



# The LS Index: a rapid assessment tool for foresters

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*LSOG Dialogue*  
*Portland, Maine*



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**Goal:** create a practical tool for forester

# 1. Key lessons from review

- Literature
  - Identify reference points (i.e., is a score of “10” really good or really bad?)
  - Don't include redundant indicators
  - Use few, good indicators (correlate with many other LS attributes)
- Foresters
  - Use few variables
  - Fast
  - Easy to learn

## 2. Selected candidate LSOG indicators

Candidate Indicators	Correlation with Other LS Attributes	Ease of Use
Trees and snags	✓	✓
Large trees and snags	✓	✓
Selected lichen & moss spp. found on tree trunks	✓	✓
Logs	✓	
Large logs	✓	
Shrub density	✓	
Selected bracket fungi spp.	✓	
Selected lichen & moss spp. found on logs	✓	
Selected herbaceous plant spp.	✓	
Soil organic layer depth	✓	
Woodpecker use	✓	

## 3. Gathered field data

*LS Northern  
Hardwoods*



*LS Upland  
Spruce-fir*



*LS Northern  
Pine*



## 4. Built LS index



### Northern Hardwood LS Index

- Large tree density (explained 54% of variation)
- Density of trees with *Collema/Leptogium* spp. (explained 7% of variation)



# L-S Index

An example of how the Northern Hardwoods LS Index works

### Large Tree Score

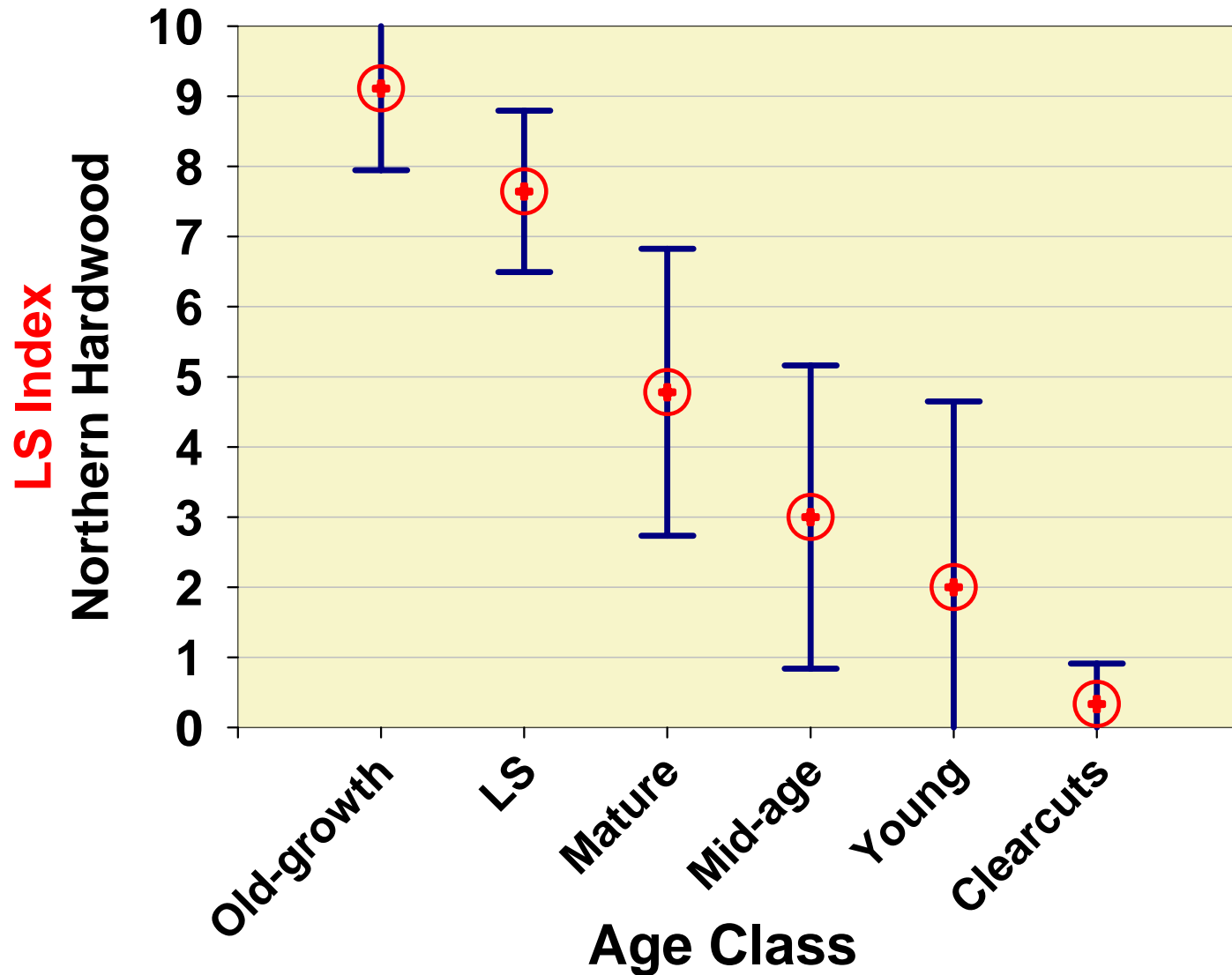
Number of large trees ( $\geq 16$ in DBH) / acre	Percentile of LS stands	Large-tree score
0	< 1	0
1-5	< 1	1
6-9	< 1	2
10-13	< 1	3
14-17	1-9	4
18-23	10-24	5
24-29	25-40	6
30-35	41-50	7
>35	> 50	8

