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Report on the Paleoethnobotanical Materials from Wingo's Site (44BE0298)

by

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Introduction

This report details the identification and analysis of macrobotanical materials recovered from Wingo's Site (44BE0298) at Thomas Jefferson's Poplar Forest. Wingo's Site, a quarter farm in use from the 1770s through the 1790s, was occupied by slaves and a white overseer whose task it was to grow tobacco for the plantation. The archaeobotanical analysis of materials from two features at Wingo's Site associated with a single slave dwelling provides information about slaves' plant use and the environment during the early years of Jefferson's ownership of the property, before he constructed the main house, visited regularly, or became actively engaged in plantation affairs and landscaping. However, this was not the first use of this land as it had been an active plantation since the mid-18th century, under Jefferson's father-in-law John Wayles. The identification of plant materials from these contexts will contribute to an understanding of the subsistence activities, lifeways, and the environment of a late 18th-century piedmont Virginia slave community. Moreover, this work provides comparative data for analyses of Jefferson's later activities in the early 19th century and even later in the 19th century when the plantation was managed by Edward Hutter, and with of the North Hill site, whose earliest occupation is probably contemporaneous with Wingo's Site. Barbara Heath, of the University of Tennessee, sent the Fiske Center Paleoethnobotany Lab at the University of Massachusetts Boston 95 floated samples and 103 botanical samples recovered from screens during excavation. This report details our examination of these samples.

Wingo's Site Background and Analyzed Features

According to 18th-century historic maps, Wingo's settlement was located in the northwest corner of Poplar Forest (Figure 1; Heath 1994) and is now located on the western edge of a modern farm, approximately 3 miles from the current boundaries of Poplar Forest (Figure 2). Between 2000 and 2011, archaeologists from the University of Tennessee Knoxville and Thomas Jefferson's Poplar Forest surveyed and tested the area historically identified as the Wingo's site. During the summer of 2009, they identified two features (designated ER281 and ER285) as subfloor pits. These features are 4 feet apart and estimated to be located within the same structure, probably a log house with a daub chimney. Both pits were affected by later agricultural activities and are capped with the plowzone and then a layer of topsoil (Heath et al. 2012). While both features date to the final quarter of the 18th century, it appears that the pit in ER 285 was filled first.

The western pit, located in ER281, was roughly circular, with a diameter ranging from 4.2 to 6.5 ft., and was approximately 1.5 ft. deep. This subfloor pit contains eight cultural layers, 281C through 281K (there is no layer labeled I due to possible confusion with the number 1) and a series of rodent burrows, 281L (Figure 3). Artifact analysis suggests that Layer K reflects primary deposition – a period during the occupation of the dwelling when artifacts and botanicals fell into or were swept into the pit. Layer J most likely represents a time during which the structure was abandoned but the pit was left open. Layers C – H appear to be post-occupational, demolition contexts. After occupation and abandonment, the structure was destroyed, resulting in several layers of demolition debris – dense concentrations of charred wood and daub, particularly in Layer G. Levels A and B represent a layer of topsoil and the plowzone, respectively (Heath et al. 2012). These were not sampled for flotation.

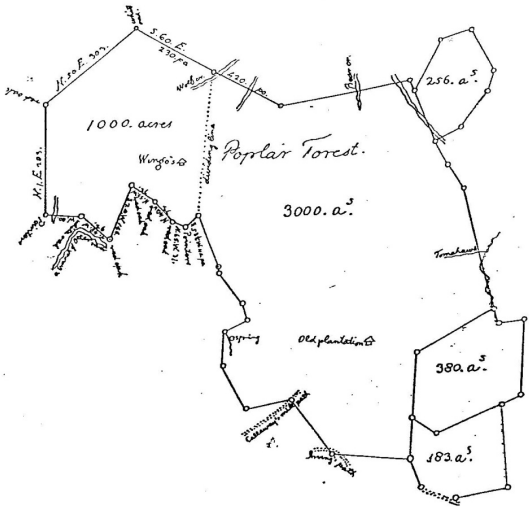

Figure 1. Map of the Poplar Forest Property (circa 1790) including the location of the Wingo's Quarter and the "Old Plantation" (location near which Jefferson would later build his retreat home).

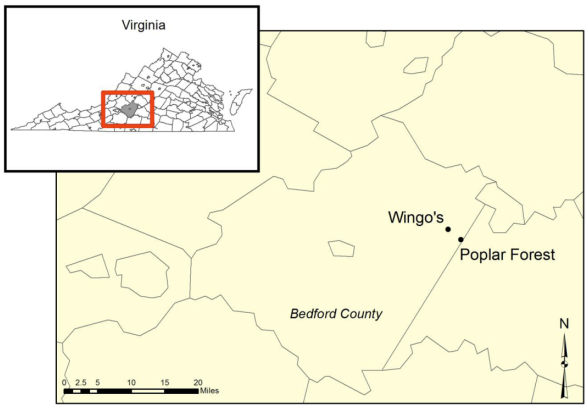

Figure 2. Location of Wingo's Site relative to Poplar Forest. From Heath et al. 2012

The pit feature contained within ER285 is located approximately 4 feet east of ER281. It is similar in size and shape to the pit in ER281 but had significantly different fill. The pit in ER285 was oval in shape measuring 6ft. long by 4ft. wide and 1.5ft. deep from the bottom of the plowzone (Heath et al. 2012). This feature was excavated and sampled similarly to ER281C-L. This feature contained eight cultural layers, 285 C - H, J, and K, and another level along the southern and western edges that most likely represents an animal burrow (Figure 4). Whereas the artifacts and architectural debris within ER281 suggested that it was left open after abandonment and during destruction of the structure, ER285 appears to have been filled before the structure was abandoned (Heath et al. 2012). The fill of ER 285 did not have the large concentrations of daub and other architectural debris, but it did have superimposed layers of charcoal and ash, more consistent with use during the occupation of the dwelling.

Sample Collection and Processing Protocols

Botanical remains were recovered using three different methods: flotation samples, waterscreening, and dry screening. Archaeologists bisected the features and removed sediment for flotation and waterscreening. In ER281, soil from the western two thirds of the pit was saved for flotation and waterscreening. The eastern third of the pit was dry screened in the field. From ER281, 37 flotation samples were taken varying in volume from 1 to 2.75 L with most 2.5 L. A total of 91.25 L of sediment from this feature was floated. From ER285, sediment from the southern half of the feature was removed for flotation and waterscreening, while sediment in the north half was dry screened in the field. Fifty -nine flotation samples were taken with volumes ranging from 0.75 L to 2.5 L (a majority being 2.5 L) for a total volume of 140.75L. All samples were floated in 2009 and 2010 at Poplar Forest using a Flote-Tech Model A machine. Due to the clayey nature of the soil, all samples were soaked in water and 2-3 teaspoons of Calgon for 10-30 minutes prior to flotation (Heath et al. 2012). Light fractions were sent to the University of Massachusetts Boston.

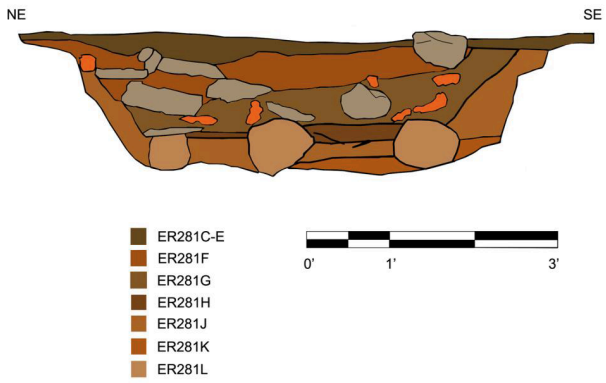

Figure 3. Profile of ER281C-L. From Heath et al. 2012.

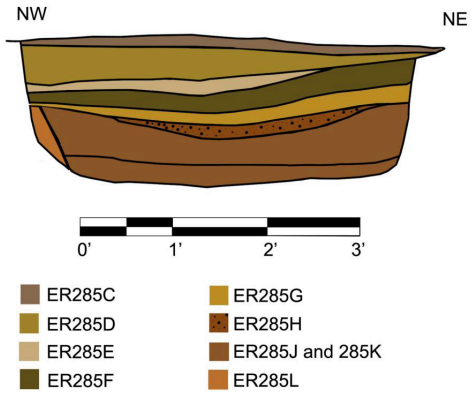

Figure 4. Profile of ER 285C-L. From Heath et al. 2012.

After sample collection for flotation, the remaining soil from the western half of ER281 and the southern half of ER285 was waterscreened through 1/4 in. and 1/16 in. mesh. From ER281 a total of 462 L of soil was waterscreened and from ER 285 a total of 342 L. Students and volunteers at the University of Tennessee Knoxville sorted this material. From the 1/4 in. mesh, all organic material was removed and sent to the University of Massachusetts Boston. The material collected in the 1/16 in. mesh was passed through 1/8 in. and 1/16 in. screens. All organic material from the 1/8 in. screen was then bagged and sent to U Mass Boston. The fraction less than 1/8 in. was examined but no attempt was made to collect all of the charcoal or organic material. As a result, remains recovered from the waterscreened soils are inherently weighted towards larger and more durable organic remains.

Sample Examination and Identification Protocols

Of the 95 samples floated and sent to the University of Massachusetts Boston, 93 were scanned and the organic remains removed and identified (Table 1). The two unscanned samples are light fraction samples 75 and 76 from ER 285 Level E. These samples appeared to have been poorly floated, containing primarily sediment and little organic material and 24.5L of soil in 10 light fraction samples have been scanned from this context. Due to the large quantity of soil that had already been processed from level E of ER 285, we felt it unnecessary to scan these additional samples.

The analyzed samples were scanned under 10 to 40x magnification using a binocular dissecting microscope. With the exception of charred wood, all charred seeds, plant parts, nutshell, and botanical tissues were removed and identification was attempted. In samples with large numbers of seeds from a single taxon, for example those with over 100 wild Poaceae seeds, a sample of 30 seeds were removed and stored; the remaining seeds were counted and returned to the sample. From each light fraction, a sample of 25 charred wood fragments over 2mm in size were randomly selected and identified. They were initially examined under 10 to 40x

magnification using a dissecting microscope, but some were viewed under a compound metallurgical microscope at 200 to 600x when necessary for a more specific identification. Identified seeds and wood were separated by taxon, placed in labeled vials or bags and stored in the sample light fraction bags.

All botanical materials were identified to the most specific taxonomic level possible – to family, genus, or, when possible, species. Some seeds, plant parts, and wood pieces remained unidentified, either due to distortion from original charring, their fragmentary nature, poor preservation, or, in the case of charcoal, small size which reduced the number of visible distinguishing characteristics. Botanical materials and charcoal were identified using standard print references (Hoadley 1990; Martin and Barkley 1961; Montgomery 1977), the comparative type collection housed at the Fiske Center for Archaeological Research at the University of Massachusetts Boston, and the United States Department of Agriculture plants database (http://plants.usda.gov).

It is common in flotation samples to find both charred and uncharred plant materials. While non-carbonized seeds from late 18th and 19th century deposits can survive in certain environments, such as waterlogged or desiccated contexts, these subfloor pits do not provide such protective conditions. Thus we consider the uncharred materials to be recent intrusive introductions that do not relate to the archaeological contexts. Similarly, previous investigations of Poplar Forest macrobotanical materials (Bowes and Trigg 2009; Raymer 1996, 2003) have excluded uncharred materials from analysis.

Results

In the course of this analysis, we recovered 4668 seeds and related plant parts (such as cupules and rind fragments) from 46 taxa (Summary Tables 2 through 8), and examined over 2000 pieces of wood and monocot stem from 11 categories (Summary Tables 9 and 10). See Appendix for identifications by sample. Below are the taxa identified from the Wingo's Site, listed alphabetically by family. We detail the various environments in which different plants grow, their uses, and the potential economic importance of many, which can illustrate the multidimensional nature of plant use at Wingo's.

Seeds and Related Plant Parts

Anacardiaceae

Rhus sp.—Sumac

Sumac is a shrubby tree species native to both warm and temperate climates. There are approximately 120 species in the United States which including several species whose fruits are considered edible (Britton and Brown 1896(2):385-388). The seeds recovered from Wingo's most closely resemble *Rhus glabra* (smooth sumac) but there are several other species native to Virginia, including *Rhus typhina* (staghorn sumac) and *Rhus aromatica* (http://plants.usda.gov). Sumac is an early succession tree for it is not highly shade tolerant; as a result it grows in open areas, along forest margins, and in burned areas. It is drought resistant and its berries, which are considered "emergency foods" for wildlife and humans, ripen in late August through September and remain on the plant through the fall and winter (Moerman 1998:472). Across the continent,

Native peoples ground sumac fruits into a juice or lemonade. Sumac could have been consumed as a fruit or lemonade by the slaves at Wingo's, especially during the winter or early spring when food might have been scarce. We found 13 sumac seeds.

Caryophyllaceae

The Caryophyllaceae family includes both weeds and cultivated, ornamental plants such as carnations and pinks, and campions. These ornamentals were grown in colonial American gardens (Sumner 2004:190), and planted "in the locks" of the garden fence at Poplar Forest in 1811 (Betts 1944). This family includes large number of weedy species, which inhabit meadows, cultivated grounds, and waste places. We found 2 Caryophyllaceae seeds.

Spergula sp.—Spurry

Spurry is common weed found in fields and waste places throughout the Eastern and Middle United Sates. It is a plant introduced from Europe, not native to North America but it is currently widely distributed (Britton and Brown 1896(2):36). The most common species in the United States is *Spergula arvensis*; *Spergula pentandra* is also found in Virginia but is not nearly as common (http://plants.usda.gov). While the taxon does not seem to have food or economic value, its presence in the archaeobotanical record illustrates the open, cleared nature of the land surrounding Wingo's. We found 1 possible spurry seed.

Chenopodiaceae

Chenopodium sp.—Goosefoot, lambsquarters

Chenopodium is an extremely common weed with around 60 species widely distributed throughout North America. It grows in waste places as well as woods and thickets. *Chenopodium* is a very commonly utilized plant (Britton and Brown 1896(1):570). Throughout North America people consume the leaves as greens and the seeds are considered a pseudo-cereal in some cultures, although this is not common in Eastern North America after the introduction of maize during the Woodland Period. It also has medicinal value as a vermifuge (Moerman 1998:154-155). At Poplar Forest, goosefoot would have grown throughout the plantation and would have been a weed easily collected for food near Wingo's quarter. We recovered 87 *Chenopodium* sp. and 7 seeds identifiable only as Chenopodiaceae family.

