

Nuthing Much to Talk About:

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## 2023 Acorn Mast Survey Results

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# Treevia Time!

*Fun Fact: Acorns have been used to make everything from a coffee substitute, oils, breads/cakes, and even jelly.*

And now to a nutty question:  
What is the name for the term describing a diet of acorns?



# Acorn Production

- “The **oaks produce a very moderate quantity** of seed as compared with many other species.” Korstian (1927)
- “From the standpoint of forest regeneration, **the occasional year of high production** probably exceeds all others in importance.” Downs (1944)
- “Trees with **codominant or suppressed crowns produced fewer good acorn yields than those with dominant crowns.**” Sharp (1967)
- “**Freezing temperatures when oaks were in flower was a major factor** affecting acorn production on the Allegheny Plateau.” Auchmoody (1993)
- “**Crown characteristics** such as width, area, and dominance **are correlated with acorn production**” Dey (1995)
- “We were **unable to detect a coherent signal between acorn production and ring growth** for five common oak species” Patterson (2023)

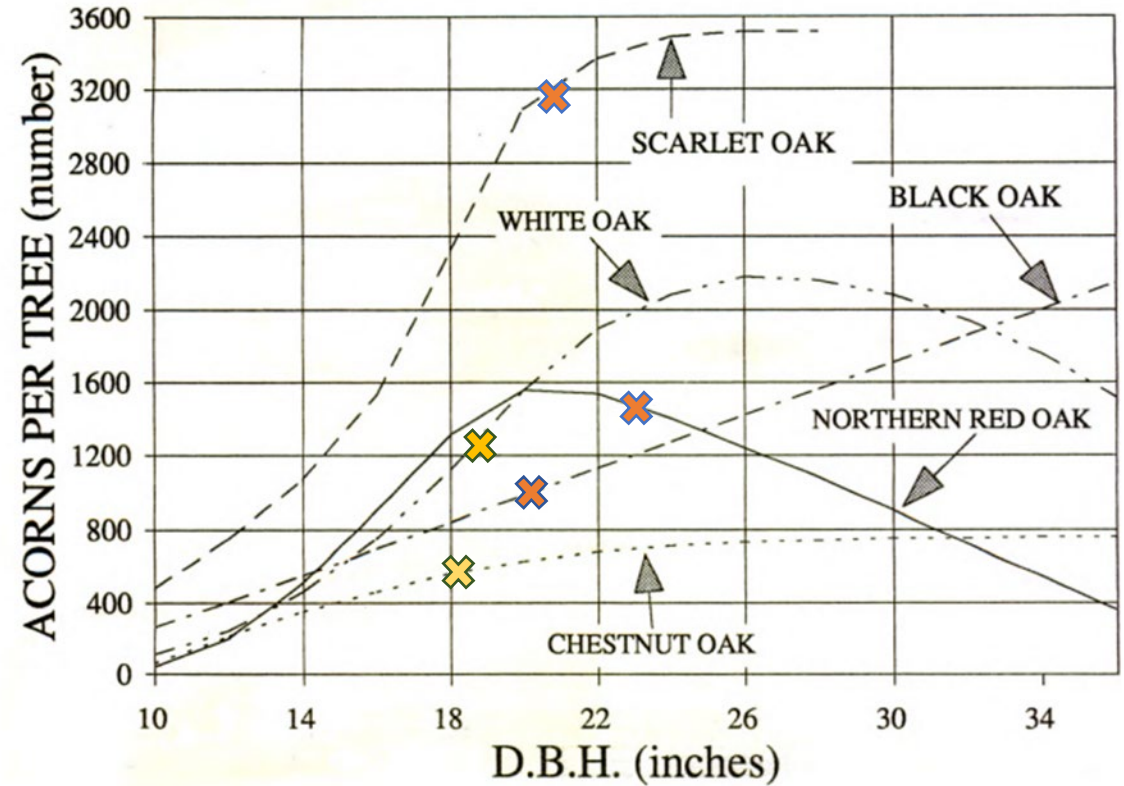


Figure 1.—Average annual acorn production per tree in relation to d.b.h. in the southern Appalachians. (Based on a 7-year study: Downs 1944.)



# Acorn Predation

"..no less than 87% of the original 1080 acorns had been destroyed by animals" Wood (1938)

"...records show that 186 kinds of birds and animals feed on oak products." Van Dersal (1940)

~20% all acorns were infested by *Curculio*. Brezner (1960)

>38% of the diet of white-tailed deer in MO consisted of acorns between 1948-1960. Korschgen (1962)

"Deer consumed 70% of the acorns during peak of mast-fall" McShea (1993)

"Where deer and squirrels were excluded, mice consumed >92% of all surface acorns" Haas (2005)

Many additional papers discuss acorn predation, but it requires more time to research. Black bears, raccoons, squirrels, rabbits, turkey, wood ducks, blue jays, crows, as well as extinct species consume acorns.

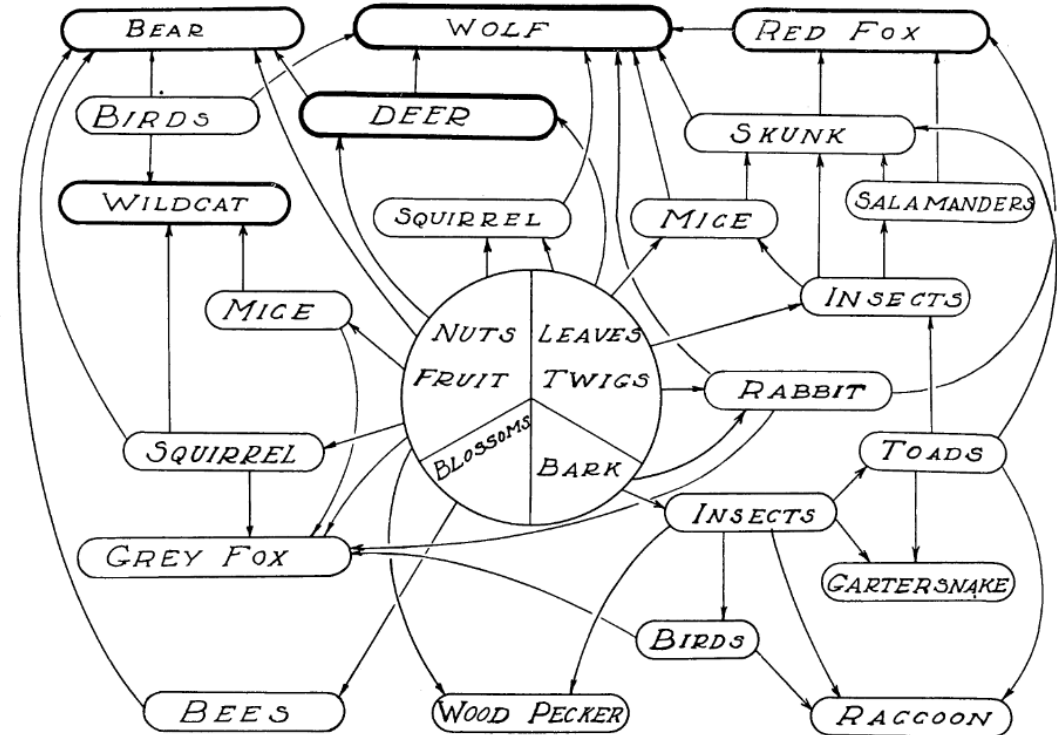


FIG. 2. Showing the food relations of mammals in the deciduous forest as given by Merriam, Korstian, and others. The changes shown in figure 1 are made evident for some of the animals. Shelford (1931)

# Common Terms

PBA- Proportion of Trees Bearing Acorns

- *% trees with at least one acorn.*

PCA- Percentage of Crown with Acorns

- *Crop is considered a failure at <34%.*

HMI- Hard Mast Index

- *Ranking of acorn crop among years.*

☺ more trees producing more acorns

☹ fewer trees producing fewer acorns



L. H. JOUDEL, 1902

INSECTS AFFECTING OAK

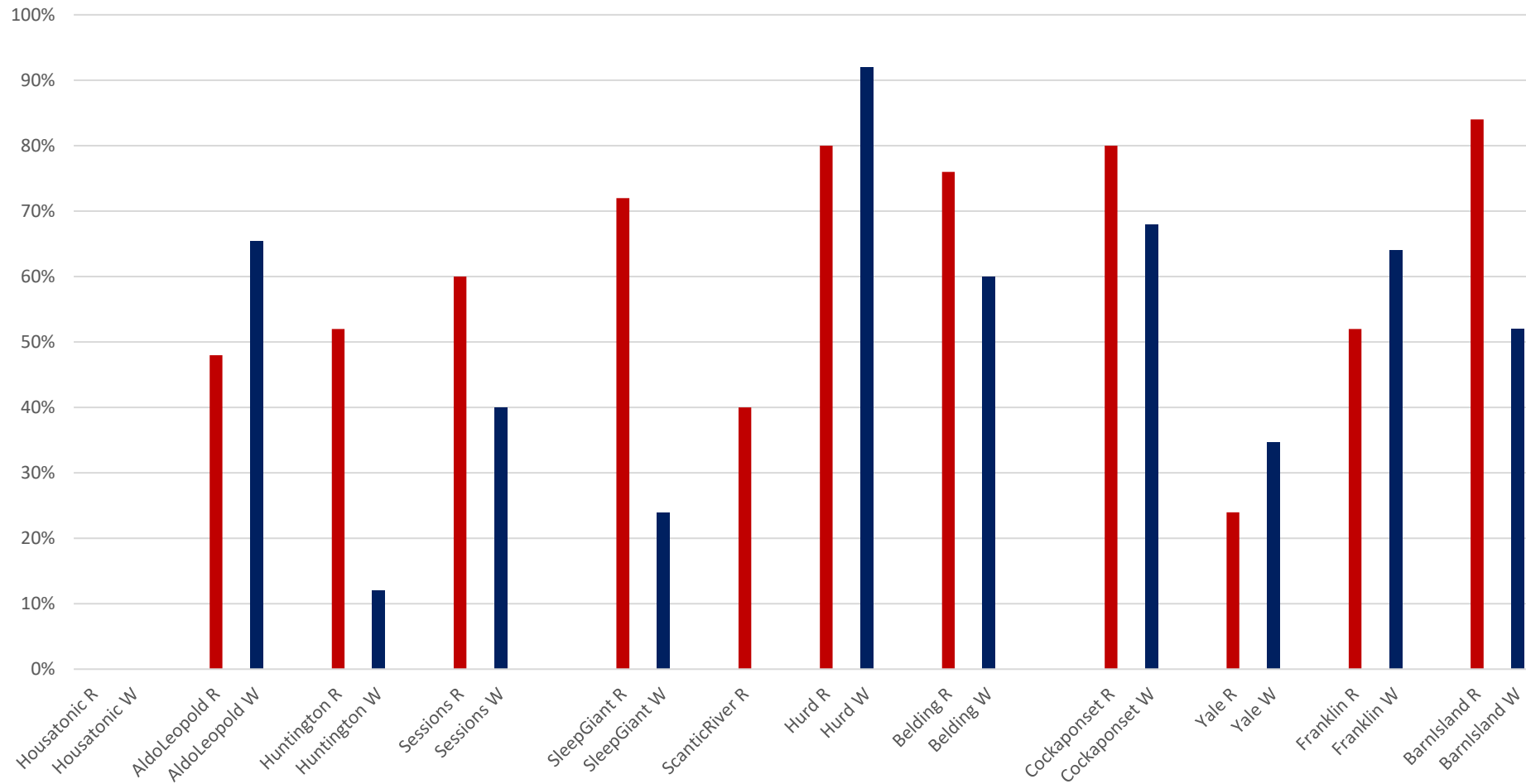
Taken from Felt (1905)

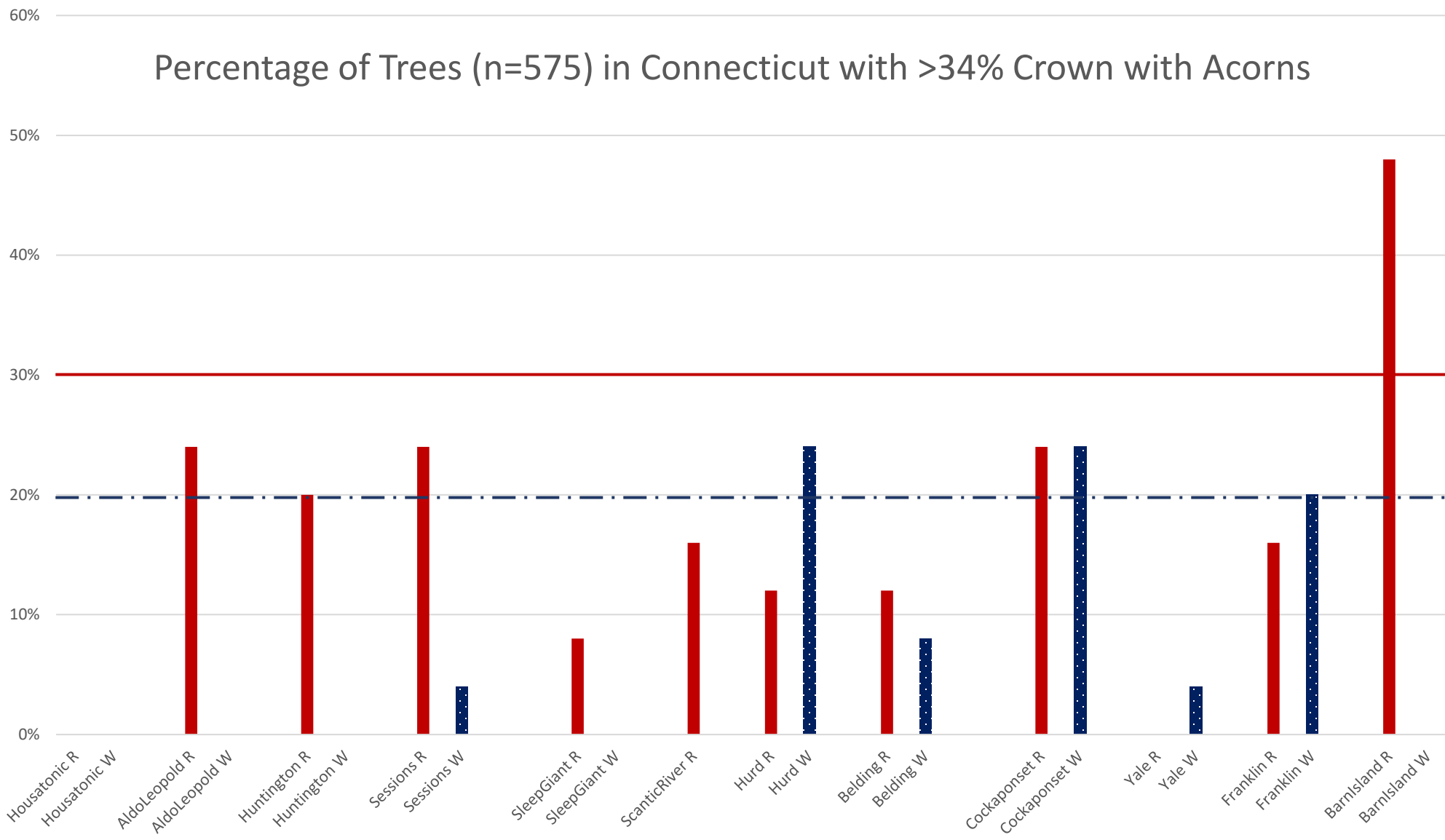




**Greetings from Connecticut!**

## Percentage of oak trees (n=575) in Connecticut bearing acorns in 2023



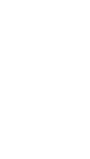




## 2023 Acorn Mast Scorecard!

	White Oak	Red Oak
Housatonic	<b>FAIL!</b>	<b>FAIL!</b>
AldoLeopold	<b>FAIL!</b>	poor
Huntington	<b>FAIL!</b>	poor
Sessions	<b>FAIL!</b>	poor
SleepGiant	<b>FAIL!</b>	<b>FAIL!</b>
ScanticRiver		poor
Hurd	Average	<b>FAIL!</b>
Belding	<b>FAIL!</b>	<b>FAIL!</b>
Cockaponset	Average	poor
Yale	<b>FAIL!</b>	<b>FAIL!</b>
Franklin	Average	poor
BarnIsland	<b>FAIL!</b>	<b>GOOD!</b>





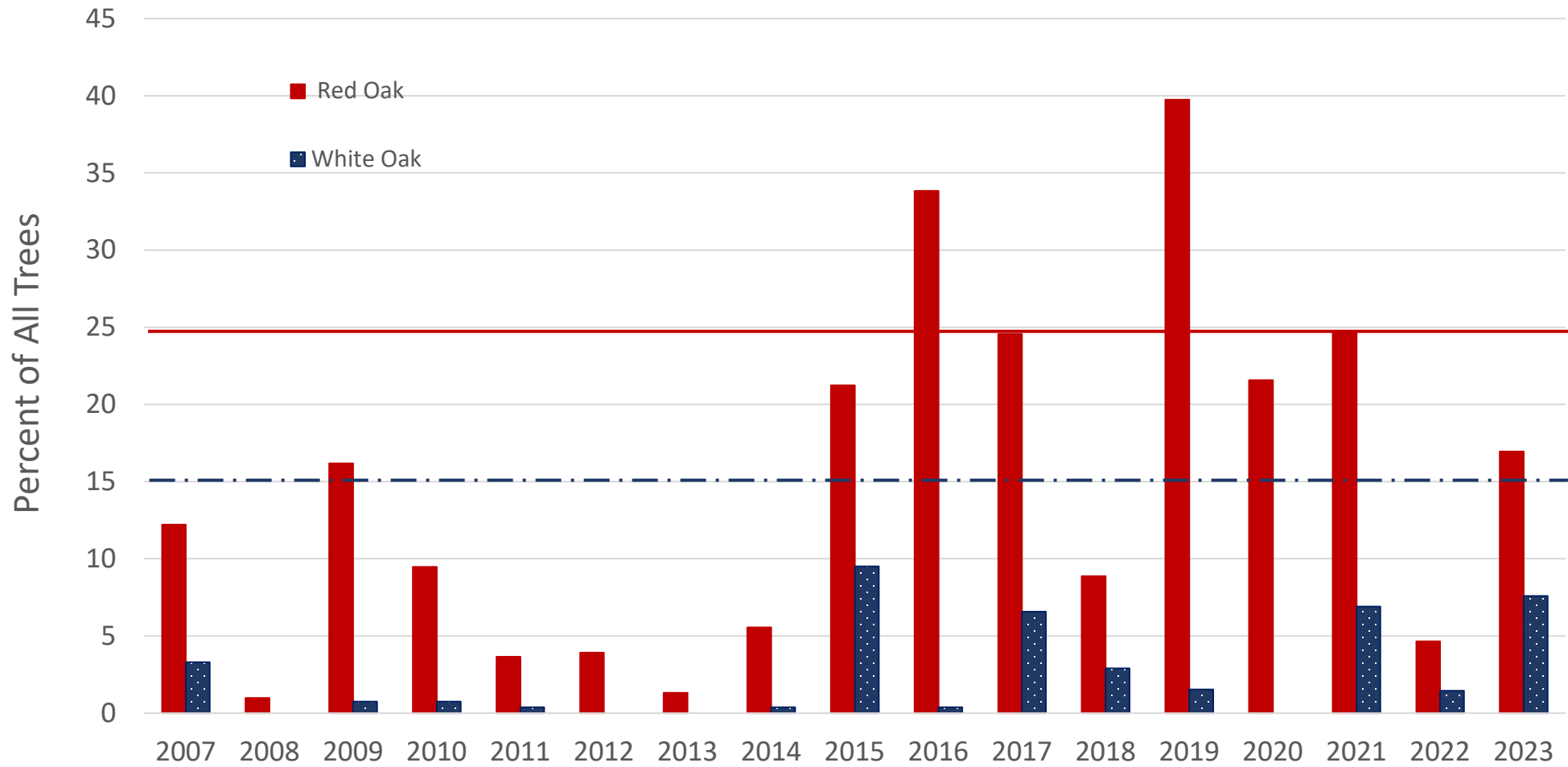
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# Proportion of Oak Trees Bearing Acorns Across Connecticut





# Answer: Balanophagy

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*First coined by*  
**Edward Winslow Gifford**

