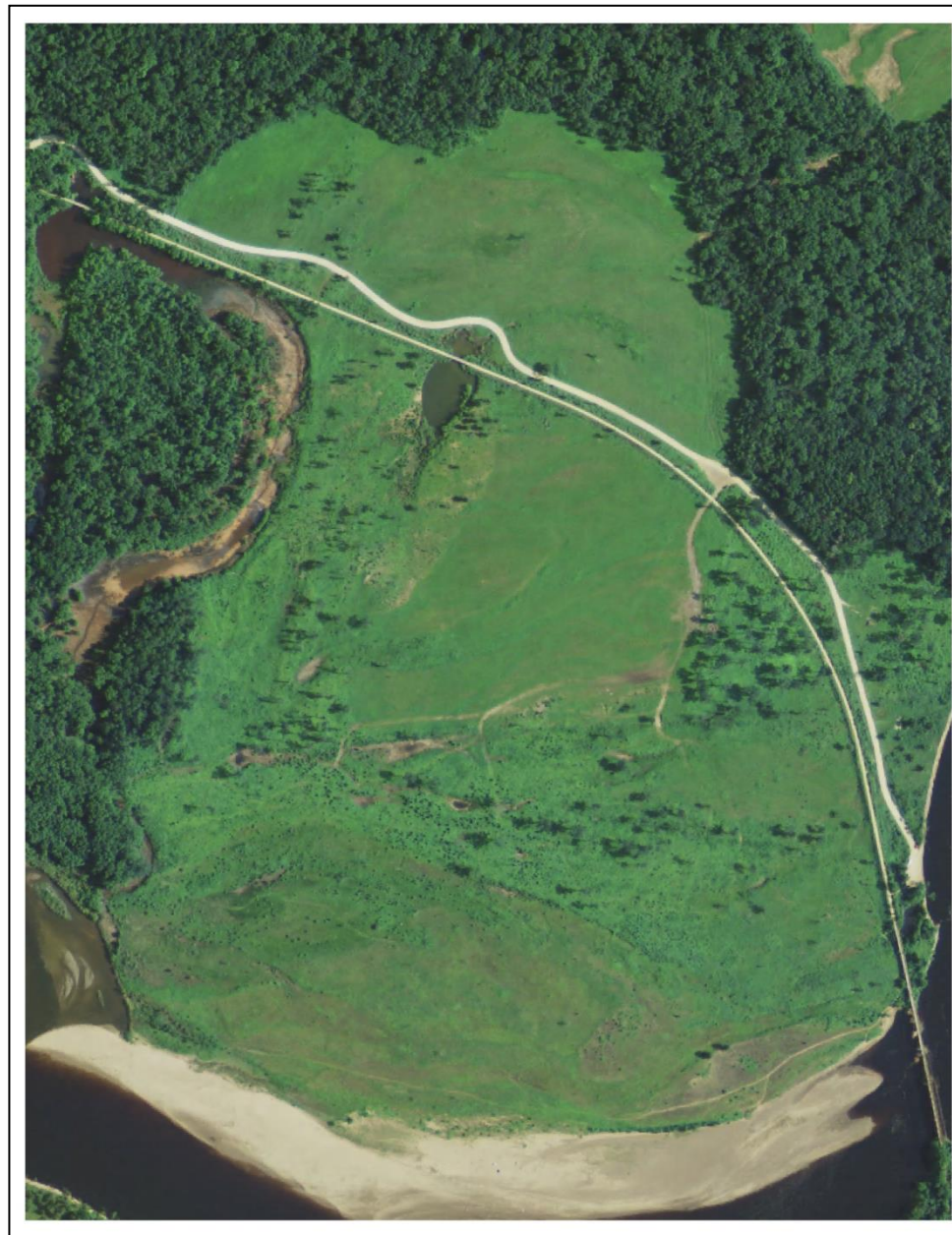