### Lichen Density Score

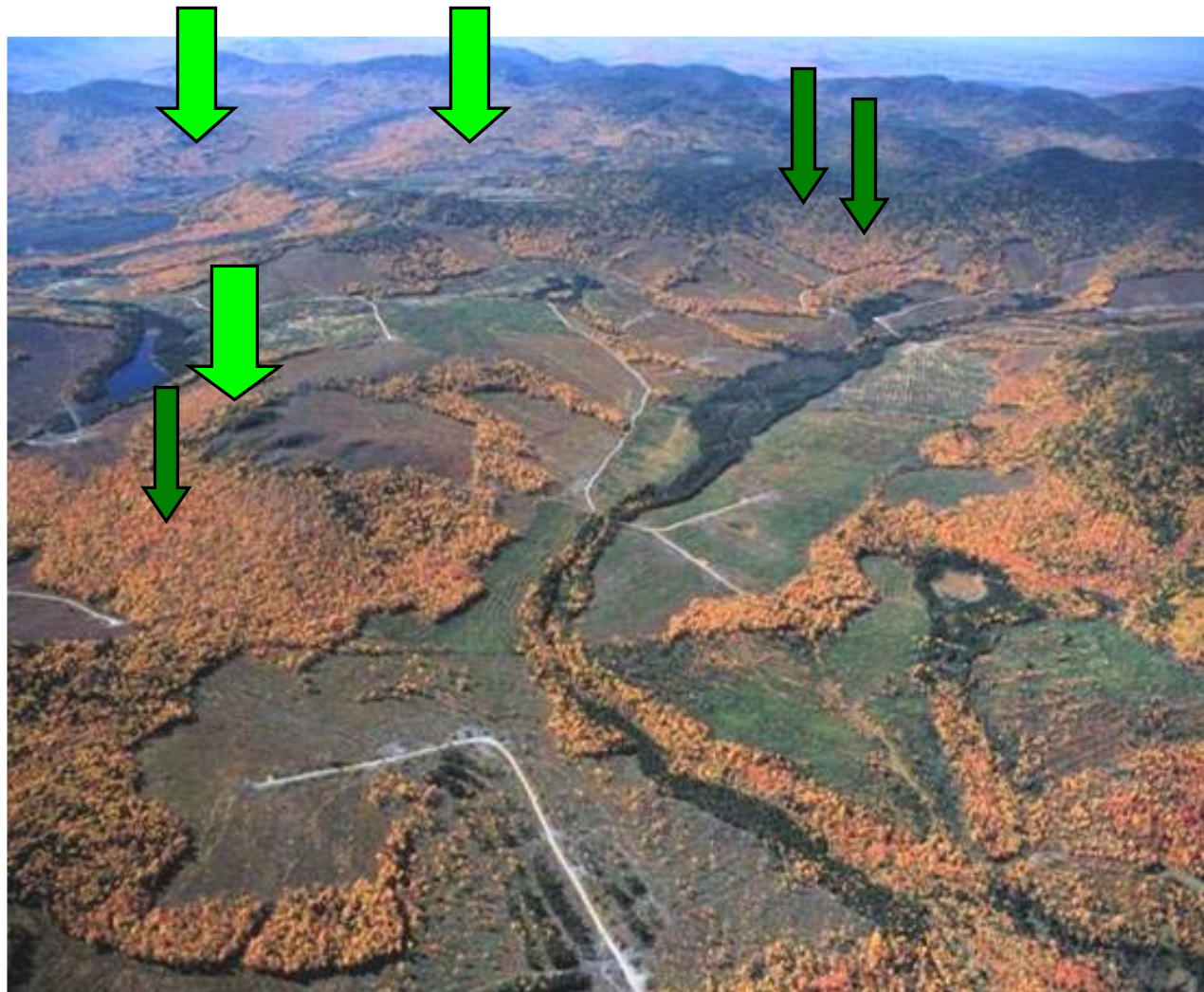
Number of trees w/ <i>Collema</i> / <i>Leptogium</i> / acre	Percentile of LS stands	Lichen Density score
0	< 9	0
1-7	10-50	1
> 7	>50	2

