

CHESTNUTS (and Friends) AT LOCKWOOD FARM, September 2022

Donald Jones, Hans Nienstaedt, Richard Jaynes, and Sandra Anagnostakis

1. KENWOOD AVENUE

by gate: *Castanea mollissima*
 USDA import FP#7275, planted 1939 [peroxidase AB]
 next west *Castanea mollissima*
 cultivar '**Bartlett**' grafted 1939 [peroxidase AA+]
 next west *Castanea mollissima*
 USDA import FP#7284, planted 1939 [peroxidase BB]
 next west *Castanea mollissima*
 USDA import FP#7273, planted 1939 [peroxidase BB]

FARM, CENTER

2. near barns: *Castanea dentata* American Orchard

Four rows of 18 seedlings from Michigan and Wisconsin, provided by Ivan Thor, U. Tennessee. planted 1976 when 2 and 3 yrs old, [all Santamour peroxidase AA].

R1T1 is at the NE corner, rows run from North to South

☺ original stem ☹ old sprouts ☹ young sprouts, lots of die-back ↑ North

| | Row 4 | Row 3 | Row 2 | Row 1 |
|--------|-------|-------|-------|-------|
| Tree 1 | ☹ | ☹ | ☹ | ☹ |
| 2 | ☹ | ☹ | ☺ | ☹ |
| 3 | ☺ | ☹ | ☹ | ☹ |
| 4 | ☹ | ☹ | ☹ | ☺ |
| 5 | ☺ | ☺ | ☹ | ☹ |
| 6 | ☹ | ☹ | ☹ | ☹ |
| 7 | ☺ | ☺ | ☹ | ☹ |
| 8 | ☹ | ☹ | ☹ | ☹ |
| 9 | ☺ | ☺ | ☹ | ☹ |
| 10 | ☹ | ☹ | ☹ | ☹ |
| 11 | ☹ | ☺ | ☺ | ☹ |
| 12 | ☺ | ☹ | ☺ | ☹ |
| 13 | ☹ | ☹ | ☺ | ☹ |
| 14 | ☺ | ☹ | ☹ | ☹ |
| 15 | ☹ | ☹ | ☹ | ☹ |
| 16 | ☺ | ☹ | ☹ | ☹ |
| 17 | ☹ | ☹ | ☺ | ☹ |
| 18 | ☹ | | ☹ | ☹ |

South of these are 27 trees from the American Chestnut Cooperator's Foundation planted 2007, and a few other trees from others.

| | | | | |
|----|---------------------------------|---------------------------------|-------------------------|----------------------------------|
| 19 | Smith Middle School, CT | cross #6-07 American tag #24712 | ACCF Pacman | ACCF VT 1 |
| 20 | ACCF NC Champ best | | | Smith Middle Schol, CT |
| 21 | cross #6-07 American tag #24714 | | Turkey, C. sativa | ACCF Loudon |
| 22 | ACCF NC Champ | ACCF VT 1 | | Turkey, C. sativa |
| 23 | ACCF Thompson | ACCF Thompson | Turkey, C. sativa | Burton 27a, GA 2011 |
| 24 | ACCF Thompson | Smith Middle School, CT | Smith Middle School, CT | Sault St. Marie tree from Canada |
| 25 | ACCF JEB | ACCF JEB | | |
| | Row 4 | Row 3 | Row 2 | Row 1 |

3. east, center `Scientists' Cliffs" graft (doesn't look like *dentata*) called "American," from Glenndale, MD, land of G.F. Gravatt, also known as FP1000, graft about 1959 [Santamour peroxidase AA]

4. SE corner (*Castanea mollissima* x *C. dentata*) x *C. dentata* two clones of hybrid `Clapper' from a USDA cross in 1946, grafted here about 1960. This was: "M16" = PI#34517, Tientsin, China (1912) crossed with an "American" in MD known as FP 555, and the hybrid crossed again with FP 555 (original now dead), these two clones are not cross-fertile [peroxidase AA and AA], (stump sprout there too!)