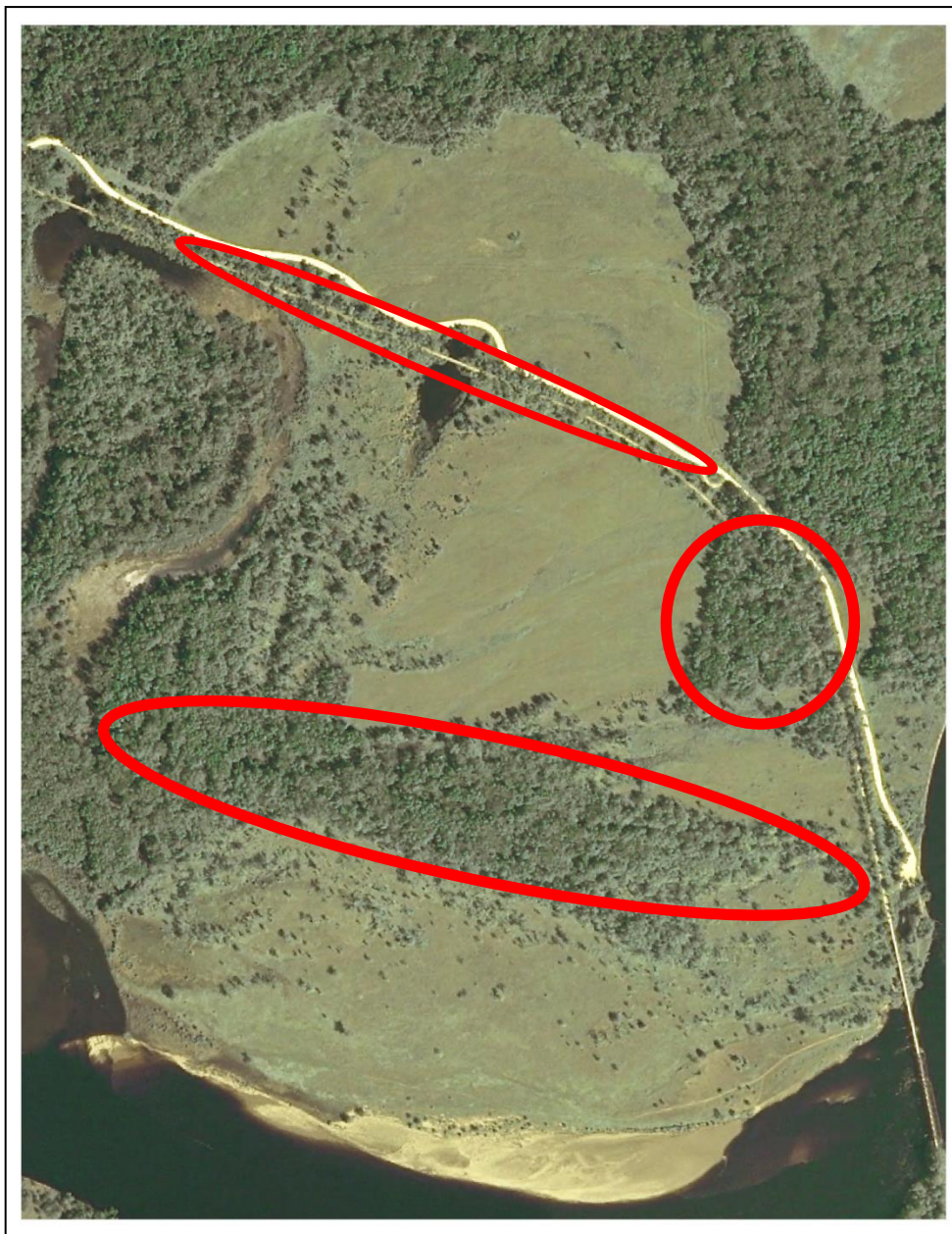