Cornaceae

Cornus sp.—Dogwood

Flowering dogwood (*Cornus florida*) is the Virginia state tree and flower but there are numerous species that are present in Virginia and approximately 25 species are native to north temperate zones. Most dogwood species prefer moist soils (Britton and Brown 1896(2):542) and grow as an understory tree for other hardwoods. It is also a common ornamental planting, and Jefferson writes of planting dogwood at Poplar Forest in 1812 (Betts 1944:494). The bark of dogwood, specifically *Cornus florida*, was used medicinally to treat malaria or fever (Moerman 1998). We found 1 dogwood seed.

Nyssa biflora—Southern/water/swamp tupelo

Swamp tupelo is found throughout southeastern North America (Britton and Brown 1896(2):546) growing in wet soils (http://plants.usda.gov). Its presence could indicate that the people at Wingo's frequented the wetland areas or overgrown gullies located nearby. We found 1 tupelo seed.

Cucurbitaceae

The Cucurbitaceae family includes pumpkins, squashes, melons, and gourds. With over 100 genera, this family includes both Old World and New World taxa. Many species are edible and were cultivated in gardens throughout the world. Dry gourds were commonly used as vessels. One seed and eight fragments of plant tissue which most closely resemble *Cucurbita* rind were recovered.

Cucurbita maxima—Winter squash, pumpkin (occasionally)

This species of cucurbit has numerous common names and varieties. It was originally a native of South America but was historically introduced to areas of North America for cultivation and is now widely cultivated. *Cucurbita maxima* is a close relative to *Cucurbita pepo*, a native squash to North America, and commonly cross-pollinates with the native species. Pumpkins, of various species, were a gardened crop and had a variety of food uses. Colonists and Native Americans alike typically stewed pumpkins or baked it in breads. Large, fibrous pumpkins were used as livestock feed (Sumner 2004:126-129). There is some evidence that several Native American groups used parts of *Cucurbita maxima* medicinally, as a diuretic (Moerman 1998:187). In 1794, Jefferson indicated that he planned to plant squashes, which Betts (1944:213) interprets as *C. maxima*. We recovered 1 seed identifiable as *C. maxima*.

Cyperaceae (sedges)

The Cyperacae family consists of around 65 genera and 3000 species with wide geographic distribution. Sedges are grass-like herbs, primarily found in marshy/swampy areas or in moist soils. Sedge leaves could be used for mats or basketry. We identified 6 of these seeds.

Ericaceae

Vaccinium sp.—Blueberry, huckleberry, cranberry

There are around 125 species of *Vaccinium*, which includes blueberries, cranberries, and some huckleberries. These fruits were originally wild fruits but over time, those in particular demand were cultivated (Sumner 2004:122). These many-seeded berries are most common in mountain areas but some species, like cranberries, inhabit swamps and wet areas (Britton and Brown (2):575-580). There are several *Vaccinium* species native to Virginia including *Vaccinium pallidum*, blue ridge blueberry, whose fruit is considered "superior to all other blueberries" (Britton and Brown 1896 (2):579). We found 6 blueberry seeds.

Fabaceae

Bean family species are prized as crops for their nitrogen-fixing qualities, making them excellent crops to replenish depleted soils. Historical records indicate that many cultures

intercropped or rotated beans with grains. In addition to the seeds identified to genus, there were 27 specimens that were only identified to Fabaceae. While most of these likely represented wild Fabacaeae species, some appeared to resemble domesticated genera such as *Phaseolus* and *Vigna* but were too fragmentary or damaged to conclusively identify.

Gleditsia triacanthos—Honey locust/sweet locust

This large, deciduous tree produces long, many-seeded pods (Britton and Brown 1896(2):260). This species is naturalized east of the Appalachians (USDA 1974:431-433). Honey locust is a pioneer species commonly found in overgrown pastures, fields, fence lines, and wood lot edges. It prefers moist fertile soils, and is commonly found in the upland areas along river drainages. The dry and pulverized pods can be used as a sweetening agent and as a food (Sumner 2004:202). We found 1 honey locust seed.

Lathyrus sp.—Sweet pea, vetch

This ornamental, flowering plant is a wild perennial pea. There are about 110 species; most like moist and wet environments but they are also found in waste places (Britton and Brown 1896(2):329-331). *Lathyrus latifolius* is the most common species in North America but other species are present in Virginia including *L. odoratus, L. palustris, and L. hirsutus* http://plants.usda.gov). These plants produce pleasing flowers so could be used as an ornamental. The pea pods of some species can be consumed but this uncommon (Moerman 1998:299). We found 1 vetch seed.

Phaseolus sp.— Common bean

This genus includes, among others, *Phaseolus vulgaris, Phaseolus lunatus* (lima bean), and *Phaseolus coccineus*. There is a large amount of variability in seed size, shape, color, and coat markings as well as in pod characteristics even within *Phaseolus vulgaris*. *Phaseolus* tolerates a wide range of soil conditions and flourishes in infertile and marginal sites. Native Americans planted beans throughout their fields interspersed with other crops. As a food, beans have been prepared in a variety of ways: in soups, stews, or baked, or as succotash, cooked with corn cut from the cob (Sumner 2004:77-78). This taxon was common in diets among people of North America, but is infrequently recovered in archaeological contexts, typically because it preserves poorly. We recovered 4 beans.

Trifolium sp. - Clover

There are around 250 species of clover – most are found in fields and waste places (Britton and Brown 1896(2):274-279). Red clover, *Trifolium pratense*, for example is naturalized from Europe but grows wild throughout North America. In addition to growing wild, clover was planted by Jefferson as part of his crop rotations to replenish the nutrients in the soil and to use the crop as animal fodder (Betts 1944). Several taxa can be used as food, the leaves consumed as greens or the flowers made into teas (Moerman 1998:566-567; Sumner 2004:176). We recovered 1 clover seed.

Vigna sp.—Cow pea, black-eyed pea

The cow pea is native to the warm, tropical regions of Africa. Like numerous African cultivars, it was introduced to North America as a result of the slave trade either by slavers as provisions for the trip across the Atlantic or by slaves who attempted to bring familiar crops to

their New World. In Africa, cow peas were typically intercropped with sorghum (Carney 2011:14). While cow peas are a cultivated species, they will escape from cultivation and grow wild (Britton and Brown 1896(2):339-340). We identified 3 cow peas.

Fagaceae

Quercus sp.—Oak

Oak is one of the most prevalent trees in the Piedmont of Virginia. There are 70 species of *Quercus* native to the United States and their uses are just as varied (USDA 1974:692). Oaks grow as major canopy tree in the hardwood forests that surrounded Poplar Forest. Few acorn nutshells were found in the deposits and only in ER 281. Acorns were consumed as a food and used as dyes, although some acorns are bitter and require substantial processing before they can be consumed (Sumner 2004). Acorns would have been collected in the forests around the plantation in the same environment as much of the collected fuel wood. We only identified 2 acorn nutshell fragments.

Castanea sp.—Chestnut

Chestnuts are small- to-medium-size deciduous trees that grow in hardwood forests throughout North America. *Castanea dentata* was the most important species in North America and is the only native species of *Castanea* to the United States. The nuts were a popular food among Native Americans and Europeans. The nuts ripen in late August to September (USDA 1974:273-274) and would typically be roasted or stored dry (Sumner 2004:150). We only recovered 1 nutshell fragment identifiable as chestnut.

Juglandaceae

We recovered 3 nutshell fragments were recovered that could only be identified to the Juglandaceae family. These are either walnut or hickory nuts. Many of the 182 unidentified nutshell fragments are probably Juglandaceae.

Carya sp. - Hickory

Carya species include hickory nut and pecans. Hickories were valued for timber and food (USDA 1974:269). Hickory nuts and pecans were used in numerous foods as well as dyes. Only two pieces of hickory nutshell were firmly identified.

Juglans nigra—Black walnut

Black walnuts were used in bread baking as in soups as well as consumed raw or even pickled, although their meat is considered inferior in taste to English walnuts. The fruits of black walnut were also used in dye production (Sumner 2004:150-151). We identified 11 fragments of black walnut.

Lamiaceae

The mint family consists of over 7000 species and contains many of the common culinary herbs, such as mint, sage, oregano, and thyme.

Salvia sp. - Sage

The *Salvia* genus contains over 500 species of sages with wide distribution in temperate and tropical regions (Britton and Brown 1896(3):99-100). There are several species found in Virginia including *Salvia officinalis*, kitchen sage, which is a common cooking herb. Sages grow wild in woods and thickets but are also common garden plants (http://plants.usda.gov). Sages would have been used as flavoring in cooking as well as in teas (Sumner 2004:176, 198). We found 1 possible sage seed.

Mentha sp. - Mint

There are numerous species of *Mentha* present in Virginia (http://plants.usda.gov). These highly fragrant herbs prefer moist soils and waste places; there are several wild species but many mint species are easily gardened. Mints are used as a seasoning, in teas and as a medicinal herb (Sumner 2004:176, 198). We found 1 mint seed.

Linaceae

Linum sp.—Flax

Linum ussitatissimum is the most common cultivated species of flax, and has been cultivated for thousands of years for fiber and oil. In his Garden book Jefferson mentions two different *Linum* species: *Linum usitatissimum* and *Linum virginianum*; he was well aware of the wild species and indicated that it might be useful for fibers (Betts 1944:647). Typically flax seeds produced for oil are significantly larger than use used to produce fibers (Renfrew 1973). The flax seeds identified in the deposits were significantly smaller than *L. usitatissimum* grown for oil and therefore more likely were either the type grown for flax (which is consistent with documentary evidence) or the wild species, *L. virginianum*. *L. virginianum* seeds measure 1.2-1.4 mm long and 0.7-0.8 (-0.9) mm wide (Rogers 1963). We recovered 2 seeds. One seed recovered from Wingo's measured 3.4 mm in length and an estimated 1.7 mm in width (estimated because the seed is damaged), and the second seed, while not measured, was similar in size. These measurements are not consistent with *L. virginianum*, so we suggest that this specimen is the *L. usitatissimum* associated with linen production.

In a 1790 letter, Jefferson wrote of the beginning the "domestic cultivation & manufacture of hemp, flax, cotton & Wool for the negroes" at Poplar Forest (Betts 1944:152). He included flax planting in his crop rotation processes at his plantations (Betts 1944:194), and he writes of slaves at Poplar Forest spinning flax (Betts 1944:466). Thomas Mann Randolph encouraged Jefferson to plant flax in areas along streams and says he sets aside a meadow area for this purpose (Betts 1944:198). In colonial Virginia, enslaved peoples also cultivated flax as a garden crop (Walsh 1993).

Oxalidaceae

Oxalis stricta—Common yellow oxalis/sorrel

Oxalis thrives as an herbaceous weed in woods and fields throughout North America (Britton and Brown 1896(2):346). While sorrel is used for food, it has a harsh salty or sour taste

so people do not commonly consume it. Several native groups have used sorrel as an herbal remedy (Moerman 1998:374). We recovered 7 oxalis seeds.

Poaceae

The grass family includes common cultivated grains like maize, wheat, and rye as well as wild grasses. Wild grasses grow in almost every type of environment, from swamps to fields and waste places. Poaceae seeds (caryopses) were identified in almost every layer of both subfloor pits at Wingo's. Jefferson sought grass seed to create the beautifully manicured lawns that surrounded his houses and slaves used grasses to line subfloor pits. We identified 3 Poaceae seeds that we could not determine whether they were a domestic species or wild, and we recovered 3211 wild (non-domestic) grass seeds. There are references to slaves selling grass seeds to Jefferson and others; apparently they harvested seeds and used them as a small source of income (Heath pers. comm.).

In addition to these wild grasses there were three cultivated grains found at Wingo's: *Zea mays* (maize or corn), *Secale* sp. (rye), and *Triticum aestivum* (wheat). Grains like wheat and rye most likely represent grains grown in large scale at the plantation and perhaps provisioned to the people at Wingo's as food, either for humans or livestock. However, maize was both grown as a plantation crop and provisioned to slaves and it was produced in slaves' gardens. We identified 1 grain as Cerealia, wheat or rye, but could not identify it more specifically.

Eleusine indica - Indian goosegrass

Indian goosegrass, a species of wild grass, was identified in several samples from ER 285. This tufted grass, naturalized from the Old World, is typically found in waste places throughout North America. While it is edible, there are few records of groups consuming it in a significant way (Britton and Brown 1896(1):181). We recovered 2 of these seeds.

Panicoid - type – Panic grass

Some of these wild grasses like those in the *Panicum* genus are useful as a food grains (Moerman 1998:376-377). Panic grasses would have grown around the plantation and the quarter and would have been easily collected as a supplemental grain. We recovered 80 of these seeds.

Panicum miliaceum—Broomcorn millet

Two seeds from both pit 281 and 285 were identified as *Panicum miliaceum*, a grass that grows both wild and in cultivation. It was introduced from the Old World, principally China and south Asia (Britton and Brown 1896(1):123). This grain grows wild in waste places but was also cultivated or encouraged. Millet was most likely grown in gardens at Wingo's as a supplementary grain or fodder for livestock. However, this is not a species of millet associated with the African diaspora. These species of millet, *Pennisetum glaucum* (pearl millet), *Eleusine coracana* (finger millet), and *Digitaria* ssp. (fonio) were cultivated in Africa and historical documents note the continued use of millet in gardens of African slaves in the New World (Carney and Rosomoff 2009). We identified 1 one these seeds.

Secale sp.—Rye

Rye was grown a Poplar Forest as a field crop, produced for the support of the farm (Betts 1944:641). When combined with cornmeal it could be made into a bread. We identified 6 grains of rye.

Triticum aestivum—Wheat

Wheat, along with tobacco, was a major cash crop at Poplar Forest during Jefferson's ownership of the property after the winter of 1790 when he sold his first crop. The switch from focusing on tobacco production to wheat drastically changed the nature of slave labor in Virginia (Heath 2012). Many plantation owners eventually abandoned tobacco, which was labor-intensive to grow, depleted soils, and while valuable was not as profitable as it had been in the 17th century, and instead they emphasized wheat as a cash crop, since the market for wheat was more stable than the tobacco market. We identified 35 kernels of wheat.