5. North and East of 'Clapper', on the road Commercial chestnuts and 2014 seedlings

| | <u>S</u> | <u>Center</u> | <u>N</u> |
|---|-------------------------|-------------------------|-------------------------|
| W | 'Colossal' x 'Lockwood' | 'Colossal' x 'Lockwood' | 'Colossal' [perox. BB] |
| C | 'Colossal' x 'Lockwood' | 'Colossal' [perox. BB] | 'Colossal' x 'Lockwood' |
| E | 'Colossal' x 'Lockwood' | 'Colossal' x 'Lockwood' | 'Colossal' x 'Lockwood' |

6. East of 'Clapper', on the road, between grapes Commercial chestnut seedlings

| | <u>S</u> | <u>Center</u> | <u>N</u> |
|---|----------|---------------|----------|
| W | Dunston | Dunston | Dunston |
| C | Dunston | Dunston | Dunston |
| E | Dunston | Dunston | Dunston |

7. NEW HYBRIDS, just WEST of the American orchard

Rows run from South to North with the first row on the East side of the plot

R1T1 is at the SE corner

| | | |
|----------|--|------------|
| R1T1 | Fred Blankenship hybrid 2013 | |
| R1T2 | | |
| R1T3 | <i>C. ozarkensis</i> x <i>C. crenata</i> , NH R2T2 x WL R34T6, 2011 | F1 |
| R1T4 | <i>C. ozarkensis</i> x <i>C. crenata</i> , NH R2T2 x WL R34T6, 2011 | F1 |
| R1T5 | <i>C. dentata</i> x <i>C. crenata</i> , HH R1T6 x WL R34T6 | F1 |
| R1T6 | | |
| R1T7 | <i>C. ozarkensis</i> x <i>C. crenata</i> , NH R2T2 x WL R34T6, 2011 | F1 |
| R1T8 | | |
| R1T9 | <i>C. ozarkensis</i> x <i>C. crenata</i> , NH R2T2 x WL R34T6, 2011 | F1 |
| R1T10 | | |
| R1T11 | <i>C. dentata</i> x <i>C. crenata</i> cross #14-91, RH(5) R2T5 (farm) x WL R34T6 (Plantation), male sterile, Excellent resistance, shed nuts by mid-September, poor apical dominance | F1 |
| R1T12-13 | | |
| R1T14 | <i>C. dentata</i> x <i>C. crenata</i> cross #11-91, RH(11) R2T7 x WL R34T6 (Plantation), male sterile, form poor, resistance good, early nuts, seedlings have good roots, good apical dominance (peroxidase AB) | F1 |
| R1T15 | | |
| R1T16 | <i>C. dentata</i> x <i>C. crenata</i> , HH R1T6 x WL R34T6 | F1 |
| R1T17-18 | | |
| R1T19 | <i>C. ozarkensis</i> x <i>C. crenata</i> , NH R2T2 x WL R34T6, 2011 'Jackie' | F1 |
| R2T1 | | |
| R2T2 | <i>C. ozarkensis</i> x <i>C. ozarkensis</i> cross #8-02, CC RetaT4 x CC RgammaT3 (both Arkansas) | |
| R2T3 | <i>C. dentata</i> x <i>C. henryi</i> cross #9-09 RH(5) R2T5 x WL R32T1 | F1 |
| R2T4 | | |
| R2T5 | <i>C. ozarkensis</i> x (<i>C. henryi</i> x <i>C. ozarkensis</i>) cross #6-06, RgammaT4 x SpL R5T37, male fertile, one nut per bur | BC1 |
| R2T6 | <i>C. ozarkensis</i> Arkansas 1 from Steve Bost 2013, Nat. d-w Scott County, AR, Ouachita National Forest, o.p. | |
| R2T7 | <i>C. ozarkensis</i> x <i>C. crenata</i> , HH R2T1 x WL R34T6, 2011 | F1 |
| R2T8 | | |
| R2T9 | <i>C. ozarkensis</i> Arkansas 2 from Steve Bost 2013, Nat. d-w Scott County, AR, Ouachita National Forest, o.p. | |
| R2T10-11 | | |
| R2T12 | <i>C. ozarkensis</i> Arkansas 2 from Steve Bost 2013, Nat. d-w Scott County, AR, Ouachita National Forest, o.p. | |
| R2T13 | | |
| R2T14 | <i>C. dentata</i> x <i>C. henryi</i> cross #9-09 RH(5) R2T5 x WL R32T1 | F1 |
| R2T15-16 | | |

R2T17 'Eaton' x *C. ozarkensis* (OK), Kenwood orchard x HH R2T1, 2013
'Dr. Sandy'
R2T18-19 'Eaton' x *C. ozarkensis* (OK), Kenwood orchard x HH R2T1, 2013
R3T1-6 'Colossal' x *C. ozarkensis* (AR), commercial orchard x HH R2T2, 2013
R3T7
WATER LINE
R3T8-9 'Colossal' x *C. ozarkensis* (AR), commercial orchard x HH R2T2, 2013
R3T10
R3T11-12 'Colossal' x *C. ozarkensis* (AR), commercial orchard x HH R2T2, 2013
R3T14
R3T15-16 'Colossal' x *C. ozarkensis* (AR), commercial orchard x HH R2T2, 2013
R3T17 'Colossal' x 'Lockwood', 2014
R3T18
R3T19 'Colossal' x *C. ozarkensis* (AR), commercial orchard x HH R2T2, 2013