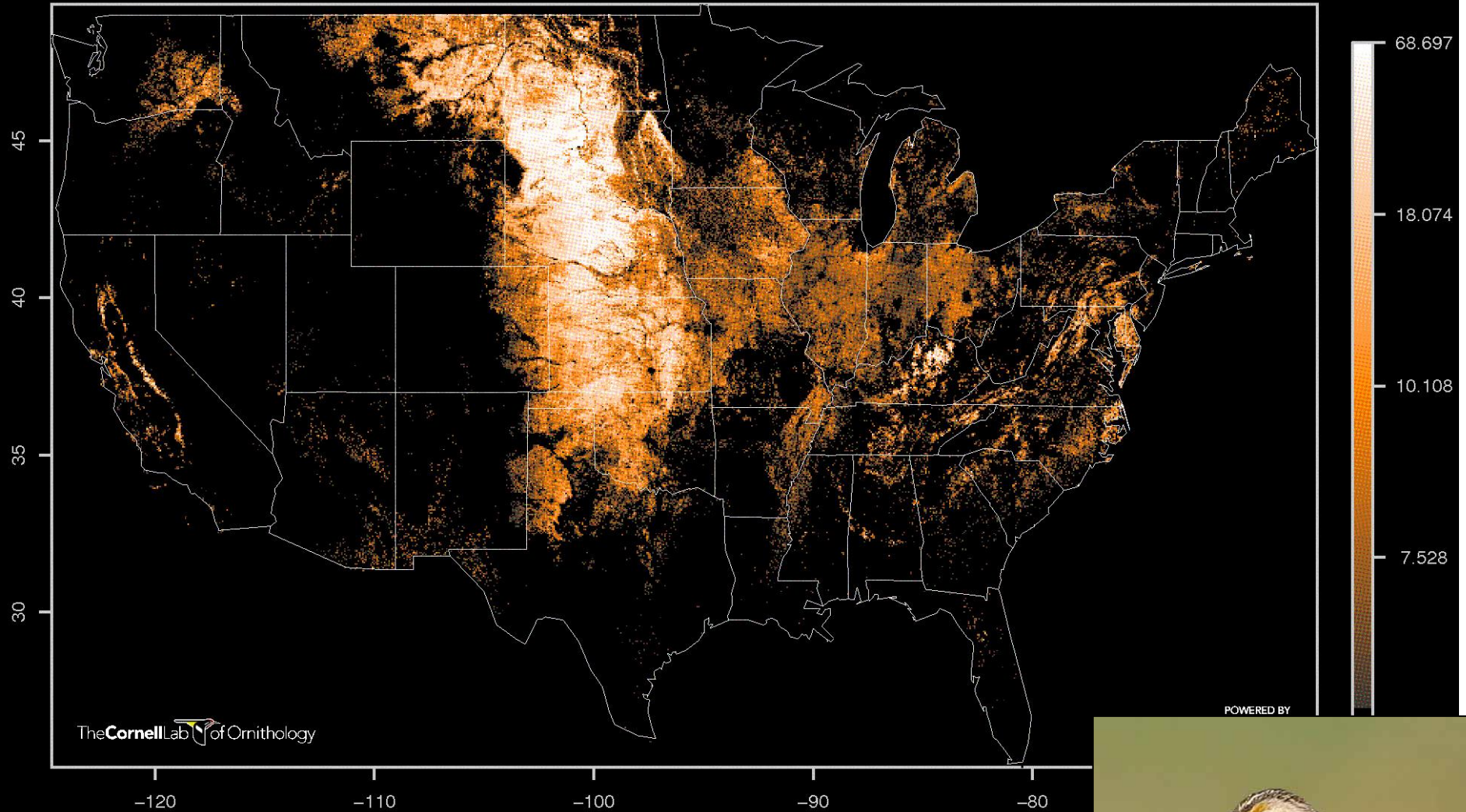








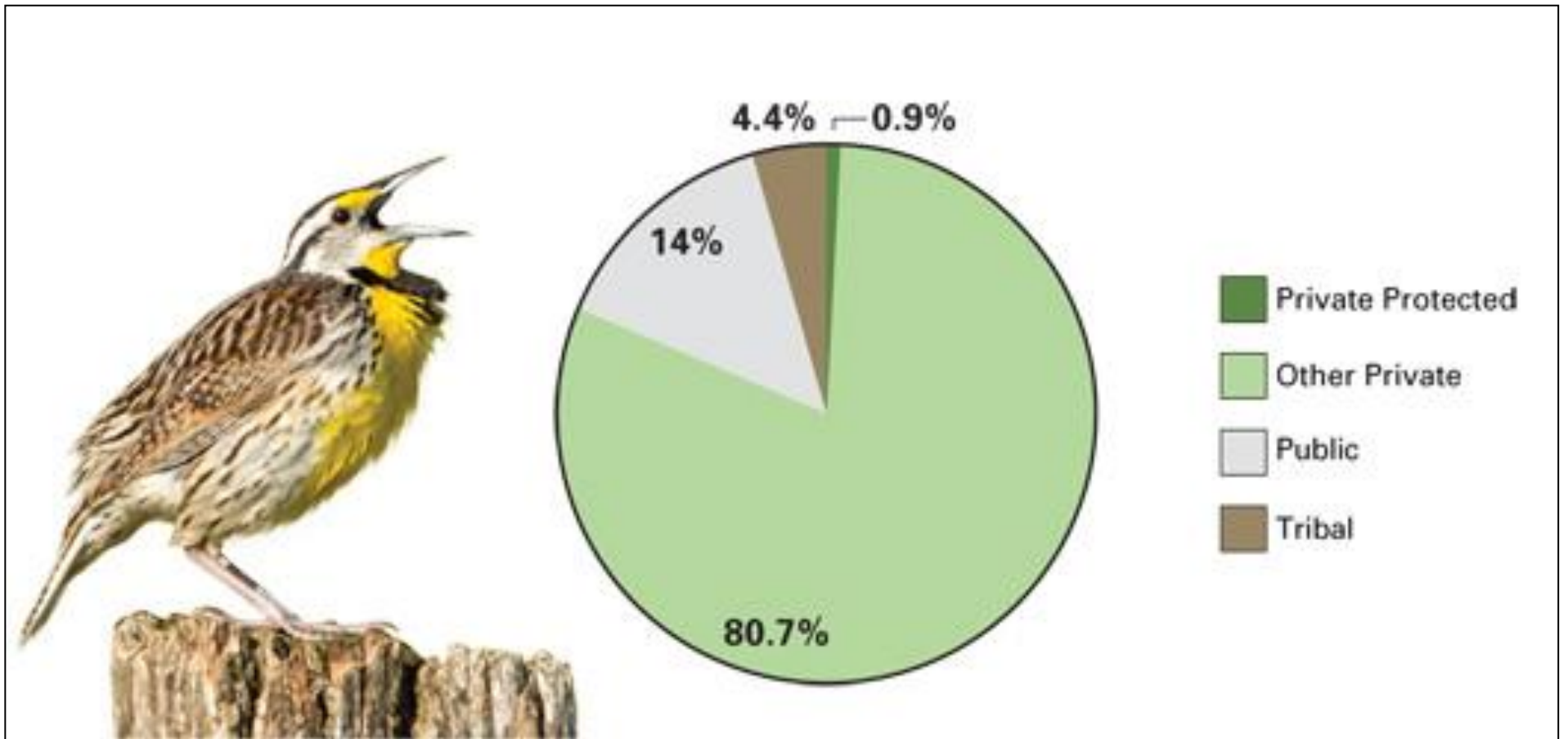
Grasshopper_Sparrow : May 31



Cornell Lab of Ornithology (c) 2012

