

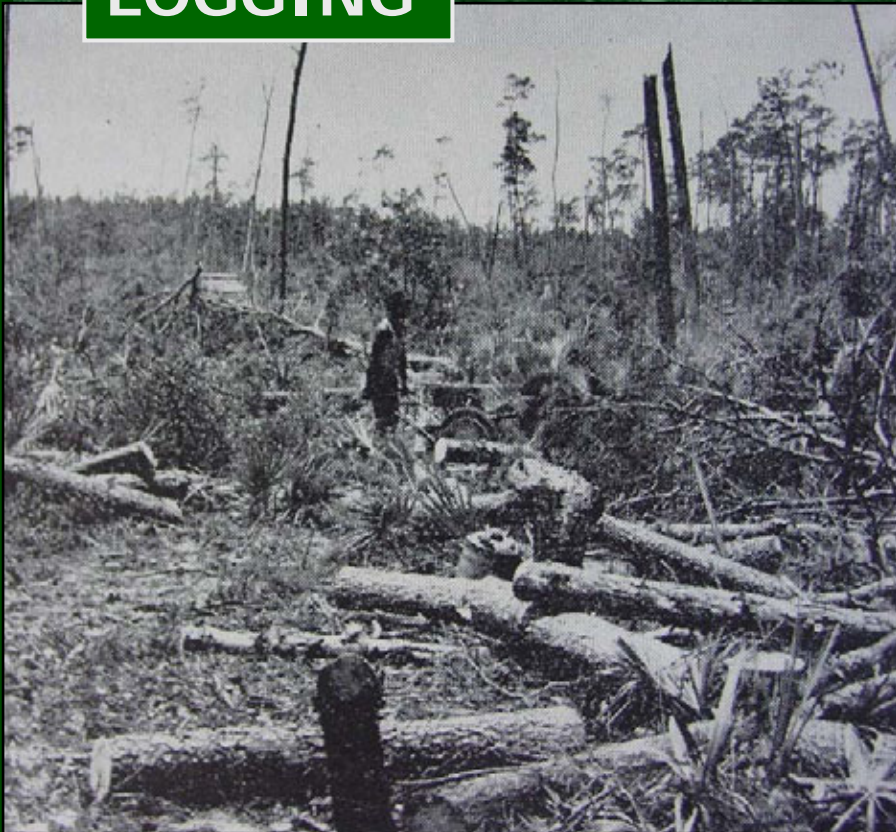
# Past and Evolving Use of Roller Drum Chopping on the Ocala National Forest