8. TURKISH CHESTNUT TREES directly south of the New Hybrids
Rows run from South to North with the first row on the East side of plot

R1T1 is at the SE corner, at the road
R1T1 #24771, Eastern Turkey, Artvin Province, Collection 1, 2007, perox. AB
R1T2 #24772, Eastern Turkey, Artvin Province, Collection 1, 2007, perox. AB
R1T3 Eastern Turkey, Artvin Province, Collection 1, 2007, perox. AB
R1T4
R1T5
R1T6 #24770, Eastern Turkey, Artvin Province, Collection 1, 2007, perox. BB
R1T7
R1T8 Eastern Turkey, Artvin Province, Collection 2, 2007, perox. AB
R1T9
R1T10 Eastern Turkey, Artvin Province, Collection 2, 2007, perox. AB
R1T11
R1T12 #24776, Eastern Turkey, Artvin Province, Collection 2, 2007, perox. AB
R1T13
R2T1
R2T2
R2T3
R2T4 R2T5
R2T6 Eastern Turkey, Artvin Province, Collection 4, 2007, perox. BB
R2T7
R2T8
R2T9 #24781, Eastern Turkey, Artvin Province, Collection 4, 2007, perox. BB
R2T10 Eastern Turkey, Artvin Province, Collection 4, 2007, perox. AB
R2T11 #24784, Eastern Turkey, Artvin Province, Collection 4, 2007, perox. AB
R2T12 R2T13 Eastern Turkey, Artvin Province, Collection 4, 2007, perox AB
R3T1

R3T2
 R3T3
 R3T4
 R3T5
 R3T6
 R3T7
 R3T8
 R3T9
 R3T10
 R3T11

R3T12 *C. ozarkensis* x *C. henryi*, NH R2T2 x WL R32T1, 2011 **F1**
 R3T13 *C. ozarkensis* x *C. henryi*, NH R2T2 x WL R32T1, 2011 **F1**

9. HUMPHREY HILL (East of the Bird and Butterfly garden)

West end along the north end, small trees East end

C. henryi GA FL pum. MD pum. MD pum FL pum. FL pum. MD pum. MD pum.

C. pumila from North Florida, planted July 2011,

C. pumila from Maryland planted 2014

C. henryi from Callaway Gardens, GA, planted 2011 (See Beyond the Rock)

Rows run from North to South, with the first row on the East side of the plot

R1T1 is at the NE corner

R1T1 *C. dentata* x (*C. ozarkensis* x *C. seguinii*) "Windsor Nice #1"
 moved here from Windsor in 2006 one nut/bur!
 cross #19-93, RH(3) R4T2 x WL R29T14 (#23-60)

R1T2 *C. sativa*
 from Bursa, Turkey; wild population #010, seed 1990, planted 1991
 (peroxidase AA)

R1T3 *C. ozarkensis* x *C. ozarkensis*
 cross #8-02, CC RetaT4 X CC RgammaT3 (both Arkansas)

R1T4-5 *C. sativa*
 from Bursa, Turkey; wild population #018, seed 1990, planted 1991
 (peroxidase AA, AA)

R1T6 *C. dentata*
 Roxbury #2 op: open-pollinated seedling from tree #2 in a group of
 American chestnut sprouts on Painter Hill Rd. in Roxbury, CT seed 1988,
 planted 1989, no leaf hairs (peroxidase AA)

R1T7-8 *C. crenata*
 open pollinated '**Japanese Giant**' from Rochester, NY, seed 1990,
 planted 1991 (peroxidase BB)

R2T1 *C. ozarkensis* Ouachita National Forest, OK, planted 2004

R2T2 *C. henryi* o.p. WL R32T1 o.p. 2009 (has 3 nuts per bur, male fertile)

R2T3-4 *C. sativa*
 from Bursa, Turkey, wild population #018, seed 1990, planted 1991
 (peroxidase AA, & AA)