Zea mays—Corn, maize

Maize has a long history of cultivation in the New World. Both maize kernels and cupules (the part of the cob that holds the kernels) were recovered. This may reflect their use as tinder or fuel. Kernels were eaten whole, made into hominy, added to stews or ground into flour. Maize flour was provisioned to slaves, but they were also allowed to grow it in their gardens. The presence of the cupules in the deposits suggests that the slaves were growing maize. While grown in slaves' gardens, it was also a common field crop. When grown as a plantation crop Jefferson suggested that it should be intercropped with potatoes or peas (Betts 1944:194). We identified 29 maize kernels and 137 maize cupules.

Polygonaceae

The Polygonaceae family includes both *Polygonum* and *Rumex* among other taxa. Many taxa in this family are weedy plants, such as dock and knotweed, but some are cultivated such as buckwheat (*Fagopyrum*). We recovered 25 Polygonaceae seeds that we could not identify to a lower taxonomic level, but they are probably either *Polygonum* or *Rumex*.

Polygonum sp.—Knotweed

This genus includes several hundred species, many of which are edible as greens. They grow in wet soils and waste places and several species grow naturally in Virginia (Britton and Brown 1896(1):555-567). In addition to their use as an edible green, some species, including *Polygonum sagittatum* (present in Virginia) are used as a medicine (Leighton 1986:468). We recovered 67 *Polygonum* seeds.

Rumex sp./*Rumex crispus*—Dock

Most species of *Rumex* are edible and collected as wild leafy greens. In addition to its value as a food, *Rumex* was also used by various native group as a medicinal herb, most likely due to its high amounts of oxalic acid and tannins (http://herb.umd.umich.edu/; http://plants.usda.gov). Some types of *Rumex* were cultivated and Jefferson planted "French sorrel" or *Rumex scutatus* (Betts 1944:213). However, dock is a weedy plant that thrives in disturbed ground. We recovered 11 *Rumex* seeds.

Portulaceae

Portulaca sp. —Purslane

Purslane is a weedy plant found in fields and waste places. While some species are endemic to the New World (Britton and Brown 1896 (1):4-6), most present in Virginia, like *Portulaca grandiflora* or *Portulaca oleracea*, are introduced to the area (http://plants.usda.gov). Purslane is commonly consumed as a leafy green, either cooked or raw (Moerman 1998). We recovered 16 purslane seeds and 1 seeds which we identified to the Portulaceae family.

Ranunculaceae

The members of this family include buttercups and prefer moist habitats. We found 1 Ranunculaceae seed.

Rosaceae

Prunus persica—Peach

Peach is a cultigen introduced to the New World by Europeans. Jefferson grew peaches at both of his plantations and his records indicate that he allowed his slaves to pick fruit from the trees for themselves (Betts 1944). Peach pits were recovered primarily from ER281. Peaches could be consumed raw, baked, or preserved. We identified 244 charred peach pits. One pit was embedded in daub.

Rubus sp.—Raspberry, blackberry

About 250 species of raspberry are distributed throughout North America in environments from dry mountainous soils, woods/thickets, to wet swamps and low grounds. At Monticello, Jefferson had raspberry beds (Betts 1944:348), but these plants grow wild in old fields and forest margins. We found 2 raspberry seeds

Pyrus sp.—Pear

There are approximately 12 species of pear, all of which are native to the Old World. Several species were introduced through cultivation to the New World, including *Pyrus calleryana* (Callery pear) and *Pyrus communis* (common pear). Pears could have grown wild around Poplar Forest, having escaped from cultivation, in thickets and woods. However, it is likely in the 18th century that any pears in Virginia would have been intentional cultivars. We identified 1 pear pip.

Solanaceae

Nightshade family includes many weeds that grow in waste places and fields throughout Virginia. This family includes wild plants like *Physalis* sp. (ground cherry) and *Solanum* sp. (nightshade), as well as cultigens like *Nicotiana* (tobacco), *Solanum tuberosum* (potatoes) and in even peppers (*Capsicum* sp.). There were several seeds from Wingo's identified only to the family of Solanaceae. We found 2 Solanaceae seeds which we could not identify more specifically.

Datura stramonium—Jimsonweed, Jamestown weed

This weed grows in fields and waste places, as well as disturbed environments and urban spaces. It is also known for its medicinal uses by Native American groups, but it is poisonous as a food and can only be consumed in small amounts, as a medicine (http://plants.usda.gov). This plant does not likely represent food use but possible medicinal practices at Wingo's. We found 1 jimsonweed seed.

Nicotiana tabacum—Tobacco

One seed of *Nicotiana tabacum* was identified in level K in pit 281. This species of tobacco is the most commonly cultivated tobacco species. Tobacco, a major cash crop in Virginia since the early 17th century, is particularly evocative of the work that the people at Wingo's most likely endured as part of their responsibilities under Jefferson. Documentary evidence suggests that the Wingo's settlement, in particular, was established to produce tobacco, the profits from which would have been used to pay off John Wayles' (Jefferson's father-in-law) large debts (Heath et al. 2012). The presence of the tobacco, and the seed in particular, at the site supports the notion of production rather than merely consumption. During cultivation, tobacco plants were "topped," a process that removed the flowering stalk and prevented the formation of flowers and seed, which wasted the plant's energy (Cotton 1998). Thus the presence of a charred tobacco seed in this subfloor pit is suggestive of planting of tobacco, not merely its use for smoking or chewing. Tobacco is typically sown in the middle of March (Cotton 1998). We found 1 tobacco seed.

By the time Wingo's was established, planters in Virginia had come to realize that tobacco farming was no longer the cash crop it had been in the 17th century (Samford 2007:103). Most, including Jefferson, had begun diversifying their crops. In 1790 Jefferson wrote of his desire to cease growing tobacco altogether at Monticello and to reduce drastically the amount grown at Poplar Forest (Betts 1944:152). This suggests that at Poplar Forest Jefferson continued tobacco planting later than he did at Monticello, even while tobacco's popularity as a crop waned and wheat became more popular as a cash crop.

Vitis sp.—Grape

Some grapes are cultivated but there are several wild species that grow in Virginia. At Monticello, Jefferson writes of growing grapes (Betts 1944). Because it is difficult to distinguish between domestic grapes and wild grapes, we cannot be certain if the specimen recovered from Wingo's was cultivated or gathered, but since Wingos was occupied before Jefferson became actively involved in Poplar Forest, we are assuming that these specimens are wild. Wild species are typically found in thickets, in forest margins, or lightly shaded forests. Depending on the species, the fruits ripen between late spring into the fall (Britton and Brown 1896(2):407-410). We found 1 grape pip.

Starchy material

In several samples we identified a starchy material that most closely resembles charred potato tubers (Table 8). Jefferson suggested that potatoes be grown with maize planted thinly

(Betts 1944:194). However, many of the pieces were too small to identify, and some of these may be charred pieces of flour – wheat, maize, or rye. We recovered 468 such fragments.

Wood

Aceraceae

Acer sp. - Maple

Maples are deciduous trees and shrubs consisting of over 115 species (USDA 1948:62; Bailey 1949:635). *Acer saccharum* (sugar maple), *Acer saccharinum* (silver maple), *Acer rubrum* (red maple), *Acer negundo* (boxelder) are all common in Virginia and are all shade tolerant and can be found in moist areas (Samuelson and Hogan 2006:76, 80-86; Petrides 1988:64, 68-71). Maples are commonly harvested for their edible sap (Medve and Medve 1990:202-203), but most species do not generate a great deal of heat and are not prime fuel woods. Maple wood was recovered in small amounts (7 pieces) in the charcoal assemblage.

Fabaceae

Gymnocladus dioicus – Kentucky coffee tree

Kentucky coffee tree roots were used for medicines. The wood was used for timber and fence posts (USDA 1974) along with many other construction purposes (www.fpl.fs.fed.us/research/centers/woodanatomy/techsheets). It has also been used as a fuel, but it generates little heat so it would not have been a prime fuelwood. Kentucky coffee tree wood was recovered in several samples, and in significant proportions in ER285G for a total of 73 pieces.

Fagaceae

Castanea sp. – Chestnut

There are five to six species of *Castanea* native to North America, two of which were once prevalent in eastern hardwood forests, mainly along the Appalachians (Samuelson and Hogan 2006:222). It was a dominant tree utilized for its timber (USDA 1948:112), but it generates a low amount of heat when burned. It was a major timber species in the Appalachian region, until most of the mature trees were destroyed by blight in the late 19th century (Sumner 2004:152). We only identified 1 piece of chestnut wood.

Quercus sp. – Oak

There are about 300 species of oak trees (Bailey 1949:329), which are deciduous and grow in the well-drained soils of mature forests (Medve and Medve 1990:204-205). They are most valued for the hardwood timber for construction purposes, especially in white oak, which is more durable (USDA 1948:297). Oak wood can be divided into two types (red oak-type and white oak-type) based on micromorphology of the wood. Red oak-type is found in most areas of the eastern United States, including Virginia (Samuelson and Hogan 2006:288; Petrides 1988:141). The white oak-type is also found in most of the eastern United States north of Florida, including Virginia (Samuelson and Hogan 2006:230; Petrides 1988:145). At Wingo's, oak was the most common wood taxon identified – 1395 pieces. Some species were also used in basketry.

Juglandaceae

Carya sp. - Hickory

These deciduous trees are a dominant species, after oak, in the hardwood forests throughout the Piedmont. Hickory is a strong heavy wood (Petrides 1988:98) that when burned provides a lot of heat (Medve and Medve 1990:210-211). Hickory wood was common (60 pieces) in the charred wood assemblage.

Magnoliaceae

Liriodendron tulipifera – Tulip or Yellow poplar

Common in Virginia, Tulip or Yellow Poplars are shade tolerant and found on stream banks, well-drained bottomlands, coves and ravines (Samuelson and Hogan 2006:352-353). They serve as the namesake for Thomas Jefferson's Poplar Forest and several of the original poplars still stand today. We only recovered 1 piece of identifiable tulip poplar wood perhaps reflecting its poor quality as fuel wood.

Pinaceae

Pinus sp. – Pine

There are 80 species of pine (Bailey 1949:104) that mainly grow in dry, sandy soils (Petrides 1988:34). About 30 species are native to North America and are valuable timber trees, while some species are used in the protection of steep slopes from erosion (USDA 1948:360). Of the pine species, white pine is both the largest and most valuable (Petrides 1988:62-63). With respect to their value as fuel, pines are generally considered inferior to hardwoods, and this may be the reason we only recovered 9 pieces of charred pine in the assemblage.

Hardwood

In some cases we could not identify charred wood to a more specific taxonomic level, but we could distinguish whether the specimen was hardwood (angiosperm) or softwood (gymnosperm). We identified 37 pieces as hardwood.

Monocot stems

A large number of monocot stems (90 pieces) were identified in the assemblage. Some of these were consistent with maize stalks, but smaller grasses were used to make baskets and to insulate subfloor pits (Samford 2007).

Morphological Types

Ring Porous/Diffuse Porous

For hardwood that could not be identified to a lower taxonomic category, we attempted to assign a morphological category – ring porous or diffuse porous -- based on the arrangement of pores within an annual ring (see Hoadley 1990). While such categories may not tell us what a piece of wood is, it can help us identify possible taxa and more importantly what the wood is not.

Ring porous woods include oaks, hickory, ash, and mulberry among others. Diffuse porous woods include maple, cherry, dogwood, tulip poplar, magnolia, willow, and aspen. We identified 563 pieces of ring porous wood and 34 pieces of diffuse porous wood.

Discussion

The plant remains we recovered reflect slaves' foodways, their activities on the plantation, their construction materials and fuel use, and the plantation's production for the market. While many of the seeds reflect slaves' foodways, wood and even some non-woody botanicals such as corn cobs might represent fuel use and not food production or consumption. Likewise, seeds and other plant parts might be present which were not deliberately used, but which may represent natural, background seeds that were brought into houses on clothing or shoes or windblown and accidentally charred. These are not necessarily indicative of foodways but are accident inclusions in the archaeological record, which can illustrate the nature of the environment or particular activities in which slaves were engaged around Wingo's. Below we discuss considerations of preservation and stratigraphic history for interpretation of the finds. Then we discuss what the findings mean for slaves' subsistence and plantation activities.

Recovery and Stratigraphic History

The recovery techniques and sampling employed also create inherent biases in the collection. Many of the unfloated materials from the subfloor pits were recovered by waterscreening. Waterscreening collects material over 1/8 in., and would not recover smaller botanicals, like tobacco seeds or wild grass and weed seeds for example, which can be less than 1mm in size. However, a large portion of the botanicals recovered that likely represent food consumption and production were large enough that they would have been recovered in the waterscreen.

This analysis, like others undertaken at Poplar Forest, limits its interpretation to the charred materials. It is important to understand the processes by which the plant remains became charred in order to interpret the plants recovered and identified. Seeds and other plant parts must have been exposed to fire whether through cooking, as part of cleaning up, or as a source of fuel. Many seeds in this collection could have been burned during the process of cooking when they were spilled into the fire. Food preparation debris may also have been swept into the fire when the dwelling was cleaned. Alternatively herbs that were hung for drying or storage may have shed seeds, which were later swept into the fireplace.

Catastrophic burning of structures, such as *may* have occurred (it is unclear) during demolition, adds plant materials that would not ordinarily be subject to charring, and aids in the preservation of charred materials that might have been extant in the house but had not been charred during its use. We do need to carefully interpret these remains, however, since unused structures are perfect habitats for wildlife (squirrels and other rodents, and birds) to nest (Miller 1989). Such animals may have added to the seeds present during the abandonment of the structure.

The complex, but well-investigated stratigraphic history of the pits also assists us in interpreting the recovered plants. Below we discuss the botanical assemblage according to the interpretations of the layers by Heath (Heath et al. 2012): *Occupation* covering the period when the structure was inhabited; *Abandonment* for the layer representing the brief period when the structure was empty but had not yet been destroyed; and *Demolition* for the layers representing when the structure was possibly burned and demolished.