# Early Sand Pine Management – 1950's

**LOGGING**



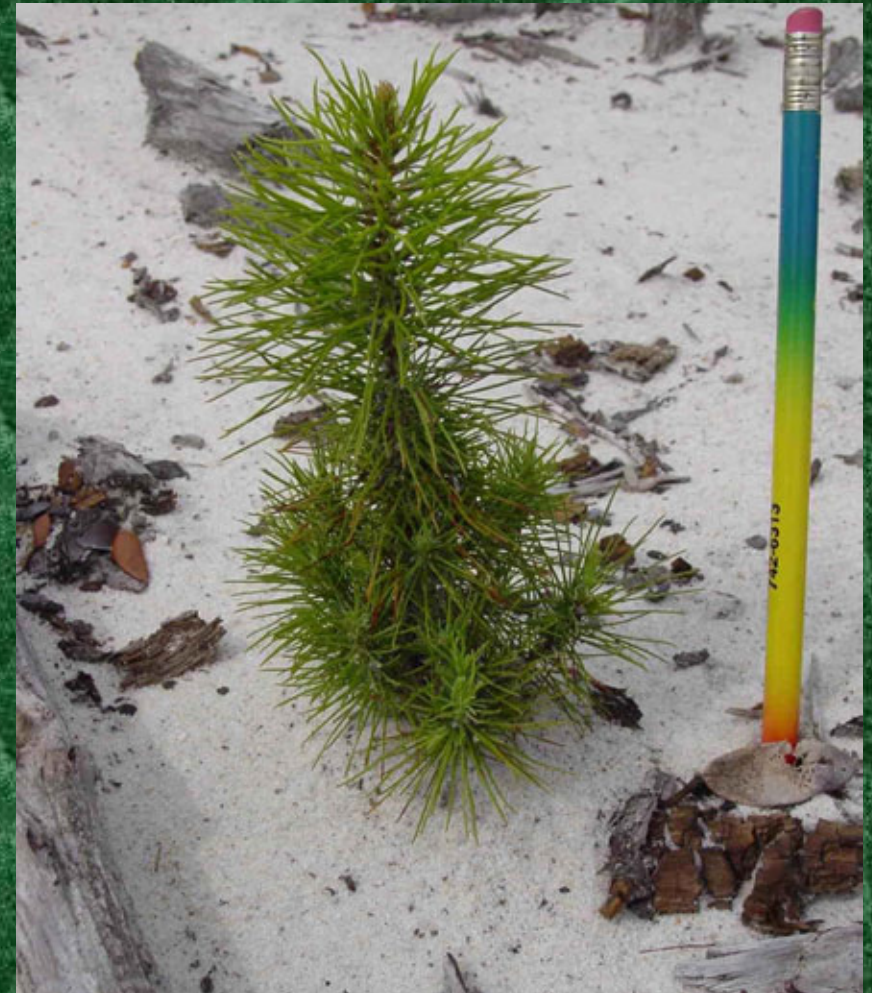
**SITE PREP**





# Current Uses - Sand pine management

Has been used since the 1950's to prepare sites both before seeding or before natural regeneration





**Used to control the amount of woody brush that would regenerate after logging or other mechanical disturbance**



**And used to reduce coarse woody debris generated during the logging operation**



Chopping  
creates  
bare  
ground

Aerial View

6-Year old scrub

Chopped area

Un-chopped  
area





# Facilitates the seeding operation





# Creating scrub jay habitat by regenerating scrub oaks





# Use of Chopping in Flatwoods

For site preparation before  
planting





**Future uses** -Using a light single drum in flatwoods  
for *wildlife habitat improvement* and *fuels reduction*





# Chopping is done by contract

Contractor provides tractor or dozer/ operator and chopper(s)



0-42GK TANDEM ROLLINS RANCH  
IN DIA. 10 FT. CUT; 11 FT. OVERALL  
8 X 10 BLADES; 150 HP SKIDDER REQ  
PTY WT. 29,500 LBS.; FILLED WT. 42,500 LBS.





# Contract Specifications

- Size of equipment to pull chopper
  - Can vary from 20-350 hp
- Size of choppers
  - Drum diameters vary from 20-60 inches
  - Drum width varies from 4-12 feet
- Blade configuration of choppers
  - High-low; offset drawbar; straight or angle
- Single or tandem choppers



Protection clauses in our chopping contracts may include:

## Gopher tortoise burrow protection

15 foot buffer around burrows—  
active or inactive





# Indigo snake awareness and protection:





- Protection of improvements
- Access to areas
- Hauling choppers on forest roads
- Snags