- R2T5 *C. sativa*
European (Black Forest, Germany), seed 1984, planted here 1988
(peroxidase AA)
- R2T6 *C. dentata*
seed 1984 from E. Wisniewski, Norwich, CT, planted 1988 no leaf hairs
(peroxidase AA)
- R2T7 *C. dentata*
Rox 2 op, see R1T6, no leaf hairs (peroxidase AA)
- R2T8 *C. mollissima*
Chinese, cultivar `Orrin', planted 1963
- R3T1 *C. mollissima*
Chinese, cultivar `Kuhling' PI #108552, "K'uei Lee"
from Louis Gerard Nursery in Illinois, planted 1961
- R3T2 *C. sativa*
from the Cavcas Biosphere Reserve, seed 1993, planted 1994
collected by Fred Paillet (peroxidase AA)
- R3T3 *C. seguini* cross, *clearly hybrid*, HH R4T2 x SL R8T4, 2011
- R3T4 *C. sativa* hybrid
looks like a European X Japanese hybrid, seed from E. W. Morse,
Grandview, Washington, 1944 as "various unidentified" nuts, moved
here 1952
- R3T5 *C. mollissima*
"wild Chinese" from Dr. Liu Liu, Nanjing, seed 1992, planted 1994 [perox AB]
- R3T6 *C. dentata*
American, seed 1985 of Watertown III X Watertown I, trees in upstate
New York thought to have some blight resistance, seedling from W.
Mac Kentley, St. Lawrence Nurseries, Potsdam, NY, planted 1989, no leaf
hairs (peroxidase AA)
- R3T7 *C. mollissima*
Chinese, cultivar `Abundance' from Louis Gerard Nursery in Illinois,
planted 1963
- R3T8 *C. dentata*
seedling of Watertown III x Watertown I, see notes R3T6, planted 1989
(peroxidase AA)
- R4T1 *C. pumila*
from Empire Chestnut Co., 2000 (peroxidase AA)
- R4T2 *C. seguinii* x *C. seguinii* "ever-flowering"
cross #4-98 of SL R8T4 x SL R2T16, planted 1999, perox. A+BB
- R4T3 `Scientists' Cliffs' x *C. dentata*
`Scientists' Cliffs' x Roxbury #5, planted 1990, no leaf hairs
- R4T4 *C. mollissima* x *C. mollissima*
cross #15-90, `Mahogany' SL R1T15 x `Tiger Paw' SL R9T2,
planted 1991, very late blooming, (peroxidase AA+),

- R4T5 *C. crenata* X *C. sativa*
`**AW 74**' Japanese x European "natural hybrid" from near Brive, France (1946) sent by Solignat as a graft, buried in-arch resulted in rooting, hybrid now on its own roots planted 1961
- R4T6-7 *C. dentata*
American, Watertown III x Watertown I, see notes R3T6, planted 1989
no leaf hairs (peroxidase AA)
- R4T8 [(*C.crenata* x *C. sativa*) x *C. dentata*] o.p.
`**Lockwood**'
seedling from SL R4T3 (Plantation) open pollinated, 1946:
SL R4T3 is `**Hammond-'86**', from cross #86-31: Its male parent was a tree near Washington, DC (FP 551). Its female parent was the east branch of a tree managed by P. Hammond, Syosset, Long Island, New York, (estate of Bronson Winthrop). The Long Island tree was grafted with two leaders: one with a single nut in each bur, (east branch) and the other with three nuts per bur (west branch; broken off in Hurricane Gloria, 1985). A peroxidase test was done on material from the surviving east branch in 1994, and it was AB, proving that it was not pure Japanese (as Hammond assumed) but a hybrid. We believe that the east branch was Japanese X European and the west branch (probably the root stock) was Japanese. The hybrid `**Hammond-'86**' has good blight resistance. `**Hammond-'86**' was open pollinated in 1946 (probably by Japanese), and seedling `**Lockwood**' was planted here about 1957 (peroxidase BB)
- R5T1-2 *C. alnifolia*?
Florida chinquapins from Lafayette County (50 miles NW of Gainesville,FL) in an oak-pine forest with sandy soil, collected by R. D. Wallace, Chestnut Hill Nursery, planted 1995, bloom late and seed rarely matures, not winter hardy (peroxidase AA & AA)
- R5T3-6 American persimmons
These were originally grafted with Asian cultivars, but all of the grafts died. The American seedlings were collected near Aurora, Arkansas in 1937

TOP OF HUMPHREY HILL

10. DENSE PLANTING OF AMERICAN CHESTNUT TREES

C. dentata, from the Wexford County Soil and Conservation District, Michigan, 226 seedlings planted at the top of the hill in April, 1981, used mixtures of hypovirulent strains, last treatment 1988. The tree in the NW corner used in crosses in 1988 is peroxidase AA

12. Species and hybrids

Rows 6, 7, 8, and 9 were planted in the spring of 2004 and 2005. Long numbers are Ozark chinquapins from the Ozark Plateau in Oklahoma, raised in the Georgia nursery, and sent here (dormant) by Scott Schlarbaum in 2004.

