

**Results of Oak Coring in Lindy Roosenburg Preserve
Summary and Analysis by Phil Cantino
January 2024**

Coring was done in the Lindy Roosenburg Preserve on 11 January 2024 by Sam Gutekanst, with help from Greg Kessler, Nick Pilewski, Kate Kelley, Claudia Sheehan, and Phil Cantino.

Summary:

- The white oak and four chestnut oaks in the southwest corner of the preserve range from 104 to 140+ years old.
- The two black oaks—one along Magic Is Real Trail by the power line and the other at the junction of Runaway Tractor Trail and Renz Ridge—are about 100 years old.
- The two smallest diameter chestnut oaks are the two oldest trees cored. It would be interesting to find out whether some nearby chestnut oaks are even older.
- The ring width sequences indicate logging around 1915 but nothing more recent than that. There is also evidence suggesting there may have been some logging in the 1880s.
- The apparent logging event around 1915 that left a signature in the oldest tree left no signature in the second oldest one (1888), which was no more than 200 feet from the oldest. This indicates that the 1915 logging was light and selective. If the area was ever completely cleared, it was at least 140 years ago. More likely, trees on that steep slope were taken here and there as needed.

Specifics:

Minimum age is stated as of 2024, though the most recent ring was formed in 2023. The actual age would have been 5-10 years older because the tree had to grow to the height at which the core was taken.

Organized from largest (diameter at breast height) to smallest

DBH	species	ID code	earliest growth ring	Minimum age (in 2024)
107 cm	black oak	BO2	1922	102 years
83.5 cm	black oak	BO1	1927	97 years
68.1 cm	white oak	WO1	1896	128 years
59.3 cm	chestnut oak	CO3	1912	112 years
59.3 cm	chestnut oak	CO4	1920	104 years
58.2 cm	chestnut oak	CO2	1888	136 years
43.5 cm	chestnut oak	CO1	1886*	140+ years*

* In CO1, the core missed the center by a few years, so the tree is older than 1886. An estimate of at least 140 years is reasonable.

Coordinates (organized by ID code)

BO1: 1927 (97 years old in 2024)	39.403836, -82.111593
BO2: 1922 (102 years old in 2024)	39.401822, -82.108131
CO1: 1886 (138 years old in 2024)	39.402497, -82.111479
CO2: 1888 (136 years old in 2024)	39.402558, -82.111499
CO3: 1912 (112 years old in 2024)	39.402571, -82.112007
CO4: 1920 (104 years old in 2024)	39.402767, -82.111385
WO1:1896 (128 years old in 2024)	39.402415, -82.111159

BO=black oak

CO=chestnut oak

WO=white oak

Ring width sequences:

Black oak 1 (1927): Tree next to power line clearing. The power line was there in 1939 (air photo) but I don't know how much earlier it was built. The tree laid down wide rings throughout its life except for two periods in the 1950s and 1960s with narrower rings (perhaps due to drought?). In the 1939 air photo, the tree is visible, surrounded by what appears to be scattered smaller trees and brush.

Black oak 2 (1922): Very wide rings the first eight years. Wide from about 1930 to about 2015, except the same two periods in the 1950s and 1960s when BO1 had narrower rings. Much narrower rings 2015-2023. The tree is visible in the 1939 air photo but not very large.

White oak 1 (1896): Wide rings until about 1948, then much narrower from then to present. This tree appears to have lived its first 50 or so years in an area receiving plenty of sun and water. In the 1939 air photo, this area had a sparse canopy.

All four chestnut oaks are growing in an area that shows as dense canopy in the 1939 air photo. I can't identify these particular trees in the photo.

Chestnut oak 1 (1886): The core missed the center by a few years, so the tree is older than 1886. The rings are relatively narrow until 1915, and especially narrow 1893 to 1915. There may have been extra light available from germination until 1893, perhaps due to death of a single nearby tree from logging or natural cause, but the fact that the rings from 1893 to 1915 are extremely narrow suggests that there was no widespread logging near that tree. The rings abruptly widened about 1915 (presumably due to nearby logging) and stayed very wide until 1928. Then there is a period of narrower rings from 1928 to about 1938; then wider 1939-1940. No abrupt changes from then until the present but the rings gradually narrow. From 2005 to the present, the rings are as narrow as in the tree's first decade of life. The probable drought signatures in the mid-1950s and mid-1960s are visible here too. This tree's ring sequence suggests that there was just one period of substantial logging near it—in 1914 or 1915. However, the moderately wide rings 1886-1893 could be a signature of an earlier period of logging, with some canopy recovery before this tree was there.

Chestnut oak 2 (1888): Rings fairly wide until 1895, suggesting it was receiving plenty of light, so there was presumably logging in this area around or prior to 1888. From 1895 to the present, there is no dramatic change in ring width, indicating no nearby logging. The rings from 2003-2007 are a bit wider, perhaps due to the death of a nearby tree, but we know there was no logging during the 40 years that Claudia owned the land. This area has probably been logged only once, probably in the 1880s.

Chestnut oak 3 (1912): Rings very wide from 1914 to 1928, but narrower 1912-1913. This suggests there was logging nearby in 1914 (consistent with rings of CO1). There are no dramatic and persistent changes in ring width from 1929 to present.

Chestnut oak 4 (1920): The rings are very wide 1920 to 1930, perhaps due to the same period of logging around 1915 that left a signature in CO1 and CO3. There are no dramatic and persistent increases in ring width from 1930 to present, but the rings are dramatically narrower from 2015 to 2023.