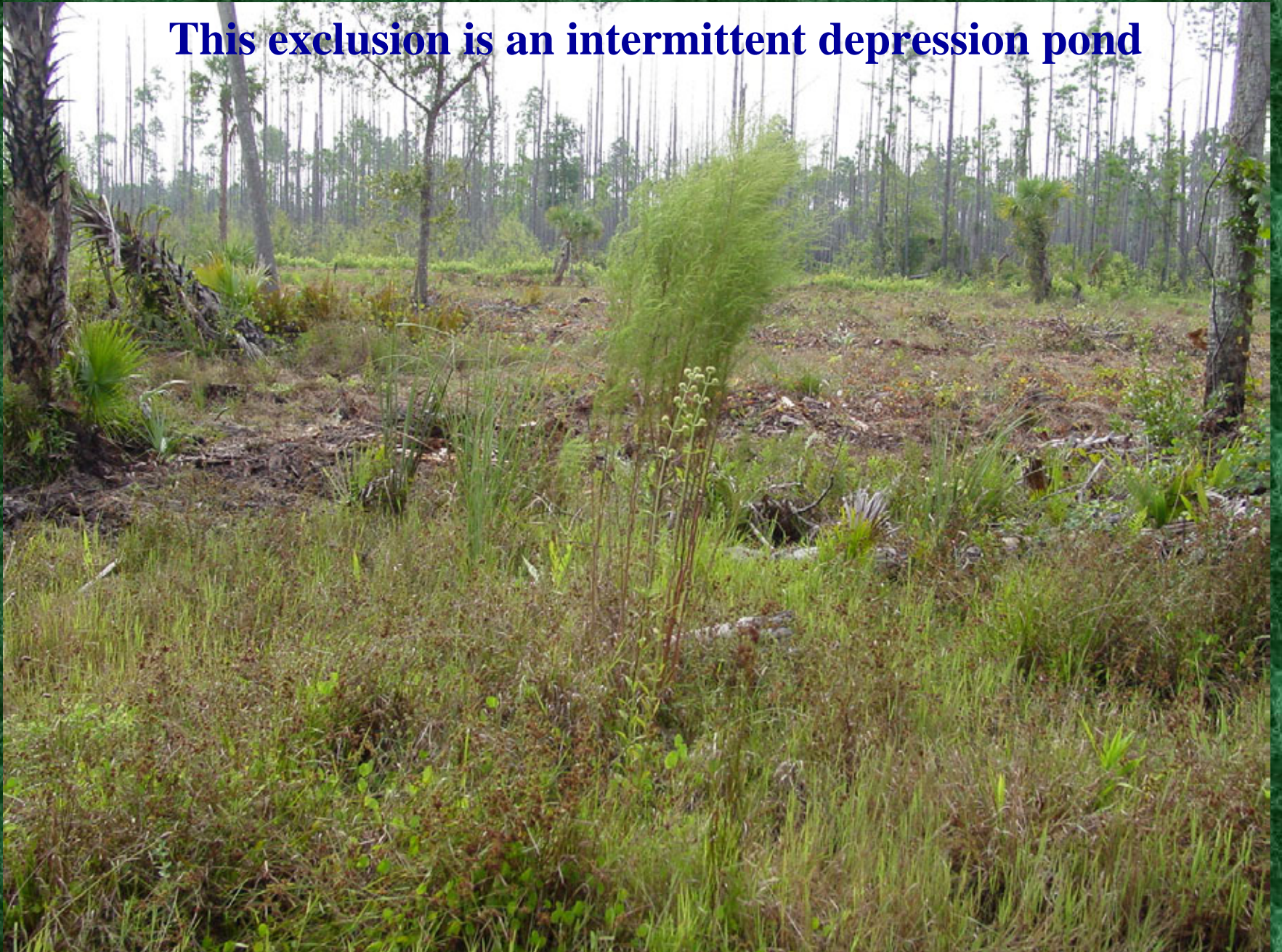
# Leave un-chopped areas for diversity

The "sloppy chop"





**This exclusion is an intermittent depression pond**





# To burn or not to burn . . .

**Burn**

vs.

**No burn**

Burn then chop

Chop then burn





# Effects of Chopping





# Effects of Chopping -- plants

- Favors herbaceous over woody





# How Chopping Effects can vary:

Single drum, light to medium sized chopper, will knock woody plants back to ground level where after they re-sprout and continue growth



SHM7-36 CHOPPER 8 IN.  
WELDED BLADES, HINGED D/B

7 FT. CUT; 9 FT. OVERALL WIDTH  
36" DRUM DIA; EMPTY WT. 7,000 LBS.  
FILLED WT. 11,000 LBS. 125 HP REQ.



Tandem drums, medium to heavy choppers, will reduce the amount of woody plants and create some bare ground

B10GK TANDEM CHOPPERS  
PULLED BY SK250 SUPERTRAK  
60 IN. DRUM DIA.; 10 FT. CUT;  
11' 11" OVERALL ; 200 HP REQ  
EMPTY WT. 38,000 LB ; FILLED WT. 59,000 LB.  
HI-LO BLADES  
SPRING LOADED DRAWBAR





# Chopping Effects:

- Reduces coarse woody debris





# Chopping Effects – bare ground

- Creating bare ground area in the scrub has important implications for many scrub animals such as scrub jays, sand skinks, scrub lizards, and gopher tortoises.





- And many T&E plants such as calaminthia and bonamia





# Effects of Chopping – Soil Disturbance

Varies by:

- type, size, and number of drums
- number of passes made by choppers
- amount of debris and brush on site
- inherent erodability of soil



# Chopping and Soil Disturbance



- Generally, the least soil disturbance of any mechanical treatment after mowing
- Soil Displacement\* is minimal

\*Soil displacement refers to soil being gouged, scraped or pushed from its natural position by mechanical means.



# Chopping Effects – affected by soil moisture

Moist soils – less effect

Dry soils – greater effect

Flatwoods site





# Chopping Effects – affected by soil moisture

- Moist soils – less effect
- Dry soils – greater effect



Scrub site



# Time of Year

- On Ocala NF, most chopping is usually done in late summer thru the fall
- Chopping done for scrub regeneration is usually done in early winter
- These times best coordinate with avoidance of ground nesting birds and least herp vulnerability



The next series of slides illustrates areas we would chop for various reasons and areas we wouldn't chop and why





Chopping is good site preparation after timber harvesting in the scrub





This kind of area may be considered for scrub oak regeneration to create new habitat for scrub jays





**This longleaf pine-wiregrass site is easily maintained with just burning.**

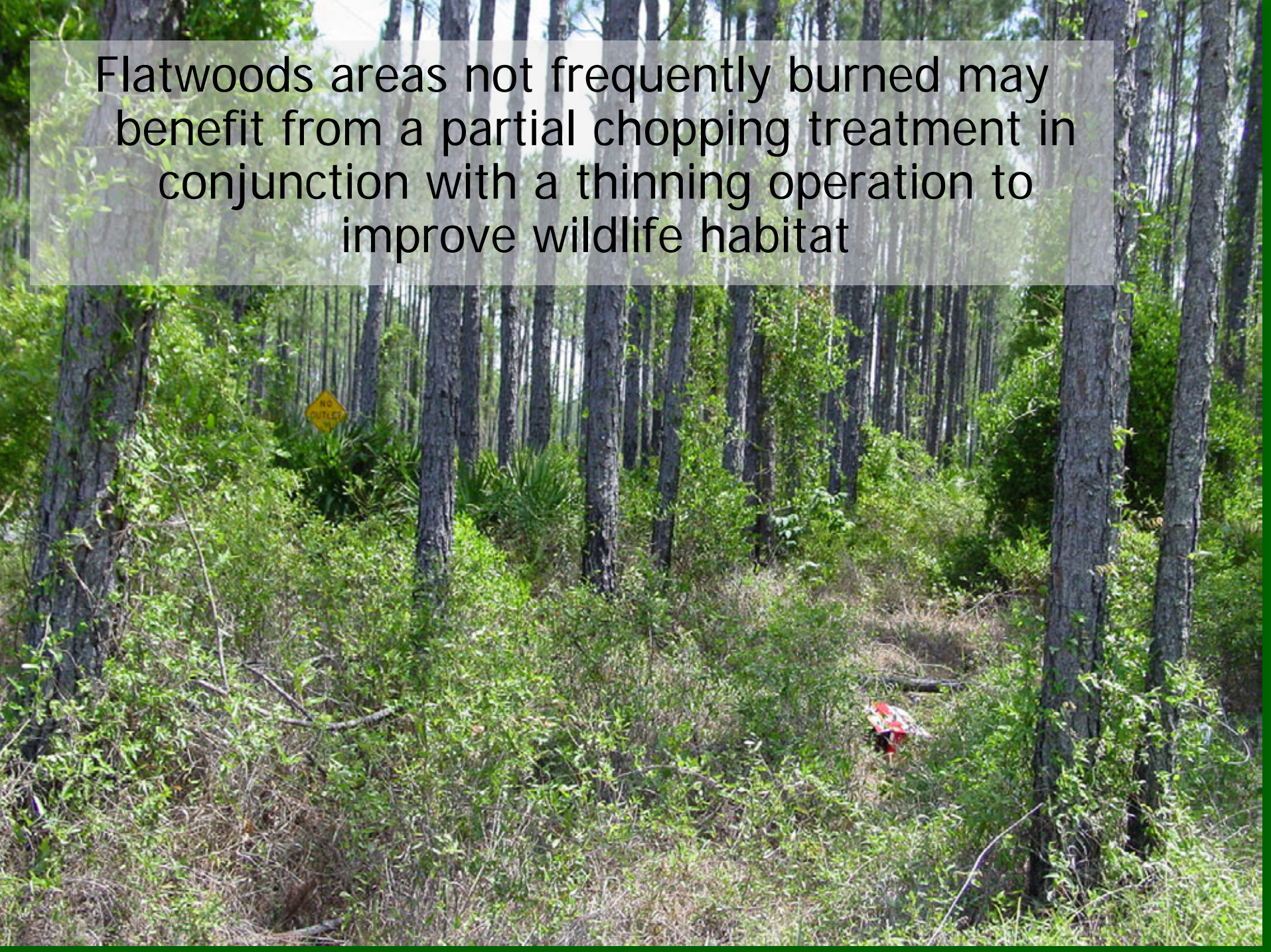




**On longleaf-wiregrass sites, if oaks become a problem we prefer mowing or herbicides on these sites.**



Flatwoods areas not frequently burned may benefit from a partial chopping treatment in conjunction with a thinning operation to improve wildlife habitat







Urban-interface areas are often not burned as regular as we would like. Chopping before burning can reduce fuels and make it a less risky burn that may be accomplished within wider parameters.





We prefer managing light palmetto roughs with  
fire only



## In Summary:

- Chopping is used on the Ocala NF for
  - Site preparation in scrub & flatwoods
  - Restoration of herbaceous species in flatwoods (in conjunction with prescribed burning)
  - Scrub jay habitat improvement in scrub
  - Fuel reduction and facilitate prescribed burning in flatwoods and urban-interface





## In Summary:

- There are many different sizes and configurations of rolling drum choppers.
- They are each tailored for a particular use and varying site conditions.