Rows run from North to South, with the first row on the East side of the plot

| Row 6 (EAST) | | ... | ... |
|-------------------|------------|---------|-------|
| <u>ozarkensis</u> | | ... | 12031 |
| 13281 | 1 perox AA | #7.5-03 | ... |
| 13287 | 2 AA | #7.5-03 | ... |
| 13272 | 3 AA | #7.5-03 | |
| | | 12848 | 18 AA |
| ... | | 12832 | 19 AA |
| ... | | 13032 | 20 AA |
| ... | | ... | |
| | | 12022 | 21 AA |
| ... | | ... | |
| 12071 | 4 AA | | |
| 12054 | 5 AA | 12819 | 22 AA |
| 12055 | | ... | |
| 12076 | 6 AA | .. | |
| ... | | 13377 | 23 |
| 13335 | 7 AA | ... | |
| 12053 | 8 AA | 13260 | 24 AA |
| 12072 | | 13255 | 25 AA |
| 13346 | 9 AA | 13259 | 26 AA |
| 12073 | 10 AA | ... | |
| 13345 | 11 AA | ... | |
| 13347 | 12 AA | ... | |
| 13340 | | ... | |
| ... | | 12033 | 27 AA |
| ... | | 12016 | 28 AA |
| ... | | 12018 | |
| 12868 | 13 AA | 12014 | |
| 12855 | 14 AA | 12010 | 29 AA |
| 12862 | | 12017 | |
| ... | | ... | |
| 12847 | 15 AA | 12004 | |
| ... | | 12030 | |
| 12861 | 16 AA | 12013 | |
| 12853 | 17 AA | 12019 | 30 AA |
| ... | ... | ... | |
| ... | | 12021 | |
| ... | | 12006 | |
| | | ... | |

| | |
|----------------------------|-------|
| <u>Row 7 next WEST row</u> | ... |
| Cross 4, 2003 | ... |
| HH R1T1 x 'Little Giant' | ... |
| #4-03 Wn nice*LG | 12881 |
| . | 12975 |
| . | ... |
| #14-04 Wtn x Rox | ... |
| #4-03 | 12909 |
| #14-04 Wtn X Rox | |
| #4-03 Wn nice*LG | |
| #4-03 | |
| #4-03 | |
| #4-03 | |
| #16-04 K Art x LK | |
| #4-03 | |
| #18-06 | |
| #18-06 | |
| #18-06 | |
| #8-06 | |
| #7-06 | |
| #12-06 | |
| #9-06 | |
| #9-06 | |
| #10-06 | |
| #10-06 | |
| ... | |
| ... | |
| 12982 ozarkensis | |
| 12882 ozarkensis | |
| ... | |
| ... | |
| ... | |
| ... | |
| 12967 | |
| ... | |
| ... | |
| ... | |
| ... | |
| ... | |
| ... | |
| 13072 | |
| ... | |

| | |
|------------------------|----------------------------|
| <u>Row 8 next WEST</u> | #8-03 |
| #4-03 HH R1T1 X LG | #8-03 |
| #4-03 | #8-03 |
| #4-03 | ... |
| #4-03 | ... |
| #4-03 | ... |
| #4-03 | #8-03 |
| #4-03 | #8-03 |
| #4-03 | ... |
| ... | #8-03 |
| #4-03 | #8-03 |
| #4-03 | ... |
| #4-03 | #8-03 |
| ... | ... |
| ... | and 14 #17-03 trees |
| ... | <u>Morris (Merribrook)</u> |
| #6-03 BC3 (C)RH R3T20 | <u>Stamford</u> |
| #6-03 | ... |
| #6-03 | ... |
| #7-03 BC3 (C)RH R3T14 | ... |
| #7-03 | ... |
| ... | ... |
| ... | ... |
| ... | ... |
| ... | ... |
| ... | ... |
| ... | ... |
| #7-03 | ... |
| ... | ... |
| ... | ... |
| ... | ... |
| #7-03 | ... |
| #7-03 | ... |
| ... | ... |
| #7-03 | ... |
| #7-03 | ... |
| #7-03 | ... |
| #7-03 | ... |
| #7.5-03 | ... |
| BC3(C)RHR4T14 | ... |
| #7.5-03 BC3 (C) | ... |
| ... | ... |
| #8-03 BC3 (C) | ... |
| ... | ... |
| #8-03 | ... |

Row 10, next West

1. HH ozarkensis x HH
R4T7 Watertown
American (2008 seed)
3. HH ozarkensis x HH
R4T7 Watertown
American (2008 seed)
4. HH ozarkensis x HH
R4T7 Watertown
American (2008 seed)
5. HH ozarkensis x HH
R4T7 Watertown
American (2008 seed)
- 6.
- 7.

Bee and Thistle o.p.

C. crenata trees in rest of
row

Row 11, next West

HH *ozarkensis* x SpL
R7T61 **BC1**
oz x (*crenata***ozarkensis*)
cross #6-08 (15 alive)
[WL R7T7 x Ark.
RgammaT3]

Row 12, next West

1-6 HH R1T6 x HH R4T7
Rox x Watertown
7-9 KA *Lock x HH
R4T7, #16-04 x
Watertown
10-36 #7-08 HH oz x
SpL R8T62 **BC1**
oz x oz*J Δ
(24 alive)

13. WEST OF THE ROCK, ROCKY HILL ORCHARD

Seed was from a wood-lot on Rt. 3 in Rocky Hill, CT in 1985 (open pollinated) from numbered female trees, seed planted at Smith College in a seed bed. Trees were transplanted to Lockwood Farm in the spring of 1988, and replacements for dead trees moved in the spring of 1989.

Rows run from South to North, with the first row at the East side of the plot

R1T1 (at the SE corner) RH #2 op, peroxidase AA
R1T2-3 RH #3 op, both peroxidase AA
R1T4-7 RH #5 op, all peroxidase AA
R1T8 RH #11 op, peroxidase AA
R1T9-10 RH #14 op, both peroxidase AA
R1T11 RH #26 op, peroxidase AA
R2T1 RH #2 op, peroxidase AA
R2T2 RH #3 op, peroxidase AA
R2T3-6 RH #5 op, all peroxidase AA
R2T7 RH #11 op, peroxidase AA
R2T8 RH #5 op, peroxidase AA
R2T9 RH #14 op, peroxidase AA
R2T10-11 RH #26 op, both peroxidase AA
R3T1-3 RH #3 op, all peroxidase AA
R3T4 RH #5 op, peroxidase AA
R3T5-6 RH #5 op, both peroxidase AA
R3T7 RH #3 op, peroxidase AA
R3T8 RH #14 op, peroxidase AA
R3T9 RH #5 op, peroxidase AA
R3T10 RH #3 op, peroxidase AA
R3T11 RH #26 op, peroxidase AA
R4T1-2 RH #3 op, both peroxidase AA
R4T3-6 RH #5 op, all peroxidase AA
R4T7 RH #11 op, peroxidase AA
R4T8 RH #14 op, peroxidase AA
R4T9 RH #3 op, peroxidase AA
R4T10 RH #11 op, peroxidase AA

THE ROCKY HILL PLANTING WAS EXTENDED IN JUNE 1996

R3T13-14 [(*Castanea dentata* x *mollissima*) x *C. dentata*] x *C. dentata* **BC2**
cross #7-95, NH R2T10 x RH(14) R3T8 [SL R10T12 x RH(5) R4T3]
R3T216-17? [(*Castanea dentata* x *mollissima*) x *C. dentata*] x *C. dentata* **BC2**
cross #7-95, NH R2T10 x RH(14) R3T8 [SL R10T12 x RH(5) R4T3]
R4T12 [(*Castanea dentata* x *mollissima*) x *C. dentata*] x *C. dentata* **BC2**
cross #7-95, NH R2T10 x RH(14) R3T8 [SL R10T12 x RH(5) R4T3]

14. SOUTH OF THE ROCK

Rows run from East to West with the first row at the North end of the plot

Row 1 Tree 1 is in the north-east corner

| | | |
|----|---|-----|
| R1 | T1,2 T3,4 T3-13 T14-15 Lanz, (Japanese?) o.p. T16-18 Szego (Long Island) <i>seguine*dentata</i> x <i>dentata*crenata</i> | |
| R2 | T1-2 <i>C. dentata</i> x [<i>C. dentata</i> x [(<i>C. crenata</i> x <i>sativa</i>) x <i>C. dentata</i>]] cross #9-95, RH(14) R1T10 X NH R2T3 (ex 'Hammond-86') | BC3 |
| | T3 | |
| | T4 [(<i>C. dentata</i> x <i>mollissima</i>) x <i>dentata</i>] x <i>dentata</i> cross #9-99, NH R2T10 x Walbridge, OH American | BC2 |
| | T5 unknown <i>Castanea</i> from Rau in Washington State | |
| | T6 | |
| | T7-8 <i>C. dentata</i> x [<i>C. dentata</i> x [(<i>C. crenata</i> x <i>sativa</i>) x <i>C. dentata</i>]] cross #9-95, RH(14) R1T10 x NH R2T3 (ex 'Hammond-86') | BC3 |
| | T9 | |
| | T10 <i>C. dentata</i> x [<i>C. dentata</i> x [(<i>C. crenata</i> x <i>sativa</i>) x <i>C. dentata</i>]] cross #9-95, RH(14) R1T10 x NH R2T3 (ex 'Hammond-86') | BC3 |
| | T11-13 unknown <i>Castanea</i> from Rau in Washington State | |
| | T14 | |
| | T15-16 <i>C. dentata</i> x [<i>C. dentata</i> x [(<i>C. crenata</i> x <i>sativa</i>) x <i>C. dentata</i>]] cross #9-95, RH(14) R1T10 x NH R2T3 (ex 'Hammond-86') | BC3 |
| | T17 | |
| | T18 <i>C. dentata</i> x [<i>C. dentata</i> x [(<i>C. crenata</i> x <i>sativa</i>) x <i>C. dentata</i>]] cross #9-95, RH(14) R1T10 x NH R2T3 (ex 'Hammond-86') | BC3 |
| R3 | T1 [(<i>C. dentata</i> x <i>mollissima</i>) x <i>dentata</i>] x <i>dentata</i> cross #9-99, NH R2T10 x Walbridge, OH American | BC2 |
| | T2-4 root sprouts of seedling 'Little Giant' | |
| | T5 | |
| | T6 [(<i>Castanea dentata</i> x <i>mollissima</i>) x <i>dentata</i>] x <i>dentata</i> cross #9-99, NH R2T10 x Walbridge, OH American | BC2 |
| R3 | T7 | |
| | T8 <i>C. "henryi"</i> II, (probably not pure <i>henryi</i>) from Liu Liu, Nanjing, 1991 Botanical Garden (root sprouts only, 2000) | |
| | T9-12 <i>C. henryi</i> I, from Liu Liu, Nanjing Botanical Garden, 1991 | |
| R4 | T13-14 [(<i>C. dentata</i> x <i>mollissima</i>) x <i>dentata</i>] x <i>dentata</i> cross #9-99, NH R2T10 x Walbridge, OH American | BC2 |
| R5 | T1-2 [(<i>C. dentata</i> x <i>mollissima</i>) x <i>dentata</i>] x <i>dentata</i> cross #9-99, NH R2T10 x Walbridge, OH American | BC2 |
| | T3 <i>Castanea dentata</i> x 'Lockwood' cross #13-94, RH(11) R1T7 x HH R4T8 | |
| | T4 <i>Castanea dentata</i> x 'Lockwood' | |

| | | |
|--------|--|------------|
| | cross #11-94, RH(5) R1T5 x HH R4T8 | |
| T5-6 | [(<i>C. dentata</i> x <i>mollissima</i>) x <i>dentata</i>] x <i>dentata</i> cross #9-99, NH R2T10 x Walbridge, OH American | BC2 |
| T7 | STUMP | |
| T8-9 | <i>C. dentata</i> x ' Lockwood ' cross #11-94, RH(5) R1T5 x HH R4T8 | |
| T10-13 | [(<i>C. dentata</i> x <i>mollissima</i>) x <i>dentata</i>] x <i>dentata</i> cross #9-99, NH R2T10 x Walbridge, OH American | BC2 |
| T14 | <i>C. dentata</i> x (<i>C. dentata</i> x <i>mollissima</i>) cross #25-94, RH(5) x NH R3T5 | BC1 |
| T15 | [(<i>C. dentata</i> x <i>mollissima</i>) x <i>dentata</i>] x <i>dentata</i> cross #9-99, NH R2T10 x Walbridge, OH American | BC2 |

15. Nut Planting South of the Rock

Rows run from South to North with the first row at the East end of the plot

R1T1 is at the South East corner

| Row 1 | Row 2 | Row 3 | Row 4 | Row 5 | Row 6 | Row 7 | Row 8 | Row 9 |
|-----------------------------|--------------------------|--------------------------|---------------------------|-----------------------------|---------------------------|---------------------------|-----------------------------|--------------------|
| 'Sadie Hunter' | 'Colossal' x henryi 2011 | | | | 'Colossal' x henryi 2011 | | Persian Walnut 'Hansen' | |
| 'Colossal' x henryi 2011 | 'Eaton' x henryi 2011 | PERSIAN WALNUT 'Somers' | PERSIAN WALNUT 'Hansen' | BLACK WALNUT 'Grundy' | | PERSIAN WALNUT 'Hansen' | PERSIAN WALNUT 'Broad-view' | |
| 'Colossal' x henryi 2011 | 'Eaton' x henryi 2011 | 'Colossal' x henryi 2011 | 'Eaton' x henryi 2011 | BLACK WALNUT 'Vander-sloot' | 'Eaton' x henryi 2011 | 'Eaton' x henryi 2011 | 'Eaton' x henryi 2011 | |
| | | | | GA 30 C. henryi (GA) 2011 | GA 30 C. henryi (GA) 2011 | GA 30 C. henryi (GA) 2011 | 'Eaton' x henryi 2011 | |
| PERSIAN WALNUT 'Broad-view' | BLACK WALNUT 'Grundy'? | | GA 30 C. henryi (GA) 2011 | C. henryi? Schm. 2013 | C. henryi? Schm. 2013 | CHESTNUT 'Hartman' 17-8 | C. henryi? Schm. 2013 | HEART-NUT 'Rhodes' |
| X | CHESTNUT 'Orrin' | CHESTNUT 'Eaton' | CHESTNUT 'Lenoir' | PERSIAN WALNUT 'Broad-view' | C. henryi? Schm. 2013 | C. henryi? Schm. 2013 | | |

16. Grafted Butternuts from Tom Hall, TN, planted May 2012, April 2013, updated 5 June 2013

South East corner

| | | | | | |
|------------------|------------------|------------------|-----------------|------------|----------------|
| | PA 25-9 | PA 64-4 | | PA 18-4 | PA 18-4 |
| | VT Richmond A-19 | | | PA 18-4 | PA 64-4 |
| | IA 12004 | BUT BS #1 | PA 61-1 | PA 64-4 | PA 25-4 |
| VT Williston #4 | | PA 61-1 | | | PA 61-1 |
| BUT RS #1 | | PA 5-8 | VT Williston #2 | | |
| VT Williston #1 | VT Fox Run #1 | VT St. Albans #3 | PA 10-2 | | |
| | PA 64-1 | VT St. Albans #3 | | | MOCA 17 |
| PA 64-6 | | PA 59-6 | | PA MOCA 17 | PA 10-9 |
| VT St. Albans #2 | IA 021001 | PA 17-1 | PA 10-2 | PA 10-8 | VT Williston#2 |
| PA 17-1 | | BUT BS #1 | PA 10-9 | PA 10-2 | |

North-West corner

17. Elm trees

From Gene Smalley, planted spring 1992

South-East end

| | | | | | | |
|----------------------|--------|--------|--------|--------|---------|--------|
| <i>U. parvifolia</i> | 2213 | 2213 | 2245-9 | 2245-9 | 2245-9 | 2245-9 |
| all | " | 2244-1 | 2245-3 | " | " | 2250-1 |
| this | " | " | " | " | 2245-10 | " |
| row | " | " | " | " | " | " |
| | " | " | " | " | " | " |
| | " | " | " | " | " | " |
| | " | " | " | " | " | " |
| | " | " | " | 2245-8 | " | " |
| | 2276-1 | " | " | " | " | " |
| | " | 2233-1 | " | " | 2247-3 | " |
| | " | " | 2245-2 | " | " | |
| | " | " | " | " | " | |
| | " | " | " | " | " | |
| | " | " | " | " | " | |
| | " | " | " | " | " | 2245-5 |

18 Fagaceae Genetics Project

2007

- Crossed ‘Mahogany’ X ‘Nanking’ pollen
 - 304 nuts planted in the greenhouse, CAES
 - seedlings tagged/numbered and individual leaves sent to T. Kubisiak in Saucier, MS for DNA
 - seedlings planted at Lockwood Farm (CAES), Hamden, CT in 2008
 - with no record of their numbers

2008

- Crossed ‘Mahogany’ X ‘Nanking’ pollen (as above)
 - 70 nuts planted in the greenhouse, CAES
 - seedlings tagged/numbered and individual leaves sent to T. Kubisiak in Saucier, MS for DNA
 - seedlings planted at Lockwood Farm (CAES), Hamden, CT in 2010
 - trees 10 ft apart in rows 10 ft apart

**Rows run from South to North, with the first row on the East side of the plot
Planted 2008 (without Kubisiak numbers) and 2010 (with Kubisiak numbers)**

S-E

South West

THE FIRST 7 ROWS DO NOT HAVE DNA NUMBERS

| row 8 | row 9 | row 10 | row 11 |
|-------|-------|--------|--------|
| 24829 | 24823 | 24815 | 24836 |
| 24793 | 24830 | 24822 | 24837 |
| 24794 | 24831 | 24817 | 24806 |
| 24803 | 24832 | 24820 | 24805 |
| 24842 | 24834 | 24821 | 24856 |
| 24828 | 24835 | 24816 | 24852 |
| 24802 | 24819 | 24810 | 24851 |
| 24843 | 24814 | 24804 | 24858 |
| 24844 | 24813 | 24809 | 24857 |
| 24795 | 24818 | 24849 | |
| 24801 | 24824 | 24808 | |
| 24827 | 24847 | 24848 | |
| t | 24846 | 24850 | |
| t | 24825 | 24807 | |
| t | 24799 | 24841 | |
| t | 24800 | 24840 | |
| t | 24797 | 24838 | |
| t | 24796 | 24839 | |
| t | 24826 | 24854 | |
| t | 24845 | | |