

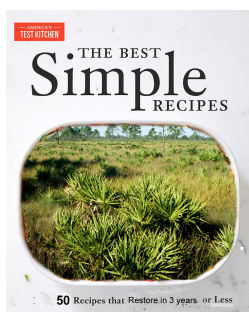
## Rx for Restoration Roller-chop with Rx Fire



Paula Benshoff  
Robert Dye  
Jean Huffman



(Yes, this was  
ALL our PPE in  
1981.)



- Weather
- Site History
- Equipment Operators
- Micro elevation variation
- Species Composition



Deer Prairie Lane  
1984

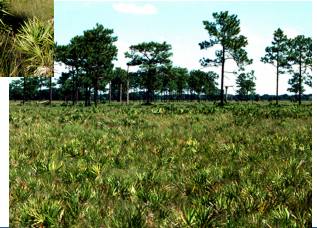


Deer Prairie Lane  
2003

In the beginning...



Cecil Webb Wildlife  
Management Area



Rusty Pot Ranch -  
Manatee County

What is Restoration Roller-chopping?

RESEARCH ARTICLE  
Restoration of  
Florida Pine  
Savanna:  
Flowering Response  
of *Lilium catesbaei*  
to Fire and  
Roller-Chopping  
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Traditional =  
Siviculture &  
Range Mgmt



Roller-chopping destroys native groundcover



## What is Restoration Roller-chopping?

Table 1. A simplified comparison of alternate methods of roller-chopping. Methods of roller-chopping application for silviculture and range-management ("traditional") are variable and depend on management goals, which may range from land-clearing for the elimination of native vegetation to range-improvement (where both goals and methods may be very similar to restoration roller-chopping).

Method of Roller-Chopping Application	
Traditional Roller-Chopping	Restoration Roller-Chopping
More than one pass of chopper (usually 2-3 passes)	Only one pass of chopper
Chopper-drum heavily weighted	Chopper-drum not heavily weighted
Maximum reduction in woody species	Moderate reduction in woody species
Usually much soil disturbance. Blades cut into and turn over soil.	Very little soil disturbance. Blades usually do not reach surface of soil, or only cut but do not turn over soil.
Usually much loss of existing herbaceous vegetation	Very little loss of existing herbaceous vegetation

Natural Areas Journal 13

## To chop or not to chop....



Rx=Repetition of lightning season burns



St. Joe Buffer Preserve











Palmetto Prairie



1927—Palmetto Prairie, Melbourne, FL

### To chop or not to chop....

#### 1. Have you researched site history?

- 1940s aerials—University of FL, ArGis
- Original 1800s surveys
  - Land Boundary Information System (LABINS)
- Previous land managers
- Current employees
- Adjoining landowners
- File cabinet
- Burn databases

[https://www.labins.org/survey\\_data/landrecords/landrecords.cfm](https://www.labins.org/survey_data/landrecords/landrecords.cfm)

### To chop or not to chop....



#### 2. Have you applied fire at least twice within optimum burn return?

### To chop or not to chop....



#### 3. Still palmetto-dominated?

### When it's time for a plan...

#### 1. A good Rx by experienced practitioners





## 2. Select a reference site



Natural community types included in the first phase of the Reference Natural Community project, and the number of sites identified and described for each type:

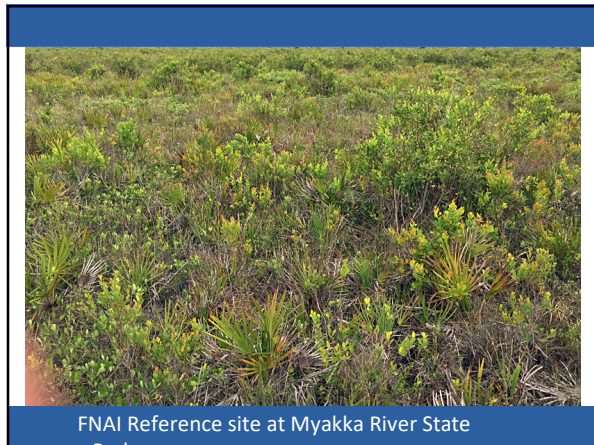
Dry Prairie	3 sites	Upland Pine	8 sites
Misc. Flatwoods	11 sites	Wet Flatwoods	9 sites
Sandhill	10 sites	Wet Prairie	5 sites
Scrub	10 sites	Floodplain Marsh	2 sites
Scrubby Flatwoods	8 sites	Basin Marsh	3 sites

FLORIDA  
Natural Areas  
INVENTORY

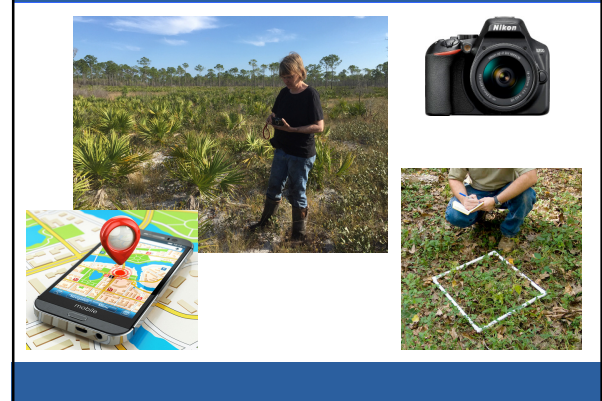
Selected Images of Reference Natural Communities

Dry Prairie   Misc. Flatwoods   Wet Prairie   Sandhill   Scrub

[Go directly to the interactive map](#)



## 3. Establish monitoring protocols



## 4. Evaluate/modify canopy density



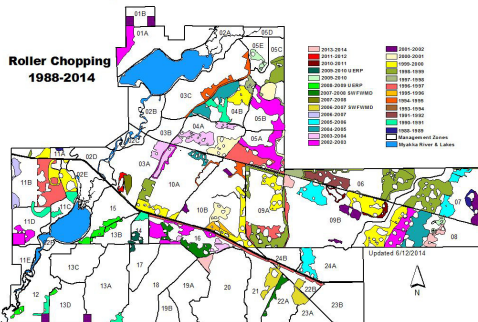
## 5. Select areas to be chopped

- Don't chop large areas.
- Know your site history. Re-chopping previously chopped areas can cause serious harm
- Prioritize areas that have significant seed source close by.



## 6. Keep good records!

### Myakka River State Park



## 7. Choose the appropriate equipment for the site.



## Chop & Burn or Burn & Chop?



Burn the area to be chopped less than 6 months pre-chop.

## Chop & Burn or Burn & Chop?

- Prevents loss of seedbank with subsequent burns.
- Prevents intense heat on soils, fungi and other micro-organisms.
- Less residence time prevents extended smoldering.
- Reduces risk of pine mortality due to smoldering duff.
- Provides equipment operator with better view.

## When to Chop?

- Growing-season chops are most effective.
- Burn spring, then chop summer to best impact palmettos.
- Chop when wet enough to get maximum palmetto trunk penetration, but not so wet as to cause wheel-slip or ground disturbance.
- Chopping during dry times of the year won't attain palmetto trunk penetration and it risks wiregrass destruction.

## Choose your equipment operator carefully!

An ad posted on a Facebook Page:

**"Does anyone need a job? Its operating a bulldozer for wildfire mitigation roller-chopping. Easy work. No skills necessary."**



### Choose your equipment operator carefully!

1. Understands the difference between Restoration-roller-chopping and other types.
2. Can identify invasive plants from afar.
3. Is sensitive to animal sign such as gopher tortoises, burrowing owls, & ground-nesting birds.
4. Knows the capabilities of the equipment.
5. Can be relied upon to stop often to assess chopping effects and inspect equipment.
6. Can be relied upon to choose the best locations to leave unchopped for mosaic.

### Finally: Roller-chopping 101

1. Be sure area is well marked. Don't just rely on maps. Go out in field with contractors.



### Finally: Roller-chopping 101

2. Carefully set your pattern so as not to double-chop.



### Finally: Roller-chopping 101

3. Consider fire shadow when planning your pattern.



### Finally: Roller-chopping 101

3. The objective is as little ground disturbance as possible.
4. Don't chop through invasive species
5. Don't chop through wetlands, no matter how small.
6. Leave a mosaic of chopped & unchopped for diversity.
7. Consider planting plugs or distributing seed after chopping if lack of diversity continues.

### Epilogue

Follow treatment with a lightning season burn, one to two years post chop.





## Epilogue

Continue to burn every two to three years or less, prioritizing lightning season burns.