L-S Index = 8 + 1 = 9

# Northern Hardwoods LSI



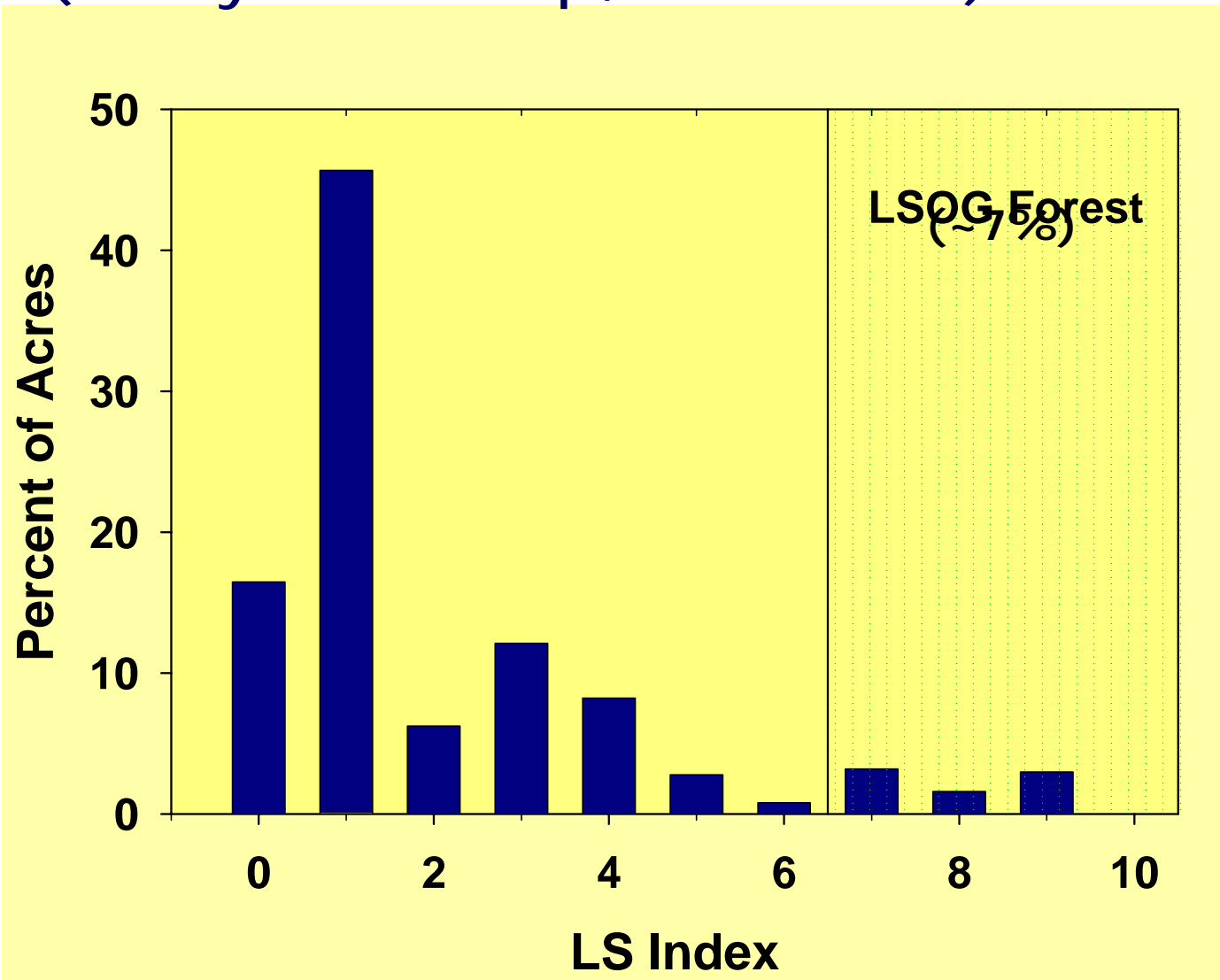
# 1. Screen stands prior to harvest



## 2. Assess the effectiveness of a harvest prescription for LS content



### 3. Build an inventory system for LS stands (Kibby Township, nw Maine)



LS indices are practical tools that can be used to:

- 1) screen stands prior to harvest
- 2) assess the effectiveness of a harvest prescription for LS content
- 3) build an inventory system for LS stands.

## Landowners:

Plum Creek Timber Co., Irving Woodlands, International Paper Co., 7-Islands Corp., TNC, Maine BPL, MeadWestvaco Co., Penobscot Tribal Nation, Town of Eustis.

## Financial Support:

