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# Investigation of red-cockaded woodpeckers in Virginia: 2014 report

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The Center for Conservation Biology
College of William and Mary
& Virginia Commonwealth University

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Cover Photo: Male nestling woodpecker peers out from nest cavity. Photo by Bryan D. Watts

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**EXECUTIVE SUMMARY**

Red-cockaded woodpecker recovery at the Nature Conservancy's Piney Grove Preserve has been a monumental achievement. Over the past 11 years, aspects of monitoring and management has worked together to more than triple the number of breeding groups from a modern low of 3 in 2000 to the 14 groups breeding there now. The current level of success has culminated from more than a decade long path of habitat management, cavity tree management, woodpecker population monitoring and translocation. It has been through the intelligent decision making and skill in the field from all partners involved in Red-cockaded Woodpecker management in Virginia that has allowed extraordinary measures of success such as population growth, an increase in the number of pairs breeding, and high annual numbers of young produced.

This past year marked another important leap forward in the overall success of the Piney Grove Preserve with the gaining of 3 additional breeding pairs. The new breeding pairs were a result of the pioneering of one pair of birds into a naturally excavated site, two pairs breeding in previously unoccupied artificial recruitment clusters, and one intra-cluster budding event where two pairs of birds produced young within the same cluster. It is the first time that a breeding cluster has been established from a voluntary pioneering event by Red-cockaded Woodpeckers without the help of an artificial recruitment clusters in Virginia since the 1980s.

A total of 83 Red-cockaded Woodpeckers were identified within the Piney Grove Preserve in 2014. This included 60 birds that were hatched at Piney Grove from previous years and 23 fledglings produced during the 2014 breeding season. There were 56 birds distributed into 13 breeding clusters and one cluster comprised only of males during the breeding season. The total number of adult birds detected in the breeding season set a new high mark by beating the previous year number of 52 birds. One long-term, historic cluster did not breed this year due to loss of females between winter and spring and another breeding cluster failed during the nestling phase and did not renest. In winter, there were 66 birds roosting in 14 different clusters. This includes 15 of the 23 birds fledged in 2014 and 52 adult birds hatched in previous years.

The Red-cockaded Woodpecker population continues to set high marks at Piney Grove Preserve for total breeding groups, numbers of individuals, and number of young produced annually. This collective result was only made possible from habitat improvements implemented over time. We have witnessed the population transform from one that required augmentation with translocated individuals to promote growth just a decade ago to a population that is positively maintaining itself through internal production and recruitment.

## BACKGROUND

### Context

The Red-cockaded Woodpecker (*Picoides borealis*) is a federally endangered species. Within the past 100 years Red-cockaded Woodpeckers have disappeared completely from the northern portion of their breeding range. Historically, this species was recorded north into New Jersey and Pennsylvania. As recently as the 1930's and 1940's resident birds were known from the open maritime forests of Maryland. Since the recent loss of habitat in Kentucky, Virginia has supported the only population north of the Carolinas. In Virginia, breeding has continued to the present time but the number of both sites and birds has declined dramatically over the past 40 years. As recently as 1977, 23 clans were known scattered across 5 counties. In 1980, all clusters determined to be active in 1977 were surveyed in preparation for an investigation of habitat use (Bradshaw 1990). Of the 23 original clusters, only 9 were still forested. In the 4 years from 1977 to 1980, more than half of the known state population had been lost. By 1990, only 5 of the original 23 clusters detected in 1977 were still active. By 2000, this number had declined to only 2 clusters. During the breeding season of 2002, Virginia supported only 2 breeding pairs and 2 clusters with solitary males.

The Red-cockaded Woodpecker remains in eminent danger of extinction within Virginia. However, in 1998 a multi-organizational partnership was formed under the primary mission of stabilizing the population and restoring it back to pre-1980 levels. During that year, The Nature Conservancy negotiated a deal with Hancock Timber to purchase 1,100 ha of land supporting the last 3 known Red-cockaded Woodpecker breeding groups. The site has since been expanded and now includes 1,270 ha of pine land. The tract, located in Sussex County is named the Piney Grove Preserve and lies in the heart of the species former Virginia range. The site has become the nucleus for restoration work in Virginia.

Restoration of the Red-cockaded Woodpecker population in Virginia will require a long-term commitment and the use of aggressive techniques that have proven successful further south. Habitat management, population monitoring and management, and translocation of birds into the population have been ongoing since 2000 and have had dramatically positive results. Since 2001, the total population and the number of potential breeding clusters (defined as having 1 adult male and 1 adult female) have nearly more than tripled (Figure 1). In 2014, the Piney Grove Preserve population reached a new high of 13 potential breeding clusters and one other active cluster comprised of only males.

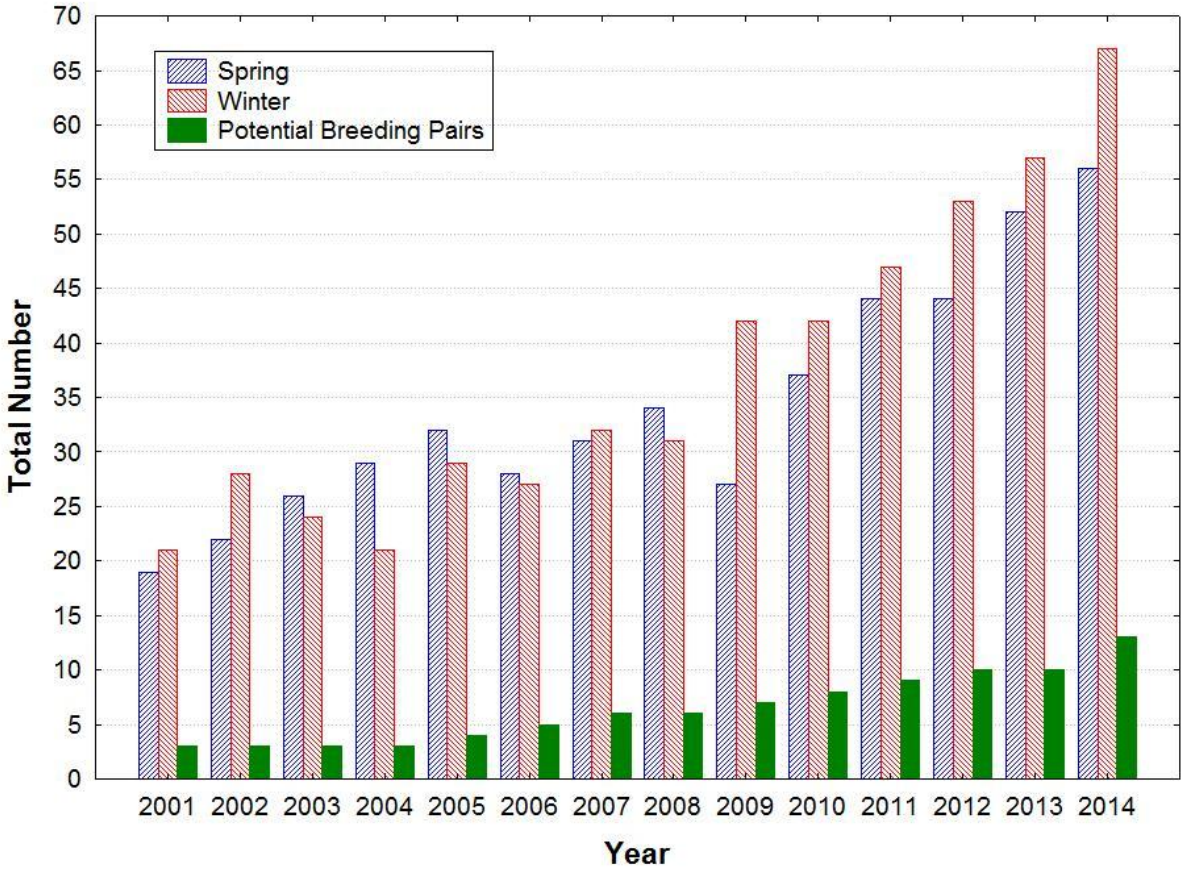


**Figure 1.** Spring and winter population counts and the number of breeding groups for Red-cockaded woodpeckers at the Piney Grove Preserve. The population reached highs for all three metrics in 2014.

**Objectives**

The primary objective of this ongoing project is to monitor the population of Red-cockaded Woodpeckers within the Piney Grove Preserve. A secondary objective is to collect information relevant to the continued management of birds and their habitat in Virginia. Specific objectives include

1) To determine the number and identification of all birds resident within Piney Grove during the 2014 calendar year.
2) To monitor breeding activity in order to document productivity and allow for the unique banding of all individuals within the population.
3) To monitor and manage nest trees and cavity condition.

## METHODS

### Description

Piney Grove Preserve contains an old-growth loblolly, pond pine, and short-leaf pine community in Sussex County, Virginia. The site supports a complex of moderate-age pine stands interspersed with pockets of older trees ranging from 80 to 140 years. Historically, the site was managed for saw timber on a relatively long rotation by Gray Lumber Company. The site was purchased by Hancock Timber Resource Group in 1993. Under Hancock Timber's management, site quality was improved by removing the dense hardwood understory. The Nature Conservancy purchased the tract from Hancock Timber in 1998. The Nature Conservancy has developed an aggressive management program designed to restore the disturbance regime necessary to return the site to an open pine savannah.

A single clan of Red-cockaded Woodpeckers was discovered within this site in 1985. A second clan was discovered in 1994 and a third in 1995. These 3 clans still remain active. Since 1999, there have been 12 recruitment clusters established by The Nature Conservancy through the installation of artificial cavities.

### Banding

Being able to identify individual birds is an essential element of the monitoring program. Banding individuals with unique combinations of color bands allows for their identification and, for this reason, has been one of the project goals.

Adults – Adult birds are captured using a specialized net mounted on a telescopic pole shortly after they roost at dusk. The birds are "roosted" and the net is raised in place and the bird is enticed out into the net. Net poles are only effective on cavities below 50 feet in height. In 1998, Don Schwab banded 10 Red-cockaded Woodpeckers within the Piney Grove complex. In 2000, 7 of these birds were still resident within Piney Grove. During 2000, Bryan Watts banded an additional 4 adult birds, leaving only 2 unbanded birds in the population (1 each in clusters 3 and 5). The 2 remaining unbanded adults within clusters 3 and 5 were lost during 2004 and 2005 respectively. Since this time, nearly all birds within the population have been individually identified by unique, color-band combinations. The only birds that remain unbanded are nestlings that could not be removed from nest cavities and have not been captured after fledging.

Nestlings – For logistical and safety reasons, banding of Red-cockaded Woodpecker nestlings is restricted to an age window of 5-10 days. Because of this restriction, close monitoring of breeding activity is essential to successful banding. During the early portion of the breeding season, both the breeding pair and the nest cavity from each cluster area were monitored closely to determine clutch initiation dates. Where cavity height permits, breeding status is determined via the use of a miniature video camera mounted on an

extendable pole. The pole can accommodate cavity heights to 50 ft. For cavities exceeding that height, breeding status was determined by visual monitoring of activity at the cavity. After dates of incubation were determined, an estimated hatching date was calculated. Nest cavities were monitored closely around the time of expected hatching to verify hatch dates. The window for banding was determined from estimated hatching dates.

All nestlings were banded during the recommended age window. Nest trees were climbed with ladders and nestlings were extracted from cavities using a noose apparatus. Nestlings were then lowered to the ground, banded, and returned to the cavity. Each nestling received a unique combination of color bands as described above. Nestlings were weighed at the time of banding using a Pesola spring scale. In the first 2 weeks after fledging, birds were identified and sex was determined by crown plumage.

**General Observations**

As in previous years, 2 systematic surveys of all birds within Piney Grove were conducted to identify individuals and to determine distribution. Surveys were conducted in the early spring prior to the expected breeding window and in early winter after the expected dispersal period. All clusters were visited before dawn to count the number of individuals emerging from roost cavities and/or joining emerging birds to determine clan size. Birds were followed while foraging so that color band combinations could be read with spotting scopes. Biologists systematically worked through all sites over a period of days until all individuals were identified. Once clutches were laid, observations were made at the nest cavity to identify the breeding male and female for each site.

**Cavity Monitoring and Management**

RCW cavity trees at Piney Grove are monitored each year to document changes in condition and use by RCW and other animals. Cavity trees are tagged with individual numbers, painted with a double white band, and mapped to facilitate monitoring. Each tree is assigned to a cluster area based on the proximity to an existing cluster and the RCW group that constructs the cavity. The cluster area assignment for a cavity tree does not change according to the RCW clan using the tree but rather is considered "captured" by the clan. To differentiate multiple cavities within a tree, each cavity, starting with the highest above ground, is assigned an alphabetical identifier. When a new cavity is discovered on a cavity tree the letter attributed to other cavities on the tree may change accordingly. Cavity monitoring and management consists of two parts: cavity tree status and cavity competitor inspection and removal. Monitoring and management in 2014 began in April and continued through June.

**Cavity Tree Status –** Cavity trees were visited at least once to evaluate tree condition and cavity characteristics. Changes to cavity status or cavity tree conditions were recorded as necessary on subsequent visits. Tree conditions that were recorded included: live or dead;

standing, broken, or fallen; evidence of beetle or other insect damage; lightning strike; and indications of red-heart disease (*Phellinis pini*).

Characteristics of each cavity were observed with binoculars and recorded to describe the physical condition of the cavity. The characteristics observed included: cavity origin and condition, the entrance and plate size, and the activity status. Activity status was determined by the presence or absence of chipping, fresh or recent sap flow, and dry sap. See Appendix I for 2012 cavity characteristics recorded for each cavity. Characteristics were categorized as follows:

Cavity

Natural – Constructed by an RCW
Artificial – Cavity is a box installed in the tree

Status:

Unavailable - Cavity is no longer available
Active: Chipping on resin wells to some degree with fresh or recent sap flow
Possibly active: Slight but inconclusive evidence of RCW activity
Inactive: No RCW chipping or sap flow
Relic: No RCW activity for 4 or more years

Condition:

Complete – Natural cavity that is excavated enough for an RCW to occupy
Complete (New) – Newly completed since last update
Advanced Start: >10 centimeter depth but not completed
Start: 1-10 centimeter depth
Sub-start: Less than one centimeter depth
Insert – Artificial cavity

Entrance:

Unavailable - Cavity is no longer available
Normal - Normal size entrance
<2X - Enlarged less than twice the normal diameter
>2X - Enlarged two to four times the normal diameter
>4X - Enlarged more than four times the normal diameter
Restrictor plate reducing entrance to normal size
Healing over

Plate size:

Unavailable - Cavity is no longer available
>45 cm - Completed: Greater than 45 centimeter diameter plate
30-45 cm - Completed: 30-45 centimeter diameter plate

15-30 cm - Completed: 15-30 centimeter diameter plate
0-15 cm – Started but not completely encircling entrance: 0-15 centimeter diameter plate
Unstarted: No plate

Resin work:

Unavailable - Cavity is no longer available
Fresh: Some to all resin wells have chipping and bark scaled
Recent: Few resin wells have little chipping with little to no sap flow
Old: No recent RCW activity

Cavity competitor inspection and removal – All active, completed inactive cavities, and artificial cavity inserts within 50 ft from the ground were checked on a one-month cycle using a camera and monitor mounted on a telescoping pole. Data on competitors is only presented for April, May, and June 2014. When cavity competitors were located, the tree was climbed to remove the competitor or nest material. Amphibians, wasps and bird nests with a tending adult, fresh eggs, or nestlings were not removed.

## RESULTS

### Population Monitoring

During the calendar year of 2014, 83 Red-cockaded Woodpeckers were identified within Piney Grove preserve (Table 1). This included 60 birds that were hatched at Piney Grove from previous years and 23 fledglings produced during the 2014 breeding season.

In general, the Piney Grove Preserve population is a relatively young group with 57 % of the birds being $\leq$ 3 yrs old (Figure 2). The oldest birds remaining in the population includes two individuals hatched in 2004. Birds that obtain a breeding slot in the population generally remain in the population for longer amounts of time compared to birds that do not become breeders. Nearly all of the breeding birds (N= 13 pairs) are $\geq$ 5yrs old with the lone exception being a female hatched in 2011 that became a breeder in 2012. Birds that do not become breeders are retained, on average, for 2.5 yrs.

There were 18 birds detected in 2013 that were not detected in 2014. This includes the loss of 11 adults hatched prior to 2013 and 8 birds hatched in 2013. However all but one of the 2013 cohort were already missing during the 2013 winter survey so were not expected to carry over into 2014 spring or winter. Among the adults that disappeared in 2014 was a 14 yr old male breeder that was hatched in Cluster 3 in 2000 and moved into a breeding slot at the same cluster in 2005. This is the third consecutive year that no translocated birds were found in the population. It is likely that the direct contribution of that translocated breeding class for Piney Grove has reached an end but their indirect

contribution will continue on for decades because the offspring of some translocated birds have also become breeders in later years.

There were 56 birds distributed into 13 potential breeding groups identified at the Piney Grove preserve during the breeding season. This was an increase of 4 additional breeding groups from 2013. The additional groups consisted of a pair that pioneered breeding in a natural breeding territory established in the winter of 2013, two pairs that pioneered new trees near a previously unused artificial cluster, and a pair that budded within an existing breeding cluster already containing a breeding pair. Cluster 1 did not breed in 2014 due to the loss of females between 2013 and 2014. By definition, this site is not categorized as a potential breeding pair due to the lack of females. However, this cluster was maintained by several males that foraged together throughout the breeding season. The total number of adult birds detected in the breeding season set a new high mark by beating the previous year number of 52 birds.

Group sizes during the breeding season ranged from 2-10 birds with an average of 4.0 birds (± 1.58 SD) birds per group. The smallest group of 2 birds was at Cluster 15 and the largest at Cluster 8 contained 10 birds. Cluster 3 remains relatively low for the third straight year where only 3 birds were present in each of the past three breeding seasons. Cluster 3 is a natural and long standing cluster that has supported 4-7 birds in previous years.

Sixty-six birds were detected during the winter survey. This includes 15 of the 23 birds fledged in 2014 and 52 adult birds hatched in previous years. There were 6 adult birds detected during the spring survey that were not detected during winter survey. Conversely, there were 5 adult birds not detected during the spring survey that were found in winter. Two of these birds were both females that moved into empty female slots at Cluster 1.

During the winter survey, 66 birds were roosting in 14 different cluster areas including C-1, C-3, C-5, C-6, C-7, C-8, C-9, C-10, C-11, C-12, C-13, C-15, C-18, and C-19, (Cluster 18 was identified as C-207 in the 2013 report because birds were not readily associated with the C-18 artificial cluster) (Table 2). Cluster 18 was occupied for the first time in the winter of 2013 when a lone male pioneered the new site by excavating a natural cavity. This male woodpecker paired and successfully bred in 2014. It is the first time that a voluntary pioneering site has been established in Virginia since the 1980s. In the winter, the female was found to be roosting in a new natural cavity approximately 120m from the first pioneered cavity. As in years past, the birds roosting in C-9 actively forage with the birds from C-7 so behave as one functional group. Group size in winter ranged from 2-11 birds and averaged 5.3 (± 2.52 SD) birds per group.

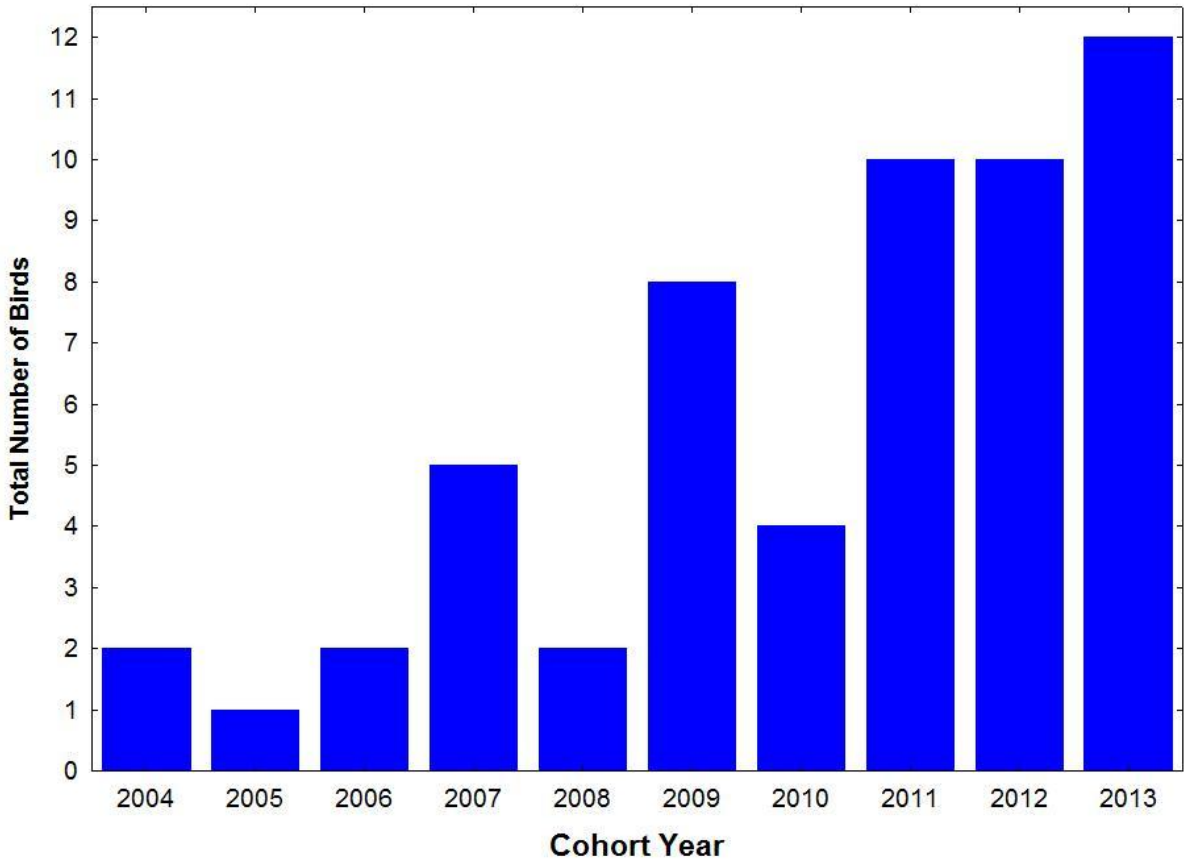


Figure 2. Age structure of the adult Red-cockaded Woodpecker population at the Piney Grove Preserve in 2014 based on year of hatching.

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**Breeding Observations**

Breeding was attempted by 13 breeding pairs distributed into 12 clusters that included C-3, C-5, C-6, C-7, C-8, C-10 (two pairs), C-12, C-13, C-15, C-18, and C-19. Cluster 1 did not breed in 2014 due to the loss of a female between the winter of 2013 and the spring of 2014 that was not replaced. However several males remained there throughout the year. Cluster 10 budded into 2 breeding pairs with each producing young. This year marked the first time breeding has occurred at clusters 11, 12, and 18. Cluster 6 produced 3 nestlings that all reached banding age of 7 days but disappeared from the nest before they could fledge. The reason for this failure is unknown. Overall, there were a combined total of 23 chicks (15 females, 8 males) that fledged from the 12 successful nests (Table 3).

**Table 1.** Occurrence of individual Red-cockaded Woodpeckers at Piney Grove Preserve 2010-2014. Only birds present in 2014 are shown.

| USGS | Left Leg | Right Leg | Sex | Hatch Year | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|
| 1581-66271 | DB/RE/DB | YE/AL | F | 2006 | x | x | x | x | x |
| 1581-66300 | AL/RE | LB/WH/LB | M | 2009 | x | x | x | x | x |
| 1581-66270 | DG/YE/DG | WH/AL | M | 2006 | x | x | x | x | x |
| 821-70912 | AL/OR | YE/LG/YE | M | 2010 | x | x | x | x | x |
| 1581-66253 | DB/RE/DB | AL/WH | F | 2004 | x | x | x | x | x |
| 1541-29902 | AL/DB | WH/RE/WH | F | 2009 | x | x | x | x | x |
| 821-70940 | AL/WH | DB/RE/DB | M | 2010 | x | x | x | x | x |
| 1581-66293 | YE/DB/YE | AL/LB | F | 2009 | x | x | x | x | x |
| 821-70906 | AL/RE | YE/DB/YE | M | 2010 | x | x | x | x | x |
| 1581-66273 | WH/RE/WH | AL/WH | M | 2007 | x | x | x | x | x |
| 1581-66276 | DG/YE/DG | OR/AL | F | 2007 | x | x | x | x | x |
| 1581-66296 | DG/AL | YE/YE/DG | M | 2009 | x | x | x | x | x |
| 1581-66274 | WH/RE/WH | AL/DB | M | 2007 | x | x | x | x | x |
| 1581-66291 | WH/WH/WH | RE/AL | F | 2008 | x | x | x | x | x |
| 1581-66280 | YE/DB/YE | AL/YE | M | 2007 | x | x | x | x | x |
| 1581-66299 | AL/YE | DB/*RE*/DB | F | 2009 | x | x | x | x | x |
| 821-70904 | AL/LB | YE/DB/YE | M | 2010 | x | x | x | x | x |
| 1581-66285 | DB/RE/DB | DB/AL | M | 2008 | x | x | x | x | x |
| 1581-66297 | AL/RE | YE/DG/YE | F | 2009 | x | x | x | x | x |
| 1581-66257 | LB/WH/LB | AL/RE | M | 2005 | x | x | x | x | x |
| 1541-29906 | AL/DG | DB/RE/DB | M | 2009 | x | x | x | x | x |
| 821-70901 | OR/OR/OR | AL/DG | M | 2009 | x | x | x | x | x |
| 1581-66251 | LB/WH/LB | AL/DB | M | 2004 | x | x | x | x | x |
| 1581-66278 | LB/WH/LB | ***OR***/AL | F | 2007 | x | x | x | x | x |
| 821-70923 | YE/LG/LG | AL/WH | M | 2011 | | x | x | x | x |
| 821-70929 | YE/OR/YE | AL/WH | M | 2011 | | x | x | x | x |
| 821-70930 | OR/OR/OR | AL/LG | F | 2011 | | x | x | x | x |
| 821-70918 | YE/DB/YE | YE/AL | M | 2011 | | x | x | x | x |
| 821-70927 | OR/OR/OR | AL/MB | M | 2011 | | x | x | x | x |
| 821-70919 | YE/DB/YE | LB/AL | M | 2011 | | x | x | x | x |
| 821-70933 | WH/LB/WH | PU/AL | F | 2011 | | x | x | x | x |
| 821-70921 | YE/DB/YE | RE/AL | M | 2011 | | x | x | x | x |
| 821-70936 | OR/DB/OR | AL/LG | M | 2011 | | x | x | x | x |
| 821-70952 | YE/***OR***/YE | AL/YE | F | 2012 | | | x | x | x |
| 821-70949 | AL/LG | WH/LB/WH | M | 2012 | | | x | x | x |
| 821-70946 | PU/YE/PU | AL/LB | M | 2012 | | | x | x | x |

| USGS | Left Leg | Right Leg | Sex | Hatch Year | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|
| 821-70955 | WH/PU/WH | AL/LG | M | 2012 | | | x | x | x |
| 821-70963 | AL/YE | LG/YE/LG | F | 2012 | | | x | x | x |
| 821-70964 | AL/WH | LG/YE/LG | F | 2012 | | | x | x | x |
| 821-70953 | YE/OR/YE | AL/LG | F | 2012 | | | x | x | x |
| 821-70935 | OR/DB/OR | AL/DB | F | 2011 | | x | | x | x |
| 821-70975 | AL/LG | OR/OR/OR | F | 2013 | | | | x | x |
| 821-70970 | AL/DB | LG/YE/LG | M | 2013 | | | | x | x |
| 821-70985 | LG/DB/LG | AL/DB | F | 2013 | | | | x | x |
| 821-70983 | AL/WH | WH/LB/WH | F | 2013 | | | | x | x |
| 821-70977 | AL/YE | PU/YE/PU | M | 2013 | | | | x | x |
| 821-70972 | WH/***PU***/WH | AL/OR | M | 2013 | | | | x | x |
| 821-70965 | AL/LG | YE/YE/DB | F | 2013 | | | | x | x |
| 821-70967 | AL/OR | YE/YE/DB | M | 2013 | | | | x | x |
| 821-70981 | AL/LG | YE/OR/YE | F | 2013 | | | | x | x |
| Not banded | | | F | 2013 | | | | x | x |
| Not banded | | | M | 2013 | | | | x | x |
| 821-70966 | AL/LB | YE/YE/DB | F | 2013 | | | | x | x |
| 821-70942 | AL/WH | OR/OR/OR | M | 2012 | | | x | | x |
| 821-70958 | AL/WH | YE/MB/YE | M | 2012 | | | x | | x |
| Not banded | | | F | | | | x | | x |
| 821-70922 | YE/LG/LG | AL/LB | F | 2011 | | x | | | x |
| 2421-02903 | OR/WH/OR | AL/LB | F | 2014 | | | | | x |
| 2421-02901 | OR/WH/OR | AL/OR | F | 2014 | | | | | x |
| 2421-02902 | OR/WH/OR | AL/LG | F | 2014 | | | | | x |
| 2421-02911 | WH/OR/WH | AL/OR | M | 2014 | | | | | x |
| 2421-02909 | WH/LG/WH | AL/YE | F | 2014 | | | | | x |
| 2421-02908 | WH/LG/WH | AL/OR | F | 2014 | | | | | x |
| 2421-02907 | AL/WH | YE/OR/YE | M | 2014 | | | | | x |
| 821-71000 | AL/WH | OR/DB/OR | M | 2014 | | | | | x |
| 821-70986 | WH/YE/WH | AL/WH | F | 2014 | | | | | x |
| 821-70997 | LG/DB/LG | AL/OR | M | 2014 | | | | | x |
| 821-70998 | LG/DB/LG | AL/WH | F | 2014 | | | | | x |
| 2421-02910 | AL/WH | DB/RE/DB | M | 2014 | | | | | x |
| 821-70989 | WH/LB/WH | AL/LG | F | 2014 | | | | | x |
| 821-70987 | AL/DB | WH/LB/WH | F | 2014 | | | | | x |
| 821-70988 | WH/LB/WH | AL/YE | F | 2014 | | | | | x |
| 821-70990 | AL/LG | PU/YE/PU | | 2014 | | | | | x |
| 821-70991 | AL/DB | PU/YE/PU | | 2014 | | | | | x |
| 821-70992 | LB/AL | PU/YE/PU | | 2014 | | | | | x |

| USGS | Left Leg | Right Leg | Sex | Hatch Year | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|
| 2421-02905 | AL/LG | WH/PU/WH | F | 2014 | | | | | x |
| 2421-02904 | AL/OR | WH/PU/WH | F | 2014 | | | | | x |
| 821-70993 | AL/DB | YE/YE/DB | M | 2014 | | | | | x |
| 821-70994 | YE/YE/DB | AL/LG | M | 2014 | | | | | x |
| 821-70995 | YE/YE/DB | AL/OR | F | 2014 | | | | | x |
| 821-70989 | LG/LG/LG | AL/LG | M | 2014 | | | | | x |
| 2421-02906 | AL/OR | YE/OR/YE | M | 2014 | | | | | x |
| 821-70996 | AL/LB | LG/DB/LG | F | 2014 | | | | | x |

Cluster 1 – This cluster failed to breed which was due to the lack of a female in this group. The breeding female for the past 3 years (YE/YE/DB, AL/DB) disappeared after the 2013 breeding season and was not present that same winter. In addition, another female present during the 2013 winter disappeared sometime before the 2014 spring survey. The dominant male remains in this cluster (DG/YE/DG, WH/AL) after successfully breeding here in 2012 and 2013. This cluster was occupied by only males throughout the breeding season until 2 new females moved into the cluster and were detected during the winter survey.

Cluster 3 – The long-time, 14 yr old breeding male (RE/DB, WH/AL) disappeared from this site so breeding duties were overtaken by a male that was hatched in this cluster in 2008 and has remained at the site since that time (DB/RE/DB, DB/AL). This is the second consecutive year for the breeding female at this cluster (AL/RE, YE/DG/YE). The pair nested in the same tree as the older male held in 2013 (#179). Breeding activity was first documented on 23 May when adults were observed feeding young in the nest. This cavity is too high to be examined by peeper scope and too awkward to be climbed for banding of nestlings. On 15 June there was one male nestling observed protruding from the nest cavity and on subsequent visits no additional fledges were discovered. This male was captured during the winter and banded (AL/WH, DB/RE/DB).

Cluster 5 – The breeding male (LB/WH/LB, AL/RE) remained for a third consecutive year but a new female assumed breeding duties (OR/OR/OR, AL/DG). This female moved to Cluster 5 in 2012 and remained here since that time. The pair nested in a new tree this year (#24) in a cavity too high to peep with the scope. Incubation or brooding young was first detected on 6 May and on 11 May the tree was climbed to find 3 nestling birds approximately 5 days old and 2 unhatched eggs. The nest was revisited on 13 May and all 3 nestlings were banded as 7-day old chicks. All three birds successfully fledged and were identified as females. One of these birds was detected in Cluster 5 again in the winter, another had moved to Cluster 1, and the last bird was not rediscovered.

Cluster 6 – This the fifth year that birds attempted to breed in this cluster. Despite four successful earlier campaigns the nest of 3 young failed sometime after banding (7 days old).

The breeding male (AL/DG, DB/RE/DB) remained the same as in the last four years. This bird was hatched in Cluster 3 in 2008 and has occupied Cluster 6 since 2009. This site continues to be occupied by 2 females that both incubate and feed young so it is difficult to ascertain which one was the genetic parent of the young birds. One female (AL/DB, WH/RE/WH) was hatched in C-7 and was first detected roosting in C-6 in the winter of 2010. The other female (DB/RE/DB, AL/WH) was hatched in C-3 in 2004 and roosted there for all years after until moving to C-6 when it was first detected roosting there in the spring of 2011. The fact that two females are occupied with breeding duties at this cluster might be the reason that the number of eggs laid at this site is so high. In 2013, 6 eggs were detected and 5 eggs in 2014. The 2014 eggs were first observed on 23 April in a new cavity tree that was naturally excavated. On 6 May all 5 eggs were observed to hatch and estimated to be 0-1 days of age. Three of these 5 young survived to banding age of 7 days. No fledged birds were observed on multiple trips to detect them on 30 May, 1 June, and 2 June. Subsequently none of these birds were observed in winter and all were presumed to have failed before fledging.

Cluster 7 – The breeding male (OR/OR/OR, AL/DG) remained the same as the last 3 years at this site whereas a new breeding female (YE/OR/YE, AL/LG) assumed reproductive duties. The female was fledged in 2013 from Cluster 13 and moved to this site sometime before the winter of 2013. The previous breeding female from 2012 and 2013 moved to Cluster 12 in the winter of 2013 and successfully bred there in 2014. The new pair nested in the same tree as last (#216) which was first excavated in 2013. One egg was detected in the nest on 7 May with no incubation occurring. On 23 May there were 2 oddly shaped eggs in the nest that successfully hatched. The 2 nestlings were banded as 9-10 day old chicks on 3 June. Both birds successfully fledged from the nest and were identified as females. Only 1 of the 2 female fledges were observed in the winter when it was detected in Cluster 7.

Cluster 8 – The breeding pair here remained the same for the seventh consecutive year. The breeding male (LB/WH/LB, AL/DB) was originally banded in Cluster 5 in 2004 and the breeding female (LB/WH/LB, OR/AL) was originally banded at Cluster 5 in 2007. The pair nested in the same tree (#211) for the second consecutive year. Incubation was first detected on 1 May when a bird was flushed from a new nest tree (#219). A total of 5 eggs were laid in this nest and on 11 May 3 young birds hatched and 2 eggs remained as unhatched. All 3 young were banded as 7 day old chicks on 16 May and subsequently determined to successfully fledge as 2 males and 1 female on 4 June. All 3 of these fledgling birds were rediscovered in Cluster 8 during the winter survey.

Cluster 10 – Two pairs successfully bred in Cluster 10 in 2014. The first pair was comprised of a male (WH/RE/WH AL/WH) that has bred at site for the 4th consecutive year and a female (DG/YE/DG, OR/AL) that has bred at this site for the 6$^{th}$ consecutive year. This pair nested in a new cavity for this season (tree #247). Five eggs were first detected on 6 May. Three of those 5 eggs hatched and all of these nestlings were banded as 7 day old chicks on 30 May. All 3 nestlings successfully fledged and were determined to be all females on 19 June. Only 2 of these females were detected in winter when they remained in Cluster 10.

The second breeding occurrence at Cluster 10 was only discovered when fledging success of the original nest was being determined. An additional male fledgling bird was found to be fed by the other birds in the cluster but not by the long-term breeding pair. The actual breeding pair of this group is not known for certain but could be any combination of 2 remaining males and 2 remaining females that were helping to feed this additional fledgling bird. None of these four birds assisted in feeding the original pair's three fledglings. The hatch year bird was captured and banded in winter (WH/OR/WH, AL/OR).

Cluster 11 – This is the first year breeding was detected at this site and was first discovered on 1 May, 2014 when 3 natural cavity trees were found. The site was occupied by 2 adult males and 1 adult female. The breeding male (YE/DB/YE, LB/AL) was observed copulating with the breeding female (O/DB/O, AL/DB) and the first indication of breeding was the discovery of a failed nest with birds found to be removing egg shell fragments from a cavity in tree #240. The group re-nested with 3 new eggs that were found in the same cavity on 8 June. Both of these eggs hatched on 15 June and one unhatched egg remained in the nest. The two nestlings were banded on 25 June and were estimated to be 8 days of development. Both nestlings successfully fledged and were determined to be females on 17 July. Only one of these birds was detected in winter as it remained in Cluster 11.

Cluster 12 – This was the first time breeding has occurred at this cluster. Cluster 12 was established as an artificial recruitment cluster in the early days of Piney Grove. It remained unoccupied for most of that time aside from its use in one winter in 2011 by a single bird that moved to another cluster before the following spring. In the winter of 2013 this cluster became occupied by a female that bred in Cluster 7 that same season (DB/RE/DB, YE/AL). The female roosted in an artificial cavity and was joined for foraging by a bird that was presumed to be flying over from Cluster 1 (DG/AL, YE/YE/DG). In 2014, a new cavity was discovered (tree #244) that eventually was used by breeding by this same pair. Four eggs were first detected on 6 May and on 12 May only 3 of these 4 eggs hatched that same day. Only 1 nestling survived to banding age by 20 May. This bird successfully fledged and was determined to be a male while still in the cavity. This hatch year male was detected in Cluster 12 in winter.

Cluster 13 – This was the fifth consecutive year breeding has been successful in this cluster with the original breeding birds of Cluster 13 assuming reproductive duties again. The male (WH/RE/WH, AL/DB) was a Cluster 7 hatched bird from 2007 that began using Cluster 13 in 2008. The breeding female (WH/WH/WH, RE/AL) was hatched at Cluster 10 in 2008 and was first observed roosting at Cluster 13 in the winter of 2009. Two additional bird helped with the feeding of nestlings (YE/OR/YE, AL/WH) (AL/LG, YE/OR/YE). Tree #168 was chosen for breeding for the second consecutive year. Three eggs were initially discovered on 28 April and again on 6 May. On 12 May there were 3 unhatched eggs found and one egg that appeared to be pipping or was broken. This day marked the 14$^{th}$ day eggs were known to

be in the nest. This nesting attempt failed but re-nesting occurred with 4 eggs discovered on 10 June. On 18 June, 3 nestlings were discovered to be 1-2 days old and no sign of the 4th egg. Only 2 of the 3 nestlings survived to a banding age of 8 days old. Both remaining nestlings successfully fledged and were determined to be both males on 17 June. Both hatch year males were found occupying Cluster 13 in the winter.

Cluster 15 – This was the fourth consecutive year that a pair successfully bred in this cluster and the 3rd consecutive year for breeding by this male (YE/DB/YE, AL/YE) and female (WH/LB/WH, PU/AL). This pair occupies this site alone without the presence of additional helpers. Three eggs were first detected on 10 in tree # 205. This tree was excavated and used for breeding in 2013 as well. On 12 May only 1 of the 3 eggs hatched with possible pipping or a break in one of the remaining eggs. Only one chick was found when banding and estimated to be 8 days old on 20 May. This single bird fledged and was identified as a male on 10 June. This hatch year male was not found in winter.

Cluster 18 – This was the first time breeding occurred at this cluster and the first time a breeding pair was established at the Piney Grove Preserve without the facilitation of an artificial recruitment cluster. This site was established when a male hatched from Cluster 8 (YE/DB/YE, RE/AL) pioneering a site tree in the winter of 2013 by excavating a cavity away from other known cluster. This male would be joined by a female (AL/WH, YE/DG/YE) that emanated from an unknown area. In 2014, this pair nested in that newly excavated cavity with 4 eggs being detected on 23 April. On 2 May, one nestling that appeared to hatch that morning and 3 unhatched eggs remained in the nest. This single bird was banded on 11 May as a 7 day old chick, eventually fledged, and was determined to be a male on 10 June. This male was found in Cluster 15 in the winter.

Cluster 19 – This marked the 3rd consecutive year that breeding has occurred at this site. The breeding male (AL/LB, YE/DB/YE)has assumed reproductive duties since 2012 but the length of time that the female has had breeding status (AL/YE, DB/RE/DB) cannot be fully determined since there has been multiple females at this site in previous years that helped with incubation. Incubation was first observed in tree # 224 on 6 May and 3 eggs were discovered on 7 May. All three eggs hatched and the young were estimated to be 1-2 days old on 12 May. All three nestlings were banded on 20 May and estimated to be 10 days old. The three birds fledged and were identified as 2 females and 1 male. Only one of the females was found in the winter where it remained in Cluster 19.

**Translocations**

No translocations of birds into Piney Grove have been conducted since 2005. The last 2 remaining translocated birds disappeared from Piney Grove in 2011.

**Table 2.** Foraging group clusters for Red-cockaded Woodpeckers detected within Piney Grove Preserve during the 2014 winter survey.

| USGS | Left Leg | Right Leg | Sex | Hatch Year | Cluster |
|---|---|---|---|---|---|
| 1581-66270 | DG/YE/DG | WH/AL | M | 2006 | **1** |
| 821-70912 | AL/OR | YE/LG/YE | M | 2010 | **1** |
| 821-70922 | YE/LG/LG | AL/LB | F | 2011 | **1** |
| 821-70923 | YE/LG/LG | AL/WH | M | 2011 | **1** |
| 821-70970 | AL/DB | LG/YE/LG | M | 2013 | **1** |
| Not banded | | | F | 2013 | **1** |
| 821-70987 | AL/DB | WH/LB/WH | F | 2014 | **1** |
| 1581-66285 | DB/RE/DB | DB/AL | M | 2008 | **3** |
| 1581-66297 | AL/RE | YE/DG/YE | F | 2009 | **3** |
| 821-70952 | YE/OR/YE | AL/YE | F | 2012 | **3** |
| 2421-02910 | AL/WH | DB/RE/DB | M | 2014 | **3** |
| 1581-66257 | LB/WH/LB | AL/RE | M | 2005 | **5** |
| 821-70930 | OR/OR/OR | AL/LG | F | 2011 | **5** |
| 821-70949 | AL/LG | WH/LB/WH | M | 2012 | **5** |
| 821-70983 | AL/WH | WH/LB/WH | F | 2013 | **5** |
| 821-70965 | AL/LG | YE/YE/DB | F | 2013 | **5** |
| 821-70988 | WH/LB/WH | AL/YE | F | 2014 | **5** |
| 1581-66253 | DB/RE/DB | AL/WH | F | 2004 | **6** |
| 1541-29902 | AL/DB | WH/RE/WH | F | 2009 | **6** |
| 1541-29906 | AL/DG | DB/RE/DB | M | 2009 | **6** |
| 821-70946 | PU/YE/PU | AL/LB | M | 2012 | **6** |
| 821-70977 | AL/YE | PU/YE/PU | M | 2013 | **6** |
| 821-70901 | OR/OR/OR | AL/DG | M | 2009 | **7** |
| 821-70940 | AL/WH | DB/RE/DB | M | 2010 | **7** |
| 821-70955 | WH/PU/WH | AL/LG | M | 2012 | **7** |
| 821-70953 | YE/OR/YE | AL/LG | F | 2012 | **7** |
| 821-70972 | WH/PU/WH | AL/OR | M | 2013 | **7** |
| 2421-02904 | AL/OR | WH/PU/WH | F | 2014 | **7** |
| 1581-66251 | LB/WH/LB | AL/DB | M | 2004 | **8** |
| 1581-66278 | LB/WH/LB | OR/AL | F | 2007 | **8** |
| 1581-66293 | YE/DB/YE | AL/LB | F | 2009 | **8** |
| 821-70906 | AL/RE | YE/DB/YE | M | 2010 | **8** |
| 821-70918 | YE/DB/YE | YE/AL | M | 2011 | **8** |
| 821-70967 | AL/OR | YE/YE/DB | M | 2013 | **8** |
| 821-70993 | AL/DB | YE/YE/DB | M | 2014 | **8** |
| 821-70994 | YE/YE/DB | AL/LG | M | 2014 | **8** |

| USGS | Left Leg | Right Leg | Sex | Hatch Year | Cluster |
|---|---|---|---|---|---|
| 821-70995 | YE/YE/DB | AL/OR | F | 2014 | **8** |
| Not banded | | | - | - | **8** |
| 1581-66273 | WH/RE/WH | AL/WH | M | 2007 | **10** |
| 1581-66276 | DG/YE/DG | OR/AL | F | 2007 | **10** |
| 821-70927 | OR/OR/OR | AL/MB | M | 2011 | **10** |
| 821-70963 | AL/YE | LG/YE/LG | F | 2012 | **10** |
| 821-70942 | AL/WH | OR/OR/OR | M | 2012 | **10** |
| 2421-02901 | OR/WH/OR | AL/OR | F | 2014 | **10** |
| 2421-02902 | OR/WH/OR | AL/LG | F | 2014 | **10** |
| 2421-02911 | WH/OR/WH | AL/OR | M | 2014 | **10** |
| 821-70919 | YE/DB/YE | LB/AL | M | 2011 | **11** |
| 821-70935 | OR/DB/OR | AL/DB | F | 2011 | **11** |
| 821-70958 | AL/WH | YE/MB/YE | M | 2012 | **11** |
| 2421-02908 | WH/LG/WH | AL/OR | F | 2014 | **11** |
| 1581-66296 | DG/AL | YE/YE/DG | M | 2009 | **12** |
| 821-70989 | LG/LG/LG | AL/LG | M | 2014 | **12** |
| 1581-66274 | WH/RE/WH | AL/DB | M | 2007 | **13** |
| 1581-66291 | WH/WH/WH | RE/AL | F | 2008 | **13** |
| 821-70981 | AL/LG | YE/OR/YE | F | 2013 | **13** |
| 2421-02906 | AL/OR | YE/OR/YE | M | 2014 | **13** |
| 2421-02907 | AL/WH | YE/OR/YE | M | 2014 | **13** |
| 1581-66280 | YE/DB/YE | AL/YE | M | 2007 | **15** |
| 821-70933 | WH/LB/WH | PU/AL | F | 2011 | **15** |
| 821-70986 | WH/YE/WH | AL/WH | F | 2014 | **15** |
| 821-70921 | YE/DB/YE | RE/AL | M | 2011 | **18** |
| 821-70964 | AL/WH | LG/YE/LG | F | 2012 | **18** |
| 1581-66299 | AL/YE | DB/*RE*/DB | F | 2009 | **19** |
| 821-70904 | AL/LB | YE/DB/YE | M | 2010 | **19** |
| 821-70936 | OR/DB/OR | AL/LG | M | 2011 | **19** |
| 821-70998 | LG/DB/LG | AL/WH | F | 2014 | **19** |

**Cavity Tree Status**

By the end of the 2014 breeding season, Piney Grove contained 233 cavities in 201 live trees including 77 start cavities, 81 completed natural cavities, and 75 artificial inserts. While the majority of cavity trees are loblolly pine (*Pinus taeda*), six are in shortleaf pine (*Pinus echinata*). A total of 24 new cavities or new cavity starts were added to the number of known cavities. Twenty-three trees were found containing 16 cavity starts and 8 completed natural cavities, seven of which were newly completed. It is thought that one of

the newly found trees was complete for several years prior to discovery. No new starts or completed cavities were discovered in previously tagged cavity trees. There were three recorded cavity tree deaths resulting in the loss of one cavity. One of these trees, which

**Table 3.** Red-cockaded Woodpecker nestlings that were banded and successfully fledged at the Piney Grove Preserve in 2014.

| Cluster | USGS | Left Leg | Right Leg | Sex | Date Banded | Age at Banding (days) |
|---|---|---|---|---|---|---|
| 3 | 2421-02910 | AL/WH | DB/RE/DB | M | 12/20/2014 | HY |
| 5 | 821-70987 | AL/DB | WH/LB/WH | F | 5/13/2014 | 7 |
| 5 | 821-70988 | WH/LB/WH | AL/YE | F | 5/13/2014 | 7 |
| 5 | 821-70989 | WH/LB/WH | AL/LG | F | 5/13/2014 | 7 |
| 7 | 2421-02904 | AL/OR | WH/PU/WH | F | 6/5/2014 | 11 |
| 7 | 2421-02905 | AL/LG | WH/PU/WH | F | 6/5/2014 | 11 |
| 8 | 821-70993 | AL/DB | YE/YE/DB | M | 5/16/2014 | 7 |
| 8 | 821-70994 | YE/YE/DB | AL/LG | M | 5/16/2014 | 7 |
| 8 | 821-70995 | YE/YE/DB | AL/OR | F | 5/16/2014 | 7 |
| 10 | 2421-02901 | OR/WH/OR | AL/OR | F | 5/30/2014 | 7 |
| 10 | 2421-02902 | OR/WH/OR | AL/LG | F | 5/30/2014 | 7 |
| 10 | 2421-02903 | OR/WH/OR | AL/LB | F | 5/30/2014 | 7 |
| 10 | 2421-02911 | WH/OR/WH | AL/OR | M | 12/22/2014 | HY |
| 11 | 2421-02908 | WH/LG/WH | AL/OR | F | 6/25/2014 | 7 |
| 11 | 2421-02909 | WH/LG/WH | AL/YE | F | 6/25/2014 | 8 |
| 12 | 821-70989 | LG/LG/LG | AL/LG | M | 5/20/2014 | 7 |
| 13 | 2421-02906 | AL/OR | YE/OR/YE | M | 6/25/2014 | 8 |
| 13 | 2421-02907 | AL/WH | YE/OR/YE | M | 6/24/2014 | 8 |
| 15 | 821-71000 | AL/WH | OR/DB/OR | M | 5/20/2014 | 7 |
| 18 | 821-70986 | WH/YE/WH | AL/WH | F | 5/11/2015 | 10 |
| 19 | 821-70996 | AL/LB | LG/DB/LG | F | 5/20/2014 | 10 |
| 19 | 821-70997 | LG/DB/LG | AL/OR | M | 5/20/2014 | 10 |
| 19 | 821-70998 | LG/DB/LG | AL/WH | F | 5/20/2014 | 10 |

contained an artificial insert, had been burned in 2010 as a result of a sap fire. Two of the trees that died were already broken with no available cavities.

**Cavity competitor inspection and removal**

There were 18 instances of cavity competitors and 10 instance of nest material in RCW cavities during the 2014 breeding season. Multiple cavity competitor species occurring simultaneously in a cavity were counted as separate instances. Multiple individuals of one species found together in a cavity were counted as one instance. A total

of five southern flying squirrels were encountered on four instances in clusters 8, 9, 13, and 19. Nest material¸ indicating the presence of southern flying squirrels and consisting primarily of shredded pine straw, was encountered in 10 instances. Only one each of the instances of southern flying squirrels and nest material was in an active cavity. A red corn snake (*Pantherophis guttatus*) was encountered in a relic cavity at cluster 12.

Nine bird nests with eggs or nestlings (not including RCW nests) were found in cavities. White breasted nuthatches (*Sitta carolinensis*) were responsible for 4 of these nests, Eastern Bluebirds (*Sialia sialis*) for another 4 nests, and the last species was a great-crested flycatcher (*Myiarchus crinitus*). Five empty bird nests constructed by an unidentified species were also found. All of the cavities utilized by other flying squirrels and half of the cavities utilized by other birds were in artificial inserts. Six of the cavities used by other birds were in active cavities including two recently completed natural cavities at cluster 1.

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Appendix I. Condition of Red-cockaded Woodpecker cavity trees in 2014 at the Piney Grove Preserve.

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31 | | Loblolly | D | N | U | Complete | U | U | U |
| 1 | 32 | | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 1 | 34 | | Loblolly | L | N | Inactive | Complete | Normal | 30-45 cm | Old/None |
| 1 | 35 | | Loblolly | L | N | Inactive | Start (Adv) | Normal | Unstarted | Old/None |
| 1 | 36 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 1 | 37 | | Loblolly | L | N | Inactive | Start (Adv) | Normal | Unstarted | Old/None |
| 1 | 38 | | Shortleaf | D | N | U | Complete | U | U | U |
| 1 | 39 | a | Loblolly | L | N | Inactive | Start | <2X | Unstarted | Old/None |
| 1 | 39 | b | Loblolly | L | N | Inactive | Complete | <2X | > 45 cm | Old/None |
| 1 | 40 | | Loblolly | D | N | U | Complete | U | U | U |
| 1 | 41 | | Loblolly | D | N | U | Complete | U | U | U |
| 1 | 42 | | Loblolly | L | N | Relic | Start | Healing | U | U |
| 1 | 43 | | Loblolly | L | N | Relic | Complete | >2X | Unstarted | Old/None |
| 1 | 44 | a | Loblolly | L | N | Relic | Complete | Normal | Unstarted | Old/None |
| 1 | 44 | b | Loblolly | L | N | Relic | Complete | >4X | 15-30 cm | Old/None |
| 1 | 45 | a | Loblolly | D | N | U | Complete | U | U | U |
| 1 | 45 | b | Loblolly | D | N | U | Complete | U | U | U |
| 1 | 46 | | Loblolly | L | N | Relic | Complete | >2X | Unstarted | Old/None |
| 1 | 47 | | Loblolly | D | N | Relic | Start (Adv) | Restrictor | Unstarted | Old/None |
| 1 | 48 | | Loblolly | L | N | Inactive | Complete | Normal | > 45 cm | Old/None |
| 1 | 49 | | Loblolly | L | N | Relic | Complete | >4X | 15-30 cm | Old/None |
| 1 | 50 | | Shortleaf | D | A | U | Insert | U | U | U |
| 1 | 51 | | Loblolly | D | A | U | Insert | U | U | U |
| 1 | 52 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 1 | 53 | | Loblolly | L | N | Inactive | Complete | Normal | 15-30 cm | Old/None |
| 1 | 54 | | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 1 | 55 | | Loblolly | L | N | Active | Complete | <2X | >15 cm | Fresh |
| 1 | 57 | | Loblolly | L | N | Active | Complete | Normal | 30-45 cm | Recent |
| 1 | 58 | a | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 1 | 58 | b | Loblolly | L | N | Inactive | Complete | <2X | 15-30 cm | Old/None |
| 1 | 59 | a | Loblolly | L | N | Inactive | Start | Normal | Unstarted | Old/None |
| 1 | 59 | b | Loblolly | L | N | Inactive | Start | Normal | Unstarted | Old/None |
| 1 | 102 | | Loblolly | D | N | U | Complete | U | U | U |
| 1 | 117 | a | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 1 | 117 | b | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 164 | | Loblolly | D | N | U | Complete | U | U | U |
| 1 | 212 | | Shortleaf | L | N | Active | Complete (New) | Normal | >15 cm | Fresh |
| 1 | 213 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 1 | 225 | | Shortleaf | L | N | Active | Complete | Normal | Unstarted | Recent |
| 1 | 241 | | Loblolly | L | N | Active | Complete (New) | Normal | Unstarted | Fresh |
| 1 | 242 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 1 | 1NT2 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |
| 1 | 1NT5 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 1 | 1NT6 | | Shortleaf | L | N | Active | Start | Normal | Unstarted | Fresh |
| 1 | 1NT7 | | Shortleaf | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 2 | 60 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 2 | 61 | | Loblolly | D | A | U | Insert | U | U | U |
| 2 | 62 | | Loblolly | D | A | U | Insert | U | U | U |
| 2 | 63 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 3 | 1 | | Loblolly | D | A | Relic | Insert | Normal | Unstarted | Old/None |
| 3 | 2 | | Loblolly | L | A | Relic | Insert | Restrictor | Unstarted | Old/None |
| 3 | 3 | a | Loblolly | D | N | Relic | Complete | Restrictor | U | U |
| 3 | 3 | b | Loblolly | D | N | Inactive | Start | Normal | U | U |
| 3 | 4 | a | Loblolly | D | N | U | Complete | U | U | U |
| 3 | 4 | b | Loblolly | D | N | Inactive | Complete | Restrictor | U | U |
| 3 | 5 | | Loblolly | L | N | Relic | Start | Normal | Unstarted | Old/None |
| 3 | 6 | | Loblolly | L | N | Active | Complete | Normal | Unstarted | Recent |
| 3 | 7 | a | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |
| 3 | 7 | b | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Recent |
| 3 | 8 | | Loblolly | L | N | Active | Complete | Normal | > 45 cm | Fresh |
| 3 | 9 | a | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |
| 3 | 9 | b | Loblolly | L | N | Active | Complete | Normal | 30-45 cm | Fresh |
| 3 | 9 | c | Loblolly | L | N | Relic | Start | Normal | Unstarted | Old/None |
| 3 | 71 | | Loblolly | D | N | U | Complete | U | U | U |
| 3 | 72 | | Loblolly | L | N | Relic | Complete | >4X | Unstarted | Old/None |
| 3 | 74 | | Loblolly | D | N | U | Complete | U | U | U |
| 3 | 75 | | Loblolly | L | N | Relic | Complete | Normal | Unstarted | Old/None |
| 3 | 76 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 3 | 77 | | Loblolly | D | N | U | Complete | U | U | U |
| 3 | 79 | a | Loblolly | L | N | Relic | Complete | >2X | 15-30 cm | Old/None |
| 3 | 79 | b | Loblolly | L | N | Inactive | Start (Adv) | Normal | Unstarted | Old/None |

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 79 | c | Loblolly | L | N | Inactive | Start (Adv) | Restrictor | Unstarted | Old/None |
| 3 | 80 | | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 3 | 128 | | Loblolly | L | N | Active | Complete (New) | Normal | Unstarted | Fresh |
| 3 | 177 | | Loblolly | L | A | Relic | Insert | Normal | >15 cm | Old/None |
| 3 | 178 | | Loblolly | L | N | Active | Complete | Normal | Unstarted | Fresh |
| 3 | 179 | | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 3 | 180 | | Loblolly | L | N | Active | Complete | <2X | >15 cm | Recent |
| 3 | 208 | | Loblolly | L | N | Inactive | Start | Normal | Unstarted | Old/None |
| 3 | 3NT2 | | Loblolly | L | N | Active | Sub-start | Normal | Unstarted | Fresh |
| 3 | 3NT3 | | Loblolly | L | N | Active | Start | Normal | > 45 cm | Fresh |
| 4 | 81 | | Loblolly | D | A | U | Insert | U | U | U |
| 4 | 82 | | Loblolly | L | A | Inactive | Insert | Normal | >15 cm | Old/None |
| 4 | 83 | | Loblolly | D | A | U | Insert | U | U | U |
| 4 | 84 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 4 | 186 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 5 | 14 | | Loblolly | L | N | Inactive | Complete | <2X | >15 cm | Old/None |
| 5 | 15 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 5 | 16 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 5 | 17 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 5 | 18 | a | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |
| 5 | 18 | b | Loblolly | L | N | Inactive | Start | Normal | Unstarted | Old/None |
| 5 | 19 | a | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |
| 5 | 19 | b | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 5 | 19 | c | Loblolly | L | N | Inactive | Start | Normal | Unstarted | Old/None |
| 5 | 20 | | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 21 | | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 22 | | Loblolly | L | N | Relic | Complete | Restrictor | 30-45 cm | Old/None |
| 5 | 23 | a | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 23 | b | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 24 | | Loblolly | L | N | Active | Complete | Restrictor | > 45 cm | Fresh |
| 5 | 25 | | Loblolly | L | N | Inactive | Complete | <2X | > 45 cm | Old/None |
| 5 | 26 | | Loblolly | L | N | Inactive | Complete | Restrictor | > 45 cm | Old/None |
| 5 | 27 | | Loblolly | L | N | Inactive | Complete | >4X | 30-45 cm | Old/None |
| 5 | 28 | | Loblolly | L | N | Relic | Complete | Restrictor | >15 cm | Old/None |
| 5 | 29 | | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 30 | | Loblolly | L | N | Inactive | Start (Adv) | Normal | Unstarted | Old/None |
| 5 | 92 | | Loblolly | L | N | Relic | Start | Healing | U | U |

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 93 | | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 94 | | Loblolly | L | N | Relic | Complete | Restrictor | Unstarted | Old/None |
| 5 | 95 | | Loblolly | L | N | Relic | Complete | >4X | Unstarted | Old/None |
| 5 | 96 | | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 97 | | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 98 | | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 99 | | Loblolly | D | N | U | Complete | U | U | U |
| 5 | 127 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 5 | 138 | | Loblolly | D | A | U | Insert | U | U | U |
| 5 | 191 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 5 | 217 | | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 5 | 218 | | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 5 | 236 | | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 5 | 237 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 5 | 5NT1 | | Loblolly | L | N | Active | Complete | Normal | Unstarted | Fresh |
| 5 | 5NT7 | | Loblolly | L | N | Active | Complete (New) | Normal | >15 cm | Fresh |
| 6 | 10 | | Loblolly | L | A | Inactive | Insert | Normal | >15 cm | Old/None |
| 6 | 11 | | Loblolly | D | A | U | Insert | U | U | U |
| 6 | 12 | | Loblolly | D | A | U | Insert | U | U | U |
| 6 | 13 | | Loblolly | D | A | U | Insert | U | U | U |
| 6 | 33 | a | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 6 | 33 | b | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 6 | 116 | | Loblolly | L | A | Active | Insert | Normal | >15 cm | Fresh |
| 6 | 135 | a | Loblolly | L | N | Active | Complete | <2X | >15 cm | Fresh |
| 6 | 135 | b | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Recent |
| 6 | 135 | c | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 6 | 136 | a | Loblolly | L | N | Inactive | Start | Healing | U | U |
| 6 | 136 | b | Loblolly | L | N | Inactive | Start (Adv) | Normal | Unstarted | Old/None |
| 6 | 137 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Fresh |
| 6 | 139 | | Loblolly | L | A | Active | Insert | Normal | 15-30 cm | Fresh |
| 6 | 199 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Fresh |
| 6 | 200 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 6 | 206 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 6 | 233 | | Loblolly | L | N | Active | Complete (New) | Normal | Unstarted | Fresh |
| 6 | 234 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 6 | 235 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 105 | | Loblolly | L | A | Inactive | Insert | Normal | 30-45 cm | Old/None |
| 7 | 106 | a | Loblolly | L | N | Inactive | Complete | >4X | 30-45 cm | Old/None |
| 7 | 106 | b | Loblolly | L | N | Inactive | Start | <2X | Unstarted | Old/None |
| 7 | 107 | a | Loblolly | L | N | Active | Complete | Restrictor | > 45 cm | Fresh |
| 7 | 107 | b | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 7 | 108 | | Loblolly | L | N | Active | Complete | <2X | 30-45 cm | Recent |
| 7 | 109 | a | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |
| 7 | 109 | b | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Recent |
| 7 | 110 | | Loblolly | L | A | Inactive | Insert | Normal | >15 cm | Old/None |
| 7 | 111 | | Loblolly | L | A | Relic | Insert | Normal | >15 cm | Old/None |
| 7 | 112 | | Loblolly | D | A | U | Insert | U | U | U |
| 7 | 113 | | Loblolly | D | A | U | Insert | U | U | U |
| 7 | 114 | | Loblolly | D | A | U | Insert | U | U | U |
| 7 | 115 | | Loblolly | L | N | Inactive | Complete | >2X | 30-45 cm | Old/None |
| 7 | 190 | | Loblolly | D | N | U | Start | U | U | U |
| 7 | 192 | a | Loblolly | D | N | U | Start | U | U | U |
| 7 | 192 | b | Loblolly | D | N | U | Complete | U | U | U |
| 7 | 194 | a | Loblolly | D | N | Inactive | Sub-start | Normal | U | U |
| 7 | 194 | b | Loblolly | D | N | Inactive | Complete | Normal | U | U |
| 7 | 195 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Fresh |
| 7 | 216 | | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 7 | 243 | | Loblolly | L | N | Active | Complete (New) | Normal | >15 cm | Fresh |
| 7 | 7NT1 | | Loblolly | L | N | Inactive | Start (Adv) | Normal | Unstarted | Old/None |
| 7 | 7NT2 | | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 7 | 7NT3 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 8 | 129 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 8 | 155 | | Loblolly | L | N | Inactive | Complete | Normal | >15 cm | Old/None |
| 8 | 170 | | Loblolly | L | A | Inactive | Insert | Normal | 15-30 cm | Old/None |
| 8 | 171 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 8 | 172 | | Loblolly | L | A | Inactive | Insert | Normal | >15 cm | Old/None |
| 8 | 173 | | Loblolly | L | A | Inactive | Insert | Normal | >15 cm | Old/None |
| 8 | 174 | a | Loblolly | L | N | Inactive | Complete | Restrictor | Unstarted | Old/None |
| 8 | 174 | b | Loblolly | L | N | Inactive | Start | <2X | Unstarted | Old/None |
| 8 | 174 | c | Loblolly | L | N | Inactive | Complete | <2X | Unstarted | Old/None |
| 8 | 175 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 8 | 176 | a | Loblolly | L | N | Inactive | Start (Adv) | >2X | Unstarted | Old/None |
| 8 | 176 | b | Loblolly | L | N | Relic | Complete | >4X | Unstarted | Old/None |

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 176 | c | Loblolly | L | N | Relic | Start | <2X | Unstarted | Old/None |
| 8 | 176 | d | Loblolly | L | N | Relic | Complete | >2X | Unstarted | Old/None |
| 8 | 176 | e | Loblolly | L | N | Relic | Start | Normal | Unstarted | Old/None |
| 8 | 176 | f | Loblolly | L | N | Relic | Start | Normal | Unstarted | Old/None |
| 8 | 209 | | Loblolly | L | N | Inactive | Complete | <2X | 15-30 cm | Old/None |
| 8 | 210 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 8 | 211 | | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Recent |
| 8 | 219 | | Loblolly | L | N | Active | Complete (New) | Normal | Unstarted | Fresh |
| 8 | 220 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 8 | 226 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 8 | 227 | | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 8 | 228 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 8 | 229 | | Loblolly | L | N | Active | Sub-start | Normal | Unstarted | Fresh |
| 8 | 230 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 8 | 231 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 9 | 85 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Recent |
| 9 | 86 | | Loblolly | L | A | Inactive | Insert | Normal | 30-45 cm | Old/None |
| 9 | 87 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Fresh |
| 9 | 88 | | Loblolly | L | A | Active | Insert | Normal | 15-30 cm | Fresh |
| 10 | 64 | | Loblolly | L | A | Inactive | Insert | Normal | > 45 cm | Old/None |
| 10 | 65 | | Loblolly | L | A | Active | Insert | Normal | 30-45 cm | Recent |
| 10 | 66 | | Loblolly | L | A | Active | Insert | Normal | >15 cm | Fresh |
| 10 | 67 | | Loblolly | L | N | Relic | Complete | >4X | Unstarted | Old/None |
| 10 | 68 | | Loblolly | L | N | Active | Complete | >2X | Unstarted | Recent |
| 10 | 150 | | Loblolly | L | A | Active | Insert | Normal | >15 cm | Recent |
| 10 | 151 | | Loblolly | D | A | U | Insert | U | U | U |
| 10 | 152 | | Loblolly | D | A | U | Insert | U | U | U |
| 10 | 153 | | Loblolly | D | A | U | Insert | U | U | U |
| 10 | 154 | | Loblolly | L | N | Active | Complete | Normal | 30-45 cm | Recent |
| 10 | 156 | | Loblolly | L | N | Inactive | Complete | Restrictor | 15-30 cm | Old/None |
| 10 | 157 | | Loblolly | L | N | Active | Complete | <2X | > 45 cm | Fresh |
| 10 | 214 | | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 10 | 215 | a | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Recent |
| 10 | 215 | b | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 10 | 10NT 3 | a | Loblolly | L | N | Active | Start (Adv) | <2X | Unstarted | Fresh |
| 10 | 10NT 3 | b | Loblolly | L | N | Inactive | Start | Normal | Unstarted | Old/None |

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 10NT 3 | c | Loblolly | L | N | Inactive | Sub-start | Normal | Unstarted | Old/None |
| 10 | 10NT 4 | a | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |
| 10 | 10NT 4 | b | Loblolly | L | N | Inactive | Sub-start | Normal | Unstarted | Old/None |
| 10 | 10NT 5 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 11 | 140 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 11 | 141 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 11 | 142 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 11 | 143 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 11 | 238 | | Unknown | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 11 | 239 | | Loblolly | L | N | Active | Complete (New) | Normal | Unstarted | Fresh |
| 11 | 240 | | Loblolly | L | N | Active | Complete (New) | Normal | Unstarted | Fresh |
| 12 | 130 | | Loblolly | D | A | U | Insert | U | U | U |
| 12 | 131 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 12 | 132 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 12 | 133 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 12 | 158 | | shortleaf | L | A | Active | Insert | Normal | Unstarted | Fresh |
| 12 | 159 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 12 | 189 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 12 | 244 | a | Loblolly | L | N | Active | Start | Normal | Unstarted | Recent |
| 12 | 244 | b | Loblolly | L | N | Active | Complete (New) | Normal | 15-30 cm | Fresh |
| 13 | 118 | | Loblolly | D | A | Relic | Insert | Normal | U | U |
| 13 | 119 | | Loblolly | L | A | Inactive | Insert | Normal | 30-45 cm | Old/None |
| 13 | 120 | | Loblolly | L | A | Inactive | Insert | Normal | >15 cm | Old/None |
| 13 | 121 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Recent |
| 13 | 122 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Fresh |
| 13 | 123 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 13 | 124 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 13 | 126 | | Loblolly | D | A | Relic | Insert | Normal | U | U |
| 13 | 144 | | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 13 | 145 | | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 13 | 168 | | Loblolly | L | A | Active | Insert | Normal | >15 cm | Fresh |
| 13 | 169 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Recent |
| 13 | 13NT 1 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 88 | | Loblolly | L | N | Inactive | Start (Adv) | Normal | Unstarted | Old/None |
| 14 | 89 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 14 | 90 | | Loblolly | D | A | Inactive | Insert | Normal | U | U |
| 14 | 91 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 14 | 100 | | Loblolly | L | N | Inactive | Start (Adv) | Normal | Unstarted | Old/None |
| 14 | 101 | | Loblolly | L | N | Inactive | Complete | >2X | Unstarted | Old/None |
| 15 | 160 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 15 | 161 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 15 | 162 | | Loblolly | L | A | Active | Insert | Normal | 15-30 cm | Fresh |
| 15 | 163 | | Loblolly | L | A | Inactive | Insert | Normal | 30-45 cm | Old/None |
| 15 | 187 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 15 | 198 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 15 | 205 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Fresh |
| 15 | 221 | | Loblolly | L | N | Active | Complete | Normal | >15 cm | Recent |
| 15 | 15NT 1 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 16 | 165 | | Loblolly | D | N | U | Start | U | U | U |
| 16 | 166 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 16 | 167 | | Loblolly | L | A | Relic | Insert | Normal | Unstarted | Old/None |
| 17 | 146 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 17 | 147 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 18 | 181 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Recent |
| 18 | 182 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 18 | 183 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 18 | 184 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 18 | 207 | | Shortleaf | L | N | Active | Complete | Normal | Unstarted | Fresh |
| 19 | 134 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Fresh |
| 19 | 148 | | Loblolly | L | A | Inactive | Insert | Normal | Unstarted | Old/None |
| 19 | 149 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Recent |
| 19 | 201 | | Loblolly | L | A | Active | Insert | Normal | 15-30 cm | Fresh |
| 19 | 202 | | Loblolly | D | A | Inactive | Insert | Normal | U | U |
| 19 | 203 | | Loblolly | L | A | Active | Insert | Normal | 15-30 cm | Fresh |
| 19 | 222 | | Loblolly | L | N | Active | Complete | Normal | 15-30 cm | Fresh |
| 19 | 223 | | Loblolly | L | N | Active | Complete (New) | Normal | Unstarted | Fresh |
| 19 | 224 | | Loblolly | L | N | Active | Complete (New) | <2X | Unstarted | Fresh |
| 19 | 232 | | Loblolly | L | N | Active | Start (Adv) | Normal | Unstarted | Fresh |
| 19 | 245 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |

| CLUSTER | Tree | Cavity | Species | Condition[1] | Cavity[2] | 2014 Status[3] | 2014 Condition | 2014 Entrance | 2014 Plate | 2014 Resin Work |
|---|---|---|---|---|---|---|---|---|---|---|
| 19 | 246 | | Loblolly | L | N | Active | Start | Normal | Unstarted | Fresh |
| 19 | 203 | | Loblolly | L | A | Active | Insert | Normal | Unstarted | Fresh |

[1]D = dead, L = live
[2]N = natural, A = artificial
[3]U = unavailable