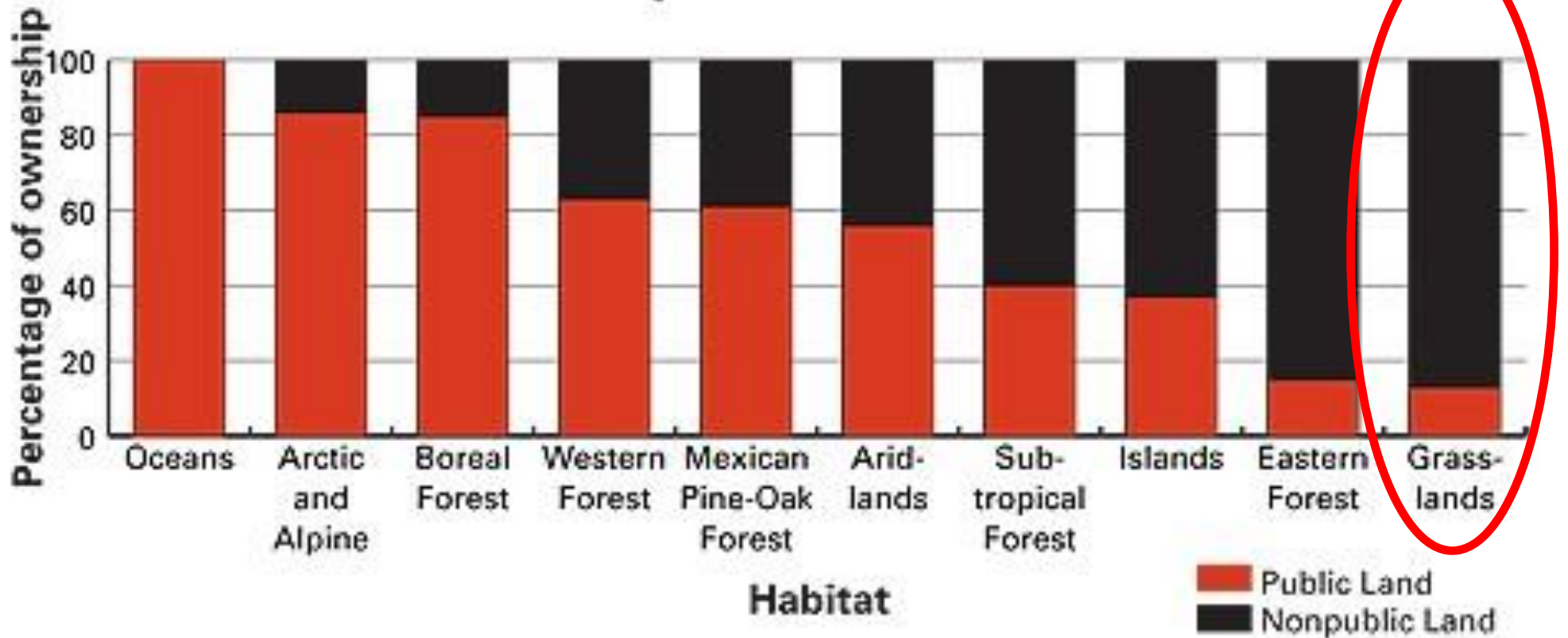


Grasshopper sparrow: Abundance on private lands in the US



More than 80% of eastern meadowlark habitat across the US is on privately-owned land.

Public and Nonpublic Lands and Waters



Less than 20% of grasslands in the US are publicly owned.



Changes in farming have directly correlated with changes in grassland bird populations.

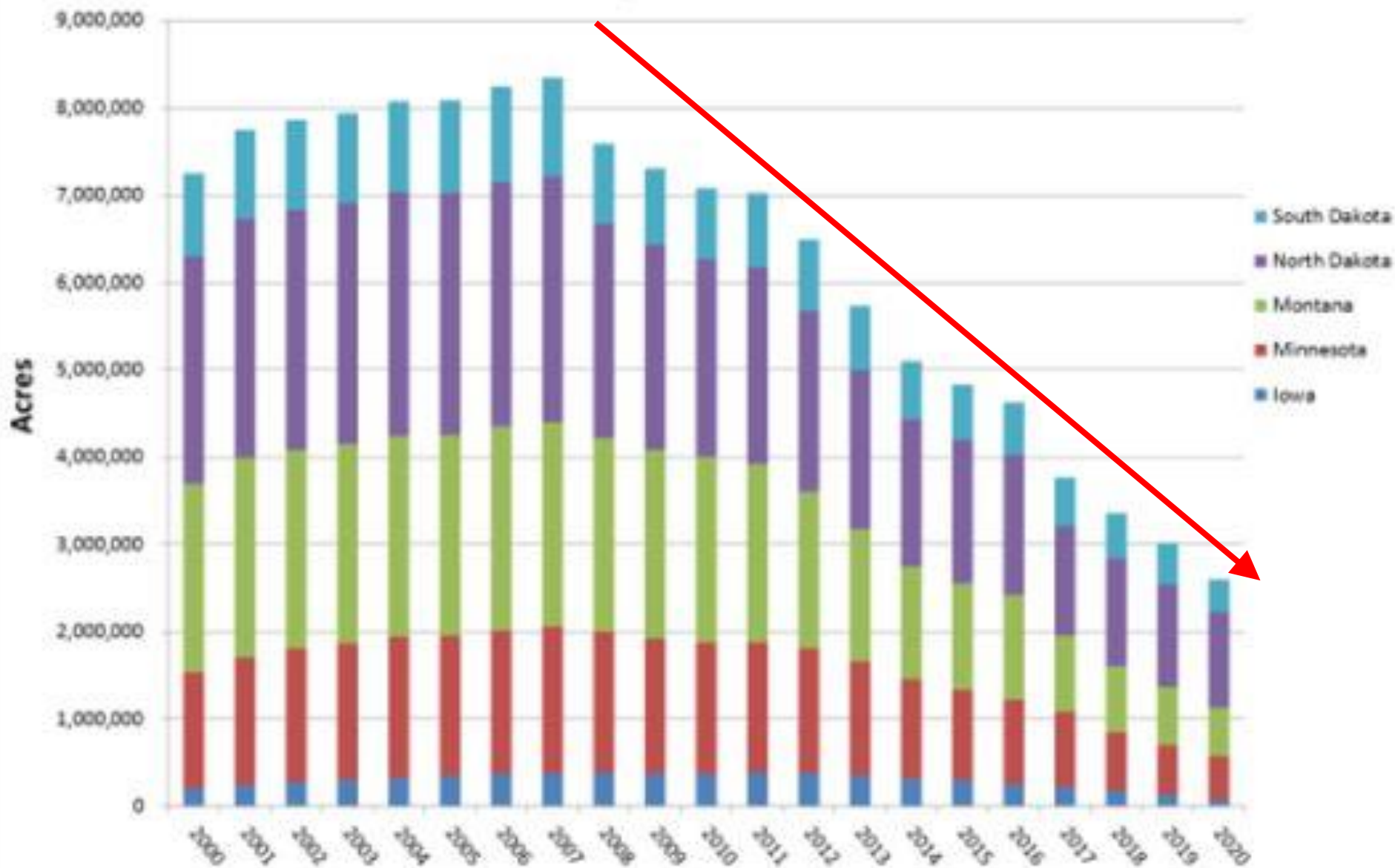


The classic dairy farm
model of rotating
hay-oats-corn and
pasture

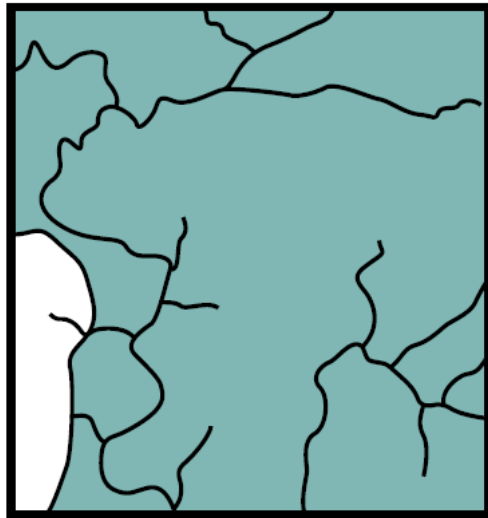


The industrial model of
intensive continuous
cropping of corn and
soybeans

Historic and Projected CRP in the U.S. PPR



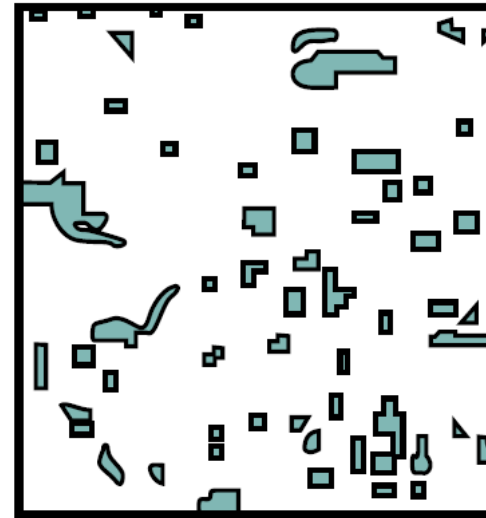
Habitat fragmentation



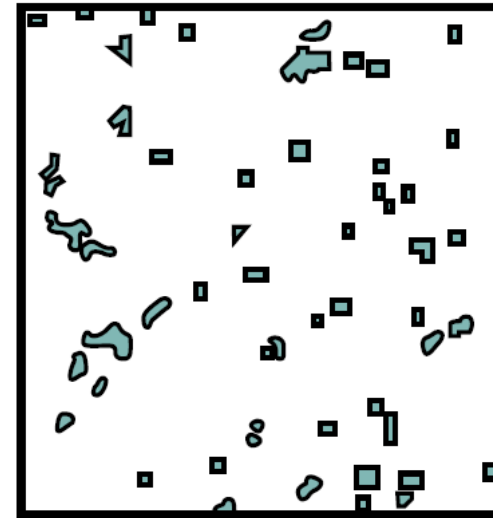
1831



1882



1902



1950



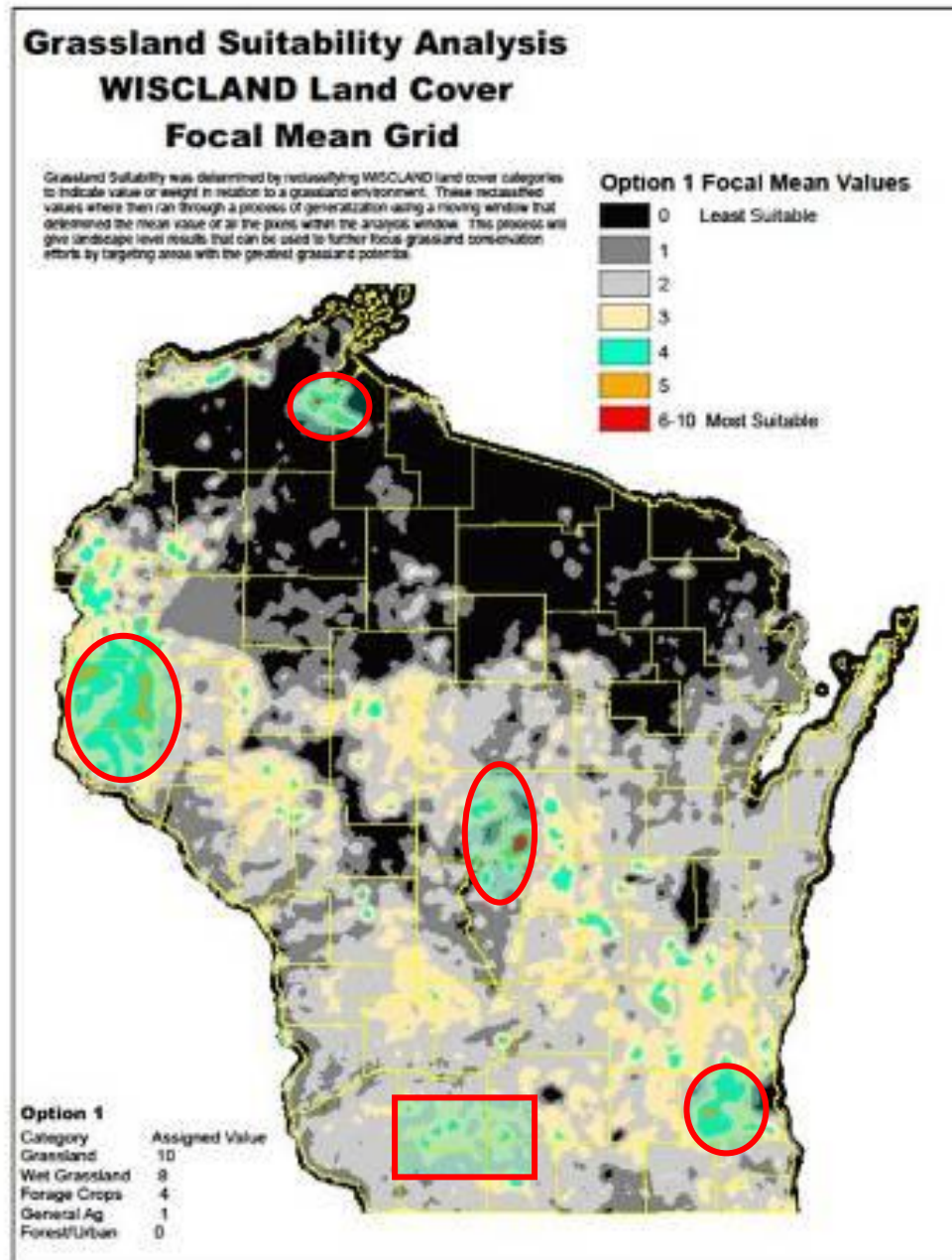
Before
European
settlement

Today



Grassland birds don't just need a grassy territory, they need a grassy landscape.

Grassland Landscapes



The best conservation strategy will be a multi-faceted one that emphasizes practices on private lands:

1. Changes on working lands
2. Farm Bill programs
3. Landscape partnerships
4. Passionate landowners

Thank you!

More questions?

Contact me at:

william.hogseth@wisconsin.gov