Contexts 285C-H and 281K (Occupation)

Because of the thin superimposed layers of ash, Feature 285 Layers C-H and Feature 281 Layer K are interpreted as being deposited when the structure was in use, which gives indications of the plants that were part of the slaves' activities during the occupation of the dwelling. The cultivated plants recovered include tobacco, clover, flax, maize, beans, wheat, cow peas, peaches and pear (Table 2).

Those foods which were fruits presumably gathered from wild plants include blueberry, sumac, and grape, although documents indicate that at Monticello at this time, Jefferson cultivated grapes, raspberries and blueberries; other plants which may have grown wild. The Kentucky coffee tree may have been food or medicine. We also recovered a few nutshells – either hickory or black walnut, but no acorns or chestnuts (Table 4).

Context 281J (Abandonment)

Since Feature 281 Layer J represents a different depositional history (an abandonment period) from 285C-H and 281K, we discuss this layer separately. Layer 281J is interpreted as indicating a post occupational layer. The botanical specimens were perhaps charred during the use of dwelling and ambient in the structure, but not yet swept into the pit when it was abandoned. During the abandonment period, wind and water moved them in to the subfloor pit. Such charred materials would also indicate deliberate use.

Cultivated taxa present in this layer include maize, wheat, rye, and a few peaches. There are few nutshells, only hickory or walnut, associated with this layer. Weedy taxa are limited to goosefoot seeds. There are substantially more (by an order of magnitude) wild grass seeds in this layer than in ER 281K or the ER 285 (Table 7), but their density is lower than in the upper layers of 281. These seeds may have come from sweepings (broomcorn brooms) or the linings of pits or floors; or they may represent natural seed rain brought in by wind or on people's clothing. Additionally, a charred starchy material, tentatively identified as potato (*Solanum tuberosum*), occurs in the highest amounts in this layer (Table 10). This could provide evidence of food material potentially left within the pit. Potatoes and other root vegetables were commonly stored in subfloor pits (Samford 2007).

Contexts 281C-H (Demolition)

The quantity and types of charred materials in these layers require careful consideration as they may be either human or animal introduced or some mixture of the two. Dogwood, tupelo, and raspberries are prime candidates for animal introduction into the abandoned building:

dogwood and tupelo are taxa that do not have food value and they were sparsely recovered. Raspberries are a common food of many animals and were rarely recovered. Some of the other wild, weedy seeds such as *Spergula, Portulaca, Datura, Polygonum, Rumex crispus,* and *Oxalis*, which are not found in the Occupation or Abandonment layers, or are not found in large numbers except in the Demolition layers, may also be natural seed rain, reflecting the disturbed area around the abandoned structure. Similarly, the large quantity of Poaceae seeds in these layers may merely be from grasses growing around the structure, which burned and became incorporated into deposits when the building was demolished (Figure 5).

The interpretation of the substantial quantities of wheat, maize, and rye is also difficult. Small seeds such as wheat, maize, and rye could be lost onto the floor of the dwelling and only burnt when the structure was destroyed. However, animals would also collect these taxa and bring them into the dwelling. The peach assemblage likewise is problematic. The largest numbers of peach pits in the assemblage come from these layers. The consumption of peaches for food by slaves is not in doubt. However, attributing the peach pits from these layers to human consumption must be considered carefully because animals also hoard and consume them. Moreover, at least 1 charred peach pit was found embedded in daub, and these may have been used as a sort of binder for the daub, much like the charred monocot stems we recovered. These plant materials may have been charred if the structure was burned during demolition, or if they were associated with the daub around the chimney, when the structure was in use. Likewise, acorns and chestnut only occur, and the majority of walnut/hickory nuts were recovered, in these layers and must be treated as possible animal introductions.

Distinguishing the sources of the plant materials is important, but we are not advocating that the plant remains recovered in the demolition layers be ignored or the information about them discarded. Rather, we suggest that they be interpreted carefully and that quantitative and comparative studies may wish to treat them separately because even the cultigens may have been selected and introduced into the structure and the deposits by rodents or other animals.

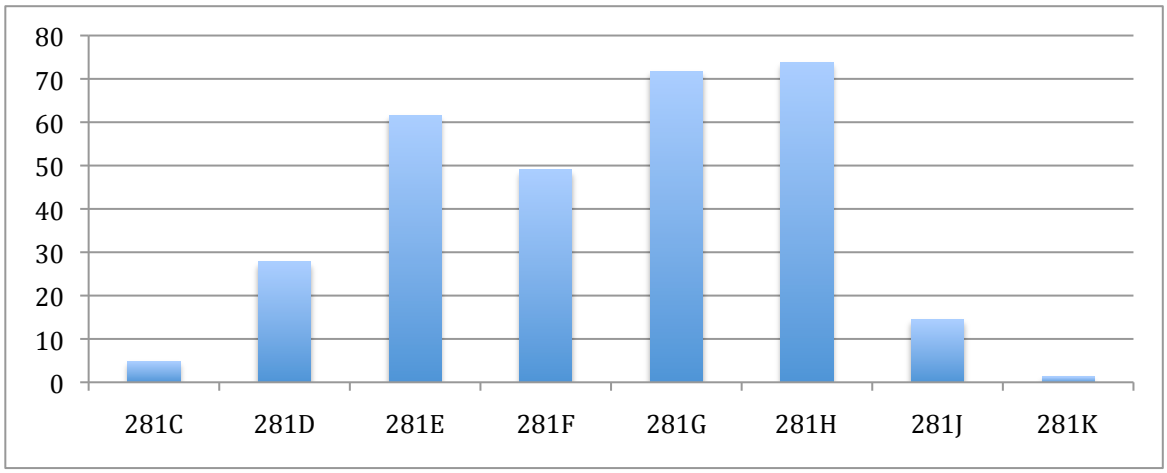

Figure 5. Number of Wild Poaceae Seeds/Liter in ER281C-K

Foodways

The plant remains indicate the inhabitant's of Wingo's quarter were consuming a combination of cultivated and gathered resources. The cultivated resources included both those grown in their own gardens and in the plantation's fields and orchards. The botanical assemblage makes a strong case for slaves growing maize in their own gardens. In Feature 285, the cupules were present in every layer and nearly every layer of Feature 281. The presence of whole kernels and cupules is consistent with slave's production rather than the provisioning of meal during this period.

Slaves may also have grown cow peas, and perhaps squash in their gardens. Peaches, pears, and cereals such as wheat and rye probably came from the plantation's fields and gardens. Wheat, as a plantation cash crop, may have been provisioned because it is not a typical garden crop and we find no archaeobotanical evidence for its cultivation or processing in the immediate area. Typically wheat was provisioned as flour, so the presence of whole kernels is interesting. It may be that the slaves grew their own wheat, but we did not find the plant remains such as chaff or rachis fragments typically associated with wheat production. Alternatively, the slaves may have acquired the wheat directly from the farm's crops.

The foods consumed by the slaves consisted of African, Eurasian, and Native American domesticates. The only African domesticated crop we recovered was cow peas. The type of millet recovered is associated with Asia – China or India rather than Africa, but more likely, these specimens are from a wild species. While maize was domesticated in the New World long before the arrival of Europeans, by the 17th century, it was well known in Africa (Carney and Rosomoff 2009). It was introduced to Cape Verde by 1540 (McCann 2005), to the mouth of the Congo by the mid-16th century, and in the Gold Coast by early 17th century. It was accepted and incorporated into subsistence strategies quickly, so that by the early 18th century Africans were familiar with its cultivation (Carney and Rosomoff 2009). If African slaves viewed this crop as alien, they most likely considered it European rather than Native American.

Weedy plants, encouraged by the disturbance produce by daily activities around the quarter, included goosefoot/lambsquarters whose greens and seeds could have been encouraged in gardens and consumed (Table 5 and Table 6). Greens such as lambsquarters and purslane would have provided seasoning to a bland diet of maize or other cereals as well as vitamins and other necessary micronutrients that those cereals lack. While these were present in small numbers, they may indicate that the greens were eaten.

The non-cultivated plants such as the sumac, grapes, and berries were probably gathered for food from forest margins or older abandoned fields (Table 3); others such as the nuts (Table 4) probably came from forest plants. Although Jefferson visited Poplar Forest and it was an active farm, it appears that Wingo's site was occupied before he implemented his landscaping plans and introduced many of the cultivars, such as specific types of grapes, raspberries, chestnuts, or walnuts (Betts 1944), evident in later years. Since these are prior to such introductions, we interpret the raspberry, grapes, and walnuts as gathered resources from the forest and forest margin rather than produce from the plantations gardens or deliberate plantings.

Fuel and Construction

The wood assemblage was comprised primarily of oak and other hardwoods (Tables 9 and 10). In both features, pine is represented in very small quantities. Combining the data from the two features, there are two major trends in the charred wood assemblage. There is, in general, greater species richness in ER285 (all layers) and ER 281J and K than in the rest of ER281C-H. While oak is dominant in most layers, non-oak species comprise greater proportions of the assemblage (Figures 6 and 7). The charred wood assemblage from the demolition layers is almost exclusively oak, comprising more than 90% of the wood identified in these layers. This is consistent with the different depositional histories that the layers represent.

The large proportion of oak from ER281C-H perhaps represents the architectural pieces of the structure that were burned during demolition. This suggests that the dwelling was probably constructed almost exclusively of oak. Similarly, the presence of monocot stems only in ER 285 suggest possible use in daub, especially since some of the stems were a size consistent with corn stalks. The use and abandonment layers contained a greater proportion of other species – maple, hickory, Kentucky coffee tree, tulip poplar and even a small amount of pine. These pieces of wood probably represent fuelwood burned during the use of the structure. If this is the case, the different types of wood probably represent wood available around the settlement and gathered as available or encountered, rather than selecting for better fuels. Given the relatively high proportion of Kentucky coffee tree wood in 285G and presence of tulip poplar and chestnut (Figure 7), which generate relatively little heat compared to oaks, hickories, and even most maple, it does not appear that the slaves actively selected only for prime fuelwoods.

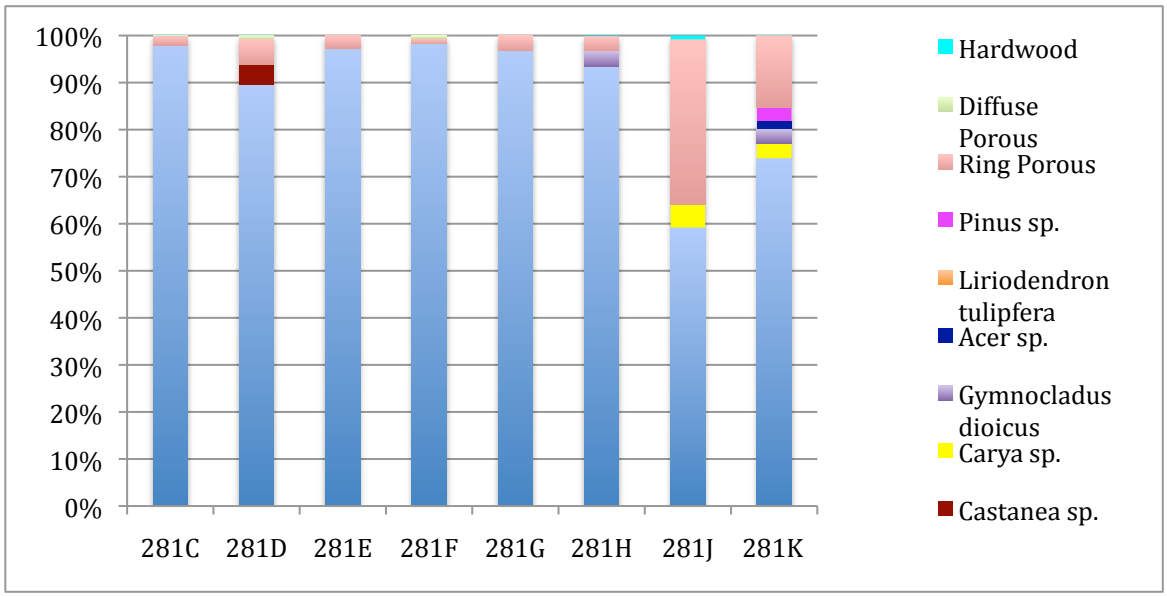

Figure 6. Charred Wood Assemblage from ER 281 by Level

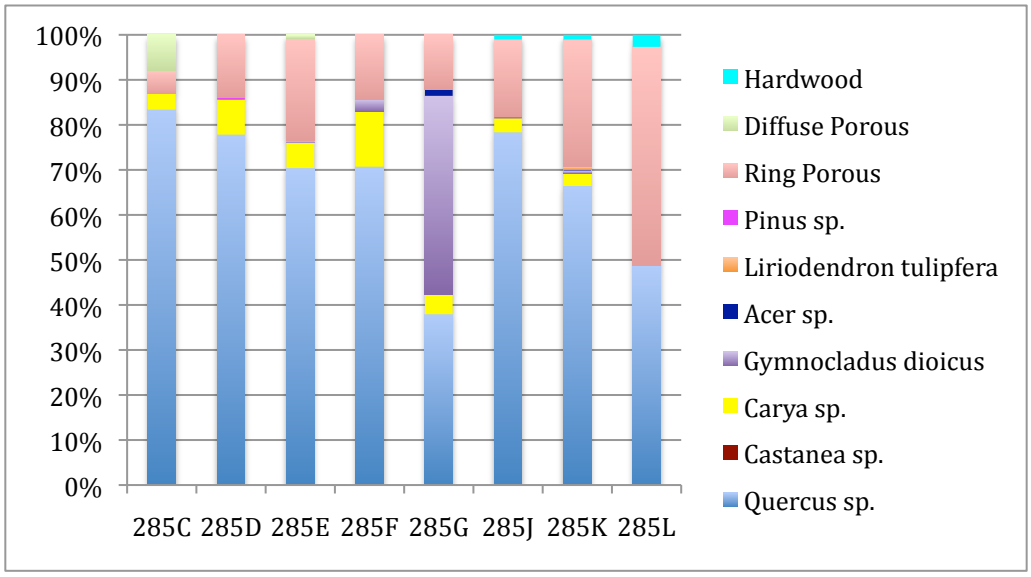

Figure 7. Charred Wood Assemblage in ER285 by Level

Activities

Some of the plant remains reference the types activities in which the slaves were engaged. The presence of wheat and tobacco indicate the slaves' participation in the production of crops for the market. Likewise the presence of rye, flax, and squash may indicate their activities in producing goods for the support of the plantation because some cereals were raised to feed livestock (Jefferson to Joel Yancey July 10 1815, MHS8), and pumpkins and squash were used to fatten pigs (Betts 1944). Flax was used to make clothes for the slaves.

Conclusion

The archaeobotanical material recovered from the Wingo's quarter shows the importance of plant use in the foodways of enslaved Africans at Poplar Forest. In order to identify what material is associated with consumption, it is best, however, to understand the depositional history of the site. The differences between deposits representing use of the structure and those representing abandonment and demolition show how seed rain and natural disturbances can alter an archaeobotanical collection. After this process is understood it is possible to consider the material more likely to relate to use in terms of foodways and use of the surrounding environments. The assemblage from Wingo's shows diverse use of cultivated and gathered wild plants as well as collection of wild plants from varied environments around the quarter.

Plant remains were probably incorporated into the archaeobotanical record through natural seed rain including some of the grasses, some of the weedy plants, and seeds from dogwood and tupelo. Low densities of plants that generally do not have economic uses such as *Spergula,* wild Fabaceae, and Solanaceae may indicate seed rain. Wild grass seeds present an interesting assemblage in that they are recovered in fairly low densities in the occupation and post-occupation layers, but in much higher densities in the post-occupation demolition layers

(281C through 281H). These, too, may represent the seed rain from a disturbed and then abandoned area around the quarter.

Maize was probably grown in the slaves' gardens, the grains used for food and the cobs for fuel. Similarly, cow peas and beans may have been grown in their gardens. Wheat and rye may have been provisioned. Or, like the tobacco and flax seeds, the wheat kernels might represent not food, but the slaves' engagement in tasks on the plantation. Recovering tobacco, clover, and flax is consistent with the tasks that slaves were engaged in during this period of Poplar Forest's history: production of tobacco as the plantation's as a cash crop, flax for the slaves' clothing, and clover as part of the plantation's crop rotation regime.

Carney (Carney and Rosomoff 2009) argues that maize quickly became a part of many African meals and greens were part of African foodways. Wild gathered greens were central to this cuisine as they were an important ingredient of starchy stews and sauces. Starchy flours from millet and later maize were the basis of meals, being cooked into porridge or dumplings. Black-eyed peas were also a part of this cuisine. Carney argues that this cuisine was transferred to the Americas during the period of slavery and is evident in southern cooking today as corn breads, stews, cooked greens, and hush puppies. Some plant remains recovered from Wingo's may be part of such a cuisine even if the slaves who worked at Poplar Forest had never seen Africa. This transfer of cuisine is not complete. Sorghum, another African staple, has been identified at other Poplar Forest contexts, but it appears to be lacking in the samples from Wingo's. Nor was African millet recovered. Their absence must be interpreted carefully because they may simply not have been preserved. Clearly, though, the wheat and rye indicate a more European part of the cuisine making use of the crops grown on the plantation, and the presence of nuts and wild fruits suggest the incorporation of available wild foods.

The food-related taxa identified at Wingo's and other site at Poplar Forest show the diversity of enslaved African foodways. Several plants associated with African foodways, like sorghum and cow pea, have been identified but most taxa are either European or New World in origin. In the late 18th century, many of these crops would have been just as familiar to African or African-American slaves in Virginia. The botanicals recovered also show that gathered plants came from various places from all around the plantation. Food related seeds came from forests, forest margins, agricultural fields, and waste areas.

Table 1. Sample Contexts, Flotation Sample Volumes, Light Fraction Weights, and Samples from Waterscreening with Identified Botanicals

Subfloor Pit ER: 281

Level	Samples	#Samples	Total Weight (g)	Total Volume (L)	Waterscreen Samples with ID Botanicals
C	81, 82, 83, 84	4	138.53	10	none
D	5, 6, 7, 8, 9, 10, 11,12	8	161.68	20.25	1, 2, 3, 4, 5, 6, 7
E	1, 2, 3, 4	4	88.02	10	9, 10, 17, 43, 49, 50, 51
F	85, 86, 87, 88	4	163.5	10	59, 60, 61, 62, 92, 93, 94, 95
G	26, 27, 28, 29, 30	5	102.83	11	54, 55, 56, 57, 58
H	89, 90, 91, 92	4	109.5	10	53, 85, 86, 87, 88
J	57, 58, 59, 60	4	14.22	10	44, 45, 46, 47, 48, 64, 71, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84
K	93, 94, 95, 96	4	90.86	10	91
Total		37	869.14	91.25	

Subfloor Pit ER: 285

Level	Samples	# Samples	Total Weight (g)	Total Volume (L)	Waterscreen Samples with ID Botanicals
C	53, 54, 55, 56, 70	5	69.67	12	11, 37, 38, 39, 40
D	61, 62, 63, 64, 65	5	76.99	10.75	none
E	42, 43, 44, 45, 46, 47, 48, 49, 51, 52	10	269.19	24.5	12, 13, 14
F	66, 67, 68, 69	4	117.9	10	41, 89, 90
G	22, 23, 24, 25	4	41.48	10	15, 16, 19, 20, 21, 30
H	77, 78, 79, 80	4	237.63	10	72-79
J	31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41	11	93.13	21	25
K	13, 14, 15, 16, 17, 18, 19, 20, 21	9	195.35	22.5	34, 35, 36
L	71, 72, 73, 74	4	29.15	10	42, 97
Total		56	1130.49	130.75	
Total		93	1999.63	222	

Table 2. Cultigens

		Zea mays										Prunus persica			
Feature /Level	Volume (L)	Cupules	Kernel	Triticum sp.	Secale sp.	Cerealia	Linum sp.	Cucurbita maxima	Cucurbit rind	Phaseolus sp.	Vigna sp.	Ct.	Wt. (g)	Pyrus sp.	Nicotiana tabacum
281C	10	0	0	0	0	0	0	0	0	0	0	4	0.42	0	0
281D	142.25	2	1	1	1	1	0	0	0	0	0	24	2.29	0	0
281E	89	0	3	3	1	0	0	0	8	0	0	26	3.71	0	0
281F	72.25	4	1	6	0	0	0	0	0	0	0	44	6.77	0	0
281G	65.5	1	2	1	1	0	0	0	0	0	0	17	4.74	0	0
281H	32.25	1	0	11	2	0	1	1	0	0	0	76	10.62	0	0
281J	110.75	9	0	9	1	0	0	0	0	0	0	14	1.28	0	0
281K	13	4	0	1	0	0	1	0	0	0	0	0	0	0	1
Total	535	21	7	32	6	1	2	1	8	0	0	205	29.83	0	1
285C	68.75	16	3	0	0	0	0	0	0	0	1	26	2.14	0	0
285D	10.75	9	3	0	0	0	0	0	0	0	0	1	0.05	0	0
285E	52.25	50	4	1	0	0	0	0	0	3	0	1	0.21	1	0
285F	21	23	7	0	0	0	0	0	0	0	2	0	0	0	0
285G	17.25	2	0	1	0	0	0	0	0	0	0	0	0	0	0
285H	29.5	7	2	0	0	0	0	0	0	1	0	10	0.71	0	0
285J	28	4	0	0	0	0	0	0	0	0	0	1	0.02	0	0
285K	33.25	3	2	1	0	0	0	0	0	0	0	0	0	0	0
285L	18	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Total	278.75	116	22	3	0	0	0	0	0	4	3	39	3.13	1	0

Table 3. Seeds from Trees and Shrubs

Feature/Level	Rubus sp.	Vaccinium sp.	Vitis sp.	Rhus sp.	Cornus sp.	Nyssa biflora	Gleditsia triacanthos
281C	0	0	0	0	0	0	0
281D	2	0	0	0	0	0	0
281E	0	0	0	0	0	0	0
281F	0	0	0	0	1	1	0
281G	0	0	0	0	0	0	0
281H	0	0	0	0	0	0	0
281J	0	0	0	0	0	0	0
281K	0	0	0	0	0	0	0
Total	2	0	0	0	1	1	0
285C	0	0	0	0	0	0	0
285D	0	0	0	3	0	0	0
285E	0	0	0	7	0	0	1
285F	0	1	1	3	0	0	0
285G	0	1	0	0	0	0	0
285H	0	2	0	0	0	0	0
285J	0	1	0	0	0	0	0
285K	0	0	0	0	0	0	0
285L	0	1	0	0	0	0	0
Total	0	6	1	13	0	0	1

Table 4. Nutshell

Feature/ Level	Quercus sp. Count	Quercus sp. Weight (g)	Castanea sp. Count	Castanea sp. Weight (g)	Carya sp. Count	Carya sp. Weight (g)	Juglans nigra Count	Juglans nigra Weight (g)	Juglandaceae Count	Juglandaceae Weight (g)	Unidentified Count	Unidentified Weight (g)	Nut meat (Ct)
281C	0	0	0	0	1	0.15	2	0.13	0	0	0	0	0
281D	0	0	0	0	0	0	0	0	0	0	51	2.27	1
281E	0	0	0	0	0	0	0	0	0	0	45	1.31	0
281F	2	0.05	0	0	0	0	0	0	0	0	16	0.45	0
281G	0	0	1	0.05	0	0	0	0	0	0	38	0.77	0
281H	0	0	0	0	0	0	5	0.27	0	0	4	0.11	0
281J	0	0	0	0	0	0	2	0.06	0	0	3	0.15	0
281K	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0.05	1	0.05	1	0.15	9	0.46	0	0	157	5.06	1
285C	0	0	0	0	0	0	2	0.07	0	0	18	0.3	0
285D	0	0	0	0	0	0	1	0.11	0	0	0	0	0
285E	0	0	0	0	0	0	0	0	0	0	1	0	0
285F	0	0	0	0	0	0	0	0	0	0	6	0.07	0
285G	0	0	0	0	1	0.04	0	0	2	0.04	0	0	0
285H	0	0	0	0	0	0	0	0	1	0.01	0	0	0
285J	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0.04	3	0.18	3	0.05	25	0.37	0

Table 5. Herbs I

Feature/Level	Rumex crispus	Rumex sp.	Polygonum sp.	Polygonaceae	Chenopodium sp.	Chenopodiaceae	Portulaca sp.	Portulacaeae	Oxalis stricta
281C	1	0	0	0	1	0	0	0	4
281D	0	0	12	12	9	1	0	1	1
281E	0	0	1	8	7	6	2	0	1
281F	2	0	11	5	4	0	2	0	0
281G	1	0	16	0	5	0	5	0	1
281H	0	5	23	0	43	0	6	0	0
281K	0	0	0	0	5	0	0	0	0
Total	4	5	63	25	74	7	15	1	7
285C	0	1	1	0	5	0	0	0	0
285D	0	1	1	0	5	0	0	0	0
285E	0	0	0	0	2	0	1	0	0
285F	0	0	0	0	0	0	0	0	0
285G	0	0	1	0	0	0	0	0	0
285H	0	0	1	0	0	0	0	0	0
285J	0	0	0	0	0	0	0	0	0
285K	0	0	0	0	1	0	0	0	0
285L	0	0	0	0	0	0	0	0	0
Total	0	2	4	0	13	0	1	0	0

Table 6. Herbs II

Feature/ Level	c.f. Spergula	Caryophyllaceae	c.f. Salvia	Mentha sp.	Datura stramonium	Solanceae	Lathyrus sp.	Trifolium sp.	Fabaceae	Ranunculaceae
281C	0	0	0	0	0	0	0	0	0	0
281D	0	0	0	0	0	0	0	0	2	0
281E	0	0	0	0	0	0	0	0	0	0
281F	0	0	1	0	0	0	0	0	0	0
281G	0	0	0	0	0	0	0	0	0	1
281H	1	0	0	1	1	1	0	0	3	0
281K	0	0	0	0	0	1	0	0	0	0
Total	1	0	1	1	1	2	0	0	5	1
285C	0	0	0	0	0	0	0	1	2	0
285D	0	0	0	0	0	0	1	0	4	0
285E	0	1	0	0	0	0	0	0	6	0
285F	0	0	0	0	0	0	0	0	5	0
285G	0	0	0	0	0	0	0	0	2	0
285H	0	1	0	0	0	0	0	0	0	0
285J	0	0	0	0	0	0	0	0	2	0
285K	0	0	0	0	0	0	0	0	1	0
285L	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	1	1	22	0

Table 7. Grasses and Sedges

Feature/Level	Volume	Poaceae wild	Panicoid	Eleusine indica	Panicum miliaceum	Poaceae-indeterminant	Cyperaceae
281C	10	48	2	0	0	0	0
281D	20.25	551	11	0	1	2	0
281E	10	589	26	0	0	1	0
281F	10	476	17	0	0	0	0
281G	33.5	770	19	0	0	0	2
281H	17.5	737	5	0	0	0	2
281K	13	15	0	0	0	0	0
Total	114.25	3186	80	0	1	3	4
285C	31.5	1	0	0	0	0	0
285D	10.75	4	0	2	0	0	0
285E	45.25	8	0	0	0	0	0
285F	21	1	0	0	0	0	0
285G	32	0	0	0	0	0	0
285H	10	7	0	0	0	0	2
285J	26	2	0	0	0	0	0
285K	23.25	1	0	0	0	0	0
285L	12.5	1	0	0	0	0	0
Total	212.25	25	0	2	0	0	2

Table 8. Unidentified Seeds and Starchy Material

		Starchy Material	
Feature/Level	Unidentified Seed	Ct.	Wt.
281C	1	9	0.15
281D	9	12	0.12
281E	13	13	0.75
281F	0	18	0.62
281G	2	5	0.13
281H	7	5	0.66
281J	0	168	8.56
281K	0	9	0.2
Total	32	239	11.19
285C	0	44	0.78
285D	0	11	0.25
285E	2	72	1.25
285F	0	44	0.78
285G	0	5	0.1
285H	0	3	0.08
285J	1	13	1.45
285K	1	36	3.1
285L	0	1	0.01
Total	4	229	7.8

Table 9. Wood I

	Quercus sp.		Castanea sp.		Carya sp.		Acer sp.		Gymnocladus dioicus	
Feature/ Level	Count	Weight	Count	Weight	Count	Weight	Count	Weight	Count	Weight
281C	37	3.54	0	0	0	0	0	0	0	0
281D	111	3.17	1	0.13	2	0.09	0	0	4	0.07
281E	92	5.87	0	0	0	0	0	0	0	0
281F	96	9.15	0	0	0	0	0	0	0	0
281G	110	6.82	0	0	0	0	0	0	0	0
281H	80	6.74	0	0	0	0	0	0	6	0.25
281J	32	0.74	0	0	3	0.06	0	0	0	0
281K	59	1.77	0	0	2	0.08	1	0.05	1	0.05
Total	617	37.8	1	0.13	7	0.23	1	0.05	11	0.37
285C	79	3.16	0	0	3	0.14	0	0	0	0
285D	88	6.32	0	0	10	0.63	0	0	0	0
285E	161	9.56	0	0	11	0.77	0	0	1	0.04
285F	76	6.17	0	0	3	0.68	0	0	3	0.21
285G	34	1.4	0	0	2	0.16	2	0.05	46	1.63
285H	45	2.29	0	0	3	0.26	1	0.01	10	0.42
285J	157	5.67	0	0	13	0.25	1	0.01	0	0
285K	124	4.43	0	0	8	0.2	2	0.02	2	0.04
285L	14	0.2	0	0	0	0	0	0	0	0
Total	778	39.2	0	0	53	3.09	6	0.09	62	2.34

Table 10. Wood II

	Liriodendron tulipfera		Ring Porous Hardwood		Diffuse Porous Hardwood		Hardwood		Monocot Stem		Pinus sp.	
Feature/ Level	Count	Weight	Count	Weight	Count	Weight	Count	Weight	Count	Weight	Count	Weight
281C	0	0	13	0.09	1	0.01	2	0.01	0	0	0	0
281D	0	0	45	0.48	26	0.53	5	0.03	1	0.02	0	0
281E	0	0	7	0.16	0	0	0	0	0	0	1	0.01
281F	0	0	3	0.11	1	0.02	0	0	0	0	0	0
281G	0	0	15	0.22	0	0	0	0	10	0.57	0	0
281H	0	0	13	0.25	0	0	1	0.01	72	1.78	0	0
281J	0	0	55	0.44	0	0	8	0.02	7	0.51	0	0
281K	0	0	32	0.48	0	0	1	0.01	0	0	4	0.08
Total	0	0	183	2.23	28	0.56	17	0.08	90	2.88	5	0.09
285C	0	0	15	0.19	3	0.3	0	0	0	0	0	0
285D	0	0	26	1.13	0	0	0	0	0	0	1	0.04
285E	0	0	74	3.08	2	0.1	0	0	0	0	1	0.03
285F	0	0	18	1.1	0	0	0	0	0	0	0	0
285G	0	0	16	0.45	0	0	0	0	0	0	0	0
285H	0	0	10	0.58	0	0	5	0.2	0	0	0	0
285J	0	0	97	1.26	1	0.01	4	0.08	0	0	2	0.02
285K	1	0.04	83	1.88	0	0	4	0.07	0	0	0	0
285L	0	0	41	0.21	0	0	7	0.03	0	0	0	0
Total	1	0.04	380	9.88	6	0.41	20	0.38	0	0	4	0.09

Table 11. Taxonomic Richness of Wood by Feature and Level

Feature/ Level	Number of Mutually Exclusive Taxa
281 C	2
281 D	4
281 E	2
281 F	2
281 G	1
281 H	2
281 J	2
281 K	5
285 C	3
285 D	4
285 E	4
285 F	3
285 G	4
285 H	4
285 J	4
285 K	5
285 L	1

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Appendix

Feature/ Level	Type	Sample Number	Volume (L)	Zea mays Cupules	Zea mays Kernel	Triticum sp.	Secale sp.	Cerealia	Linum sp.	Cucurbita maxima	Cucurbit rind	Phaseolus sp.	Vigna sp.	Prunus persica	Prunus persica weight (g)	Pyrus sp.	Nicotiana tabacum
281C	Float	LF#81	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281C	Float	LF#82	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281C	Float	LF#83	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281C	Float	LF#84	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281C	1/4"HF	82		0	0	0	0	0	0	0	0	0	0	1	0.02	0	0
281C	Dry Screen			0	0	0	0	0	0	0	0	0	0	3	0.4	0	0
281D	Float	LF#5	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#6	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#7	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#8	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#9	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#10	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#11	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#12	2.75	0	0	0	0	1	0	0	0	0	0	0	0	0	0
281D	Waterscreen	1	35	0	0	0	0	0	0	0	0	0	0	3	0.19	0	0
281D	Waterscreen	2		2	0	0	1	0	0	0	0	0	0	6	0.28	0	0
281D	Waterscreen	3	36	0	0	0	0	0	0	0	0	0	0	6	0.84	0	0
281D	Waterscreen	4		0	1	1	0	0	0	0	0	0	0	1	0.04	0	0
281D	Waterscreen	5	25.5	0	0	0	0	0	0	0	0	0	0	5	0.57	0	0
281D	Waterscreen	6	25.5	0	0	0	0	0	0	0	0	0	0	1	0.16	0	0
281D	Waterscreen	7		0	0	0	0	0	0	0	0	0	0	2	0.21	0	0
281E	Float	LF#1	2.5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
281E	Float	LF#2	2.5	0	0	0	1	0	0	0	2	0	0	0	0	0	0
281E	Float	LF#3	2.5	0	0	1	0	0	0	0	6	0	0	0	0	0	0
281E	Float	LF#4	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281E	Waterscreen	9	12	0	0	1	0	0	0	0	0	0	0	0	0	0	0
281E	Waterscreen	10		0	0	0	0	0	0	0	0	0	0	3	1.05	0	0
281E	Waterscreen	17	20	0	0	0	0	0	0	0	0	0	0	2	0.23	0	0
281E	Waterscreen	43	12	0	0	0	0	0	0	0	0	0	0	10	0.62	0	0
281E	Waterscreen	49	12	0	2	0	0	0	0	0	0	0	0	4	0.33	0	0
281E	Waterscreen	50	11	0	0	0	0	0	0	0	0	0	0	3	0.26	0	0
281E	Waterscreen	51	12	0	0	1	0	0	0	0	0	0	0	2	0.19	0	0
281E	Dry Screen			0	0	0	0	0	0	0	0	0	0	2	1.03	0	0
281F	Float	LF#85	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281F	Float	LF#86	2.5	0	0	1	0	0	0	0	0	0	0	1	0.05	0	0
281F	Float	LF#87	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281F	Float	LF#88	2.5	1	0	1	0	0	0	0	0	0	0	0	0	0	0
281F	Waterscreen	59	13.25	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Feature/ Level	Type	Sample Number	Volume (L)	Zea mays Cupules	Zea mays Kernel	Triticum sp.	Secale sp.	Cerealia	Linum sp.	Cucurbita maxima	Cucurbit rind	Phaseolus sp.	Vigna sp.	Prunus persica	Prunus persica weight (g)	Pyrus sp.	Nicotiana tabacum
281F	Waterscreen	60	12.75	1	0	1	0	0	0	0	0	0	0	10	2.31	0	0
281F	Waterscreen	61	13.25	0	0	1	0	0	0	0	0	0	0	1	0.05	0	0
281F	Waterscreen	62	13	0	0	0	0	0	0	0	0	0	0	4	0.87	0	0
281F	Waterscreen	92	2.5	0	0	0	0	0	0	0	0	0	0	11	0.12	0	0
281F	Waterscreen	93	2.5	0	0	1	0	0	0	0	0	0	0	6	0.13	0	0
281f	Waterscreen	94	2.5	0	0	0	0	0	0	0	0	0	0	2	0.2	0	0
281F	Waterscreen	95	2.5	2	0	0	0	0	0	0	0	0	0	2	0.03	0	0
281F	1/4"HF	86		0	1	0	0	0	0	0	0	0	0	0	0	0	0
281F	1/4"HF	88		0	0	0	0	0	0	0	0	0	0	1	0.01	0	0
281F	Dry Screen			0	0	0	0	0	0	0	0	0	0	6	3	0	0
281G	Float	LF#26		0	0	0	0	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#27	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#28	2.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#29	2.5	0	1	0	0	0	0	0	0	0	0	1	0.04	0	0
281G	Float	LF#30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281G	Waterscreen	54	12	0	0	0	0	0	0	0	0	0	0	2	0.24	0	0
281G	Waterscreen	55	12	1	0	0	1	0	0	0	0	0	0	6	1.07	0	0
281G	Waterscreen	56	11.5	0	0	0	0	0	0	0	0	0	0	1	0.07	0	0
281G	Waterscreen	57	10.5	0	1	0	0	0	0	0	0	0	0	2	0.42	0	0
281G	Waterscreen	58	11	0	0	0	0	0	0	0	0	0	0	3	0.71	0	0
281G	Dry Screen			0	0	0	0	0	0	0	0	0	0	2	2.19	0	0
281H	Float	LF#89	2.5	0	0	2	0	0	0	0	0	0	0	4	0.33	0	0
281H	Float	LF#90	2.5	0	0	2	0	0	0	0	0	0	0	2	0.08	0	0
281H	Float	LF#91	2.5	0	0	1	0	0	1	0	0	0	0	2	0.12	0	0
281H	Float	LF#92	2.5	0	0	0	0	0	0	0	0	0	0	1	0.05	0	0
281H	Waterscreen	53	12.25	0	0	4	2	0	0	1	0	0	0	26	6.15	0	0
281H	Waterscreen	85	2.5	0	0	2	0	0	0	0	0	0	0	0	0	0	0
281H	Waterscreen	86	2.5	0	0	0	0	0	0	0	0	0	0	4	0.32	0	0
281H	Waterscreen	87	2.5	0	0	0	0	0	0	0	0	0	0	13	0.71	0	0
281H	Waterscreen	88	2.5	1	0	0	0	0	0	0	0	0	0	1	0.02	0	0
281H	1/4"HF	91		0	0	0	0	0	0	0	0	0	0	9	0.15	0	0
281H	1/4"HF	92		0	0	0	0	0	0	0	0	0	0	6	0.05	0	0
281H	Dry Screen			0	0	0	0	0	0	0	0	0	0	8	2.64	0	0
281J	Float	LF#57	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#58	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#59	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#60	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Feature/ Level	Type	Sample Number	Volume (L)	Zea mays Cupules	Zea mays Kernel	Triticum sp.	Secale sp.	Cerealia	Linum sp.	Cucurbita maxima	Cucurbit rind	Phaseolus sp.	Vigna sp.	Prunus persica	Prunus persica weight (g)	Pyrus sp.	Nicotiana tabacum
281J	Waterscreen	44	12.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0
281J	Waterscreen	45	13	0	0	1	0	0	0	0	0	0	0	0	0	0	0
281J	Waterscreen	46	10	0	0	0	0	0	0	0	0	0	0	4	0.12	0	0
281J	Waterscreen	47	10	0	0	2	1	0	0	0	0	0	0	2	0.18	0	0
281J	Waterscreen	48	13	0	0	1	0	0	0	0	0	0	0	1	0.39	0	0
281J	Waterscreen	64	10.75	0	0	0	0	0	0	0	0	0	0	1	0.14	0	0
281J	Waterscreen	65	12	0	0	1	0	0	0	0	0	0	0	0	0	0	0
281J	Waterscreen	70	2.5	0	0	0	0	0	0	0	0	0	0	1	0.04	0	0
281J	Waterscreen	71	2.5	0	0	0	0	0	0	0	0	0	0	2	0.06	0	0
281J	Waterscreen	73	2.5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
281J	Waterscreen	74	2	1	0	0	0	0	0	0	0	0	0	1	0.05	0	0
281J	Waterscreen	75	2.5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
281J	Waterscreen	79	2.5	0	0	0	0	0	0	0	0	0	0	1	0.02	0	0
281J	Waterscreen	82	2.5	0	0	2	0	0	0	0	0	0	0	0	0	0	0
281J	Waterscreen	83	2.5	1	0	1	0	0	0	0	0	0	0	0	0	0	0
281J	Dry Screen			0	0	0	0	0	0	0	0	0	0	1	0.28	0	0
281K	Float	LF#93	2.5	1	0	1	0	0	0	0	0	0	0	0	0	0	0
281K	Float	LF#94	2.5	0	0	0	0	0	1	0	0	0	0	0	0	0	0
281K	Float	LF#95	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281K	Float	LF#96	2.5	1	0	0	0	0	0	0	0	0	0	0	0	0	1
281K	Waterscreen	91	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#54	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#55	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#56	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#70	UNK	1	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Waterscreen	11	15.25	1	0	0	0	0	0	0	0	0	1	0	0	0	0
285C	Waterscreen	37	12	1	1	0	0	0	0	0	0	0	0	3	0.18	0	0
285C	Waterscreen	38	12	0	1	0	0	0	0	0	0	0	0	6	0.3	0	0
285C	Waterscreen	39	12	10	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Waterscreen	40	10	3	1	0	0	0	0	0	0	0	0	6	0.5	0	0
285C	Dry Screen			0	0	0	0	0	0	0	0	0	0	11	1.16	0	0
285D	Float	LF#61	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285D	Float	LF#62	2.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0
285D	Float	LF#63	2.5	3	2	0	0	0	0	0	0	0	0	0	0	0	0
285D	Float	LF#64	2.5	5	1	0	0	0	0	0	0	0	0	0	0	0	0
285D	Float	LF#65	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285D	1/4"HF	62		0	0	0	0	0	0	0	0	0	0	1	0.05	0	0

Feature/ Level	Type	Sample Number		Volume (L)	Zea mays Cupules	Zea mays Kernel	Triticum sp.	Secale sp.	Cerealia	Linum sp.	Cucurbita maxima	Cucurbit rind	Phaseolus sp.	Vigna sp.	Prunus persica	Prunus persica weight (g)	Pyrus sp.	Nicotiana tabacum	
285E	Float	LF#42		2.5	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
285E	Float	LF#43		2.5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
285E	Float	LF#44		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285E	Float	LF#45		2.5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
285E	Float	LF#46		1.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
285E	Float	LF#47		2.5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	
285E	Float	LF#48		2.5	1	1	1	0	0	0	0	0	0	0	0	0	0	0	
285E	Float	LF#49		2.5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	
285E	Float	LF#51		2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	
285E	Float	LF#52		2.5	6	0	0	0	0	0	0	0	1	0	0	0	0	0	
285E	Waterscreen		12	9.75	27	0	0	0	0	0	0	0	0	0	0	0	0	0	
285E	Waterscreen		13	12	0	0	0	0	0	0	0	0	0	0	1	0.21	0	0	
285E	Waterscreen		14	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
285F	Float	LF#66		2.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
285F	Float	LF#67		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285F	Float	LF#68		2.5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
285F	Float	LF#69		2.5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	
285F	Waterscreen		41	8.5	17	4	0	0	0	0	0	0	0	1	0	0	0	0	
285F	Waterscreen		90	2.5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
285F	Dry Screen				0	1	0	0	0	0	0	0	0	0	0	0	0	0	
285G	Float	LF#22		2.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
285G	Float	LF#23		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285G	Float	LF#24		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285G	Float	LF#25		2.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
285G	Wateerscreen		15	7.25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
285H	Float	LF#77		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285H	Float	LF#78		2.5	2	0	0	0	0	0	0	0	1	0	3	0.1	0	0	
285H	Float	LF#79		2.5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	
285H	Float	LF#80		2.5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
285H	Waterscreen	72-79		19.5	0	0	0	0	0	0	0	0	0	0	2	0.17	0	0	
285H	1/4"HF		78		0	0	0	0	0	0	0	0	0	0	1	0.02	0	0	
285H	1/4"HF		79		0	0	0	0	0	0	0	0	0	0	4	0.42	0	0	
285J	Float	LF#31		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285J	Float	LF#32		2.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
285J	Float	LF#33		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285J	Float	LF#34		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285J	Float	LF#35		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
285J	Float	LF#36		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Feature/ Level	Type	Sample Number		Volume (L)	Zea mays Cupules	Zea mays Kernel	Triticum sp.	Secale sp.	Cerealia	Linum sp.	Cucurbita maxima	Cucurbit rind	Phaseolus sp.	Vigna sp.	Prunus persica	Prunus persica weight (g)	Pyrus sp.	Nicotiana tabacum
285J	Float	LF#37		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#38		2.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#39		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#40		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#41		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Waterscreen		25	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	1/4"HF		35		0	0	0	0	0	0	0	0	0	0	1	0.02	0	0
285K	Float	LF#13		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#14		2.5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#15		3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#16		2.5	2	1	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#17		2.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#18		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#19		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#20		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#21		2.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0
285K	Waterscreen		36	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#71		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#72		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#73		2.5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#74		2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	Waterscreen		42	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total				813.75	137	29	35	6	1	2	1	8	4	3	244	32.96	1	1

Feature/Le	Type	Sample	Volume	Rubus sp.	Vaccinium sp.	Vitis sp.	Rhus sp.	Cornus sp.	Nyssa biflora	Gleditsia triacanthos	
281C	Float	LF#81	2.5	0	0	0	0	0	0	0	
281C	Float	LF#82	2.5	0	0	0	0	0	0	0	
281C	Float	LF#83	2.5	0	0	0	0	0	0	0	
281C	Float	LF#84	2.5	0	0	0	0	0	0	0	
281D	Float	LF#5	2.5	0	0	0	0	0	0	0	
281D	Float	LF#6	2.5	0	0	0	0	0	0	0	
281D	Float	LF#7	2.5	0	0	0	0	0	0	0	
281D	Float	LF#8	2.5	1	0	0	0	0	0	0	
281D	Float	LF#9	2.5	1	0	0	0	0	0	0	
281D	Float	LF#10	2.5	0	0	0	0	0	0	0	
281D	Float	LF#11	2.5	0	0	0	0	0	0	0	
281D	Float	LF#12	2.75	0	0	0	0	0	0	0	
281E	Float	LF#1	2.5	0	0	0	0	0	0	0	
281E	Float	LF#2	2.5	0	0	0	0	0	0	0	
281E	Float	LF#3	2.5	0	0	0	0	0	0	0	
281E	Float	LF#4	2.5	0	0	0	0	0	0	0	
281F	Float	LF#85	2.5	0	0	0	0	0	0	0	
281F	Float	LF#86	2.5	0	0	0	0	0	0	0	
281F	Float	LF#87	2.5	0	0	0	0	0	0	0	
281F	Float	LF#88	2.5	0	0	0	0	0	0	0	
281F	Waterscreen	60	12.75	0	0	0	0	1	0	0	
281F	Waterscreen	61	13.25	0	0	0	0	0	1	0	
281G	Float	LF#26	2.5	0	0	0	0	0	0	0	
281G	Float	LF#27	2.5	0	0	0	0	0	0	0	
281G	Float	LF#28	2.5	0	0	0	0	0	0	0	
281G	Float	LF#29	2.5	0	0	0	0	0	0	0	
281G	Float	LF#30	1	0	0	0	0	0	0	0	
281H	Float	LF#89	2.5	0	0	0	0	0	0	0	
281H	Float	LF#90	2.5	0	0	0	0	0	0	0	
281H	Float	LF#91	2.5	0	0	0	0	0	0	0	
281H	Float	LF#92	2.5	0	0	0	0	0	0	0	

Feature/Le	Type	Sample	Volume	Rubus sp.	Vaccinium sp.	Vitis sp.	Rhus sp.	Cornus sp.	Nyssa biflora	Gleditsia triacanthos	
281J	Float	LF#57	2.5	0	0	0	0	0	0	0	0
281J	Float	LF#58	2.5	0	0	0	0	0	0	0	0
281J	Float	LF#59	2.5	0	0	0	0	0	0	0	0
281J	Float	LF#60	2.5	0	0	0	0	0	0	0	0
281K	Float	LF#93	2.5	0	0	0	0	0	0	0	0
281K	Float	LF#94	2.5	0	0	0	0	0	0	0	0
281K	Float	LF#95	2.5	0	0	0	0	0	0	0	0
281K	Float	LF#96	2.5	0	0	0	0	0	0	0	0
285C	Float	LF#54	2.5	0	0	0	0	0	0	0	0
285C	Float	LF#55	2.5	0	0	0	0	0	0	0	0
285C	Float	LF#56	2.25	0	0	0	0	0	0	0	0
285C	Float	LF#70	UNK	0	0	0	0	0	0	0	0
285D	Float	LF#61	2.5	0	0	0	1	0	0	0	0
285D	Float	LF#62	2.5	0	0	0	0	0	0	0	0
285D	Float	LF#63	2.5	0	0	0	0	0	0	0	0
285D	Float	LF#64	2.5	0	0	0	1	0	0	0	0
285D	Float	LF#65	0.75	0	0	0	1	0	0	0	0
285E	Float	LF#42	2.5	0	0	0	1	0	0	1	
285E	Float	LF#43	2.5	0	0	0	0	0	0	0	0
285E	Float	LF#44	2.5	0	0	0	2	0	0	0	0
285E	Float	LF#45	2.5	0	0	0	1	0	0	0	0
285E	Float	LF#46	1.5	0	0	0	0	0	0	0	0
285E	Float	LF#47	2.5	0	0	0	2	0	0	0	0
285E	Float	LF#48	2.5	0	0	0	0	0	0	0	0
285E	Float	LF#49	2.5	0	0	0	0	0	0	0	0
285E	Float	LF#51	2	0	0	0	0	0	0	0	0
285E	Float	LF#52	2.5	0	0	0	1	0	0	0	0
285F	Float	LF#66	2.5	0	0	1	2	0	0	0	0
285F	Float	LF#67	2.5	0	0	0	0	0	0	0	0
285F	Float	LF#68	2.5	0	0	0	0	0	0	0	0

Feature/Le	Type	Sample	Volume	Rubus sp.	Vaccinium sp.	Vitis sp.	Rhus sp.	Cornus sp.	Nyssa biflora	Gleditsia triacanthos	
285F	Float	LF#69	2.5	0	1	0	1	0	0	0	
285G	Float	LF#22	2.5	0	0	0	0	0	0	0	
285G	Float	LF#23	2.5	0	0	0	0	0	0	0	
285G	Float	LF#24	2.5	0	0	0	0	0	0	0	
285G	Float	LF#25	2.5	0	1	0	0	0	0	0	
285H	Float	LF#77	2.5	0	0	0	0	0	0	0	
285H	Float	LF#78	2.5	0	2	0	0	0	0	0	
285H	Float	LF#79	2.5	0	0	0	0	0	0	0	
285H	Float	LF#80	2.5	0	0	0	0	0	0	0	
285J	Float	LF#31	2.5	0	0	0	0	0	0	0	
285J	Float	LF#32	2.5	0	1	0	0	0	0	0	
285J	Float	LF#33	2.5	0	0	0	0	0	0	0	
285J	Float	LF#34	2.5	0	0	0	0	0	0	0	
285J	Float	LF#35	2.5	0	0	0	0	0	0	0	
285J	Float	LF#36	2.5	0	0	0	0	0	0	0	
285J	Float	LF#37	2.5	0	0	0	0	0	0	0	
285J	Float	LF#38	2.5	0	0	0	0	0	0	0	
285J	Float	LF#39	2.5	0	0	0	0	0	0	0	
285J	Float	LF#40	2.5	0	0	0	0	0	0	0	
285J	Float	LF#41	1	0	0	0	0	0	0	0	
285K	Float	LF#13	2.5	0	0	0	0	0	0	0	
285K	Float	LF#14	2.5	0	0	0	0	0	0	0	
285K	Float	LF#15	3	0	0	0	0	0	0	0	
285K	Float	LF#16	2.5	0	0	0	0	0	0	0	
285K	Float	LF#17	2.75	0	0	0	0	0	0	0	
285K	Float	LF#18	2.5	0	0	0	0	0	0	0	
285K	Float	LF#19	2.5	0	0	0	0	0	0	0	
285K	Float	LF#20	2.5	0	0	0	0	0	0	0	
285K	Float	LF#21	2.5	0	0	0	0	0	0	0	
285L	Float	LF#71	2.5	0	0	0	0	0	0	0	
285L	Float	LF#72	2.5	0	0	0	0	0	0	0	

Feature/Le	Type	Sample	Volume	Rubus sp.	Vaccinium sp.	Vitis sp.	Rhus sp.	Cornus sp.	Nyssa biflora	Gleditsia triacanthos	
285L	Float	LF#73	2.5	0	1	0	0	0	0		0
285L	Float	LF#74	2.5	0	0	0	0	0	0		0
				2	6	1	13	1	1		1

				Quercus sp.		Castanea sp.		Carya sp.		Juglans nigra		Juglandaceae		Unidentified		
Feature/			Volume		Weight		Weight		Weight		Weight		Weight		Weight	Nut
Level	Type	Sample	(L)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	meat
281C	Float	LF#81	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281C	Float	LF#82	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281C	Float	LF#83	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281C	Float	LF#84	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281C	Dry Screen			0	0	0	0	1	0.15	2	0.13	0	0	0	0	0
281D	Float	LF#5	2.5	0	0	0	0	0	0	0	0	0	0	6	0.07	0
281D	Float	LF#6	2.5	0	0	0	0	0	0	0	0	0	0	1	0.01	0
281D	Float	LF#7	2.5	0	0	0	0	0	0	0	0	0	0	1	1	1
281D	Float	LF#8	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#9	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#10	2.5	0	0	0	0	0	0	0	0	0	0	0		0
281D	Float	LF#11	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#12	2.75	0	0	0	0	0	0	0	0	0	0	3	0	0
281D	Waterscre	1	35	0	0	0	0	0	0	0	0	0	0	1	0.06	0
281D	Waterscre	2		0	0	0	0	0	0	0	0	0	0	16	0.36	0
281D	Waterscre	4		0	0	0	0	0	0	0	0	0	0	4	0.17	0
281D	Waterscre	5	25.5	0	0	0	0	0	0	0	0	0	0	4	0.11	0
281D	Waterscre	7		0	0	0	0	0	0	0	0	0	0	15	0.49	0
281E	Float	LF#1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281E	Float	LF#2	2.5	0	0	0	0	0	0	0	0	0	0	1	0.05	0
281E	Float	LF#3	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281E	Float	LF#4	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281E	Waterscre	9	12	0	0	0	0	0	0	0	0	0	0	4	0.11	0
281E	Waterscre	10		0	0	0	0	0	0	0	0	0	0	1	0.09	0
281E	Waterscre	17	20	0	0	0	0	0	0	0	0	0	0	5	0.44	0
281E	Waterscre	43	12	0	0	0	0	0	0	0	0	0	0	18	0.19	0
281E	Waterscre	49	12	0	0	0	0	0	0	0	0	0	0	6	0.16	0
281E	Waterscre	50	11	0	0	0	0	0	0	0	0	0	0	7	0.13	0
281E	Waterscre	51	12	0	0	0	0	0	0	0	0	0	0	3	0.14	0
281F	Float	LF#85	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0

				Quercus sp.		Castanea sp.		Carya sp.		Juglans nigra		Juglandaceae		Unidentified		
Feature/			Volume		Weight		Weight		Weight		Weight		Weight		Weight	Nut
Level	Type	Sample	(L)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	meat
281F	Float	LF#86	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281F	Float	LF#87	2.5	2	0.05	0	0	0	0	0	0	0	0	1	0.01	0
281F	Float	LF#88	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281F	Waterscre	59	13.25	0	0	0	0	0	0	0	0	0	0	2	0.11	0
281F	Waterscre	60	12.75	0	0	0	0	0	0	0	0	0	0	8	0.18	0
281F	Waterscre	62	13	0	0	0	0	0	0	0	0	0	0	3	0.15	0
281F	Waterscre	94	2.5	0	0	0	0	0	0	0	0	0	0	2	0	0
281G	Float	LF#26	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#27	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#28	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#29	2.5	0	0	1	0.05	0	0	0	0	0	0	0	0	0
281G	Float	LF#30	1	0	0	0	0	0	0	0	0	0	0	1	<0.01	0
281G	Waterscre	54	12	0	0	0	0	0	0	0	0	0	0	1	0.03	0
281G	Waterscre	55	12	0	0	0	0	0	0	0	0	0	0	18	0.29	0
281G	Waterscre	56	11.5	0	0	0	0	0	0	0	0	0	0	5	0.17	0
281G	Waterscre	57	10.5	0	0	0	0	0	0	0	0	0	0	13	0.28	0
281H	Float	LF#89	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281H	Float	LF#90	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281H	Float	LF#91	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281H	Float	LF#92	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281H	Waterscre	53	12.25	0	0	0	0	0	0	0	0	0	0	4	0.11	0
281H	Waterscre	88	2.5	0	0	0	0	0	0	5	0.27	0	0	0	0	0
281J	Float	LF#57	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#58	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#59	2.5	0	0	0	0	0	0	0	0	0	0	2	0.03	0
281J	Float	LF#60	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281J	Waterscre	45	13	0	0	0	0	0	0	2	0.06	0	0	0	0	0
281J	Waterscre	48	13	0	0	0	0	0	0	0	0	0	0	1	0.12	0
281K	Float	LF#93	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281K	Float	LF#94	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0

				Quercus sp.		Castanea sp.		Carya sp.		Juglans nigra		Juglandaceae		Unidentified		
Feature/			Volume		Weight		Weight		Weight		Weight		Weight		Weight	Nut
Level	Type	Sample	(L)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	meat
281K	Float	LF#95	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
281K	Float	LF#96	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#54	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#55	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#56	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#70	UNK	0	0	0	0	0	0	0	0	0	0	0	0	0
285C	Waterscre	11	15.25	0	0	0	0	0	0	1	0	0	0	6	0	0
285C	Waterscre	37	12	0	0	0	0	0	0	0	0	0	0	2	0.06	0
285C	Waterscre	38	12	0	0	0	0	0	0	0	0	0	0	10	0.24	0
285C	Dry scree	38		0	0	0	0	0	0	1	0.07	0	0	0	0	0
285D	Float	LF#61	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285D	Float	LF#62	2.5	0	0	0	0	0	0	1	0.11	0	0	0	0	0
285D	Float	LF#63	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285D	Float	LF#64	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285D	Float	LF#65	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#42	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#43	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#44	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#45	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#46	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#47	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#48	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#49	2.5	0	0	0	0	0	0	0	0	0	0	1	<0.01	0
285E	Float	LF#51	2	0	0	0	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#52	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285F	Float	LF#66	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285F	Float	LF#67	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285F	Float	LF#68	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285F	Float	LF#69	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0

				Quercus sp.		Castanea sp.		Carya sp.		Juglans nigra		Juglandaceae		Unidentified		
Feature/			Volume		Weight		Weight		Weight		Weight		Weight		Weight	Nut
Level	Type	Sample	(L)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	meat
285F	Waterscre	41	8.5	0	0	0	0	0	0	0	0	0	0	5	0.06	0
285F	Waterscre	89	2.5	0	0	0	0	0	0	0	0	0	0	1	0.01	0
285G	Float	LF#22	2.5	0	0	0	0	1	0.04	0	0	0	0	0	0	0
285G	Float	LF#23	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285G	Float	LF#24	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285G	Float	LF#25	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285G	Waterscre	16	9.5	0	0	0	0	0	0	0	0	1	0.03	0	0	0
285G	Waterscre	30	6	0	0	0	0	0	0	0	0	1	0.01	0	0	0
285H	Float	LF#77	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285H	Float	LF#78	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285H	Float	LF#79	2.5	0	0	0	0	0	0	0	0	1	0.01	0	0	0
285H	Float	LF#80	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#31	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#32	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#33	2.5	0	0	0	0	0	0	0	0	0	0	0	0	
285J	Float	LF#34	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#35	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#36	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#37	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#38	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#39	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#40	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#41	1	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#13	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#14	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#15	3	0	0	0	0	0	0	0	0	0	0	0	0	
285K	Float	LF#16	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#17	2.75	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#18	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#19	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0

				Quercus sp.		Castanea sp.		Carya sp.		Juglans nigra		Juglandaceae		Unidentified		
Feature/			Volume		Weight		Weight		Weight		Weight		Weight		Weight	Nut
Level	Type	Sample	(L)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	Count	(g)	meat
285K	Float	LF#20	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#21	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#71	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#72	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#73	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#74	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0
				2	0.05	1	0.05	2	0.19	12	0.64	3	0.05	182	5.43	1

Feature/Level	Type	Sample	Volume	Rumex crispus	Rumex sp.	Polygonum sp.	Polgonaceae	Chenopodium sp.	Chenopodiaceae	Portulaca sp.	Portulacaeae
281C	Float	LF#81	2.5	0	0	0	0	1	0	0	0
281C	Float	LF#82	2.5	1	0	0	0	0	0	0	0
281C	Float	LF#83	2.5	0	0	0	0	0	0	0	0
281C	Float	LF#84	2.5	0	0	0	0	0	0	0	0
281C	1/4"HF	82		0	0	0	0	0	0	0	0
281D	Float	LF#5	2.5	0	0	6	0	2	0	0	0
281D	Float	LF#6	2.5	0	0	0	2	0	1	0	1
281D	Float	LF#7	2.5	0	0	0	3	3	0	0	0
281D	Float	LF#8	2.5	0	0	4	0	1	0	0	0
281D	Float	LF#9	2.5	0	0	0	1	2	0	0	0
281D	Float	LF#10	2.5	0	0	0	1	0	0	0	0
281D	Float	LF#11	2.5	0	0	0	5	0	0	0	0
281D	Float	LF#12	2.75	0	0	2	0	1	0	0	0
281E	Float	LF#1	2.5	0	0	1	0	1	0	1	0
281E	Float	LF#2	2.5	0	0	0	2	0	6	1	0
281E	Float	LF#3	2.5	0	0	0	3	2	0	0	0
281E	Float	LF#4	2.5	0	0	0	3	4	0	0	0
281F	Float	LF#85	2.5	0	0	0	3	2	0	0	0
281F	Float	LF#86	2.5	2	0	8	0	0	0	0	0
281F	Float	LF#87	2.5	0	0	0	2	2	0	0	0
281F	Float	LF#88	2.5	0	0	3	0	0	0	2	0
281G	Float	LF#26	2.5	0	0	3	0	1	0	1	0
281G	Float	LF#27	2.5	1	0	4	0	1	0	0	0
281G	Float	LF#28	2.5	0	0	2	0	0	0	3	0
281G	Float	LF#29	2.5	0	0	4	0	2	0	1	0
281G	Float	LF#30	1	0	0	3	0	1	0	0	0
281G	Waterscreen	57	10.5	0	0	0		0	0	0	0
281G	Waterscreen	54	12	0	0	0		0	0	0	0
281H	Float	LF#89	2.5	0	1	7	0	12	0	2	0
281H	Float	LF#90	2.5	0	1	6	0	0	0	0	0
281H	Float	LF#91	2.5	0	2	5	0	0	0	0	0

Feature/Level	Type	Sample	Volume	Rumex crispus	Rumex sp.	Polygonum sp.	Polgonaceae	Chenopodium sp.	Chenopodiaceae	Portulaca sp.	Portulacaeae
281H	Float	LF#92	2.5	0	1	5	0	30	0	4	0
281H	Waterscreen	85	2.5	0	0	0	0	1	0	0	0
281H	Waterscreen	86	2.5	0	0	0	0	0	0	0	0
281H	Waterscreen	87	2.5	0	0	0	0	0	0	0	0
281J	Float	LF#57	2.5	0	0	0	0	2	0	0	0
281J	Float	LF#58	2.5	0	0	1	0	0	0	0	0
281J	Float	LF#59	2.5	0	0	0	0	1	0	0	0
281J	Float	LF#60	2.5	0	0	0	0	1	0	0	0
281K	Float	LF#93	2.5	0	0	0	0	1	0	0	0
281K	Float	LF#94	2.5	0	0	0	0	2	0	0	0
281K	Float	LF#95	2.5	0	0	0	0	0	0	0	0
281K	Float	LF#96	2.5	0	0	0	0	1	0	0	0
281K	Waterscreen	91	3	0	0	0	0	1	0	0	0
281K	1/4"HF	93									
285C	Float	LF#54	2.5	0	0	0	0	4	0	0	0
285C	Float	LF#55	2.5	0	1	0	0	0	0	0	0
285C	Float	LF#56	2.5	0	0	1	0	1	0	0	0
285C	Float	LF#70	UNK	0	0	0	0	0	0	0	0
285C	Waterscreen	38	12	0	0	0	0	0	0	0	0
285C	Waterscreen	39	12	0	0	0	0	0	0	0	0
285D	Float	LF#61	2.5	0	1	1	0	0	0	0	0
285D	Float	LF#62	2.5	0	0	0	0	2	0	0	0
285D	Float	LF#63	2.5	0	0	0	0	3	0	0	
285D	Float	LF#64	2.5	0	0	0	0	0	0	0	0
285D	Float	LF#65	0.75	0	0	0	0	0	0	0	0
285E	Float	LF#42	2.5	0	0	0	0	0	0	0	0
285E	Float	LF#43	2.5	0	0	0	0	1	0	0	0
285E	Float	LF#44	2.5	0	0	0	0	1	0	0	0
285E	Float	LF#45	2.5	0	0	0	0	0	0	0	
285E	Float	LF#46	1.5	0	0	0	0	0	0	0	0

Feature/Level	Type	Sample	Volume	Rumex crispus	Rumex sp.	Polygonum sp.	Polgonaceae	Chenopodium sp.	Chenopodiaceae	Portulaca sp.	Portulacaeae
285E	Float	LF#47	2.5	0	0	0	0	0	0	0	0
285E	Float	LF#48	2.5	0	0	0	0	0	0	1	0
285E	Float	LF#49	2.5	0	0	0	0	0	0	0	0
285E	Float	LF#51	2	0	0	0	0	0	0	0	0
285E	Float	LF#52	2.5	0	0	0	0	0	0	0	0
285E	Waterscreen	12	9.75	0	0	0	0	0	0	0	0
285E	Waterscreen	13	12	0	0	0	0	0	0	0	0
285F	Float	LF#66	2.5	0	0	0	0	0	0	0	0
285F	Float	LF#67	2.5	0	0	0	0	0	0	0	0
285F	Float	LF#68	2.5	0	0	0	0	0	0	0	0
285F	Float	LF#69	2.5	0	0	0	0	0	0	0	0
285F	Waterscreen	41	8.5	0	0	0	0	0	0	0	0
285F	Waterscreen	89	2.5	0	0	0	0	0	0	0	0
285G	Float	LF#22	2.5	0	0	0	0	0	0	0	0
285G	Float	LF#23	2.5	0	0	1	0	0	0	0	0
285G	Float	LF#24	2.5	0	0	0	0	0	0	0	0
285G	Float	LF#25	2.5	0	0	0	0	0	0	0	0
285G	Waterscreen	20	10	0	0	0	0	0	0	0	0
285G	Waterscreen	21	12	0	0	0	0	0	0	0	0
285H	Float	LF#77	2.5	0	0	1	0	0	0	0	0
285H	Float	LF#78	2.5	0	0	0	0	0	0	0	0
285H	Float	LF#79	2.5	0	0	0	0	0	0	0	0
285H	Float	LF#80	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#31	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#32	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#33	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#34	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#35	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#36	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#37	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#38	2.5	0	0	0	0	0	0	0	0

Feature/Level	Type	Sample	Volume	Rumex crispus	Rumex sp.	Polygonum sp.	Polgonaceae	Chenopodium sp.	Chenopodiaceae	Portulaca sp.	Portulacaeae
285J	Float	LF#39	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#40	2.5	0	0	0	0	0	0	0	0
285J	Float	LF#41	1	0	0	0	0	0	0	0	0
285K	Float	LF#13	2.5	0	0	0	0	0	0	0	0
285K	Float	LF#14	2.5	0	0	0	0	0	0	0	0
285K	Float	LF#15	3	0	0	0	0	0	0	0	
285K	Float	LF#16	2.5	0	0	0	0	0	0	0	0
285K	Float	LF#17	2.75	0	0	0	0	0	0	0	0
285K	Float	LF#18	2.5	0	0	0	0	0	0	0	0
285K	Float	LF#19	2.5	0	0	0	0	0	0	0	0
285K	Float	LF#20	2.5	0	0	0	0	1	0	0	0
285K	Float	LF#21	2.5	0	0	0	0	0	0	0	0
285L	Float	LF#71	2.5	0	0	0	0	0	0	0	0
285L	Float	LF#72	2.5	0	0	0	0	0	0	0	0
285L	Float	LF#73	2.5	0	0	0	0	0	0	0	0
285L	Float	LF#74	2.5	0	0	0	0	0	0	0	0
285L	Waterscreen	97	2.5	0	0	0	0	0	0	0	0
				4	7	68	25	91	7	16	1

Feature/Level	Type	Sample	Volume	Oxalis stricta	c.f. Spergula	Caryophyllaceae	c.f. Salvia	Mentha sp.	Datura stramonium	Solanceae	Lathyrus sp.	Trifolium sp.	Fabaceae
281C	Float	LF#81	2.5	1	0	0	0	0	0	0	0	0	0
281C	Float	LF#82	2.5	1	0	0	0	0	0	0	0	0	0
281C	Float	LF#83	2.5	0	0	0	0	0	0	0	0	0	0
281C	Float	LF#84	2.5	0	0	0	0	0	0	0	0	0	0
281C	1/4"HF	82		2	0	0	0	0	0	0	0	0	0
281D	Float	LF#5	2.5	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#6	2.5	1	0	0	0	0	0	0	0	0	1
281D	Float	LF#7	2.5	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#8	2.5	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#9	2.5	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#10	2.5	0	0	0	0	0	0	0	0	0	0
281D	Float	LF#11	2.5	0	0	0	0	0	0	0	0	0	1
281D	Float	LF#12	2.75	0	0	0	0	0	0	0	0	0	0
281E	Float	LF#1	2.5	0	0	0	0	0	0	0	0	0	0
281E	Float	LF#2	2.5	1	0	0	0	0	0	0	0	0	0
281E	Float	LF#3	2.5	0	0	0	0	0	0	0	0	0	0
281E	Float	LF#4	2.5	0	0	0	0	0	0	0	0	0	0
281F	Float	LF#85	2.5	0	0	0	0	0	0	0	0	0	0
281F	Float	LF#86	2.5	0	0	0	1	0	0	0	0	0	0
281F	Float	LF#87	2.5	0	0	0	0	0	0	0	0	0	0
281F	Float	LF#88	2.5	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#26	2.5	1	0	0	0	0	0	0	0	0	0
281G	Float	LF#27	2.5	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#28	2.5	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#29	2.5	0	0	0	0	0	0	0	0	0	0
281G	Float	LF#30	1	0	0	0	0	0	0	0	0	0	0
281G	Waterscreen	57	10.5	0	0	0	0	0	0	0	0	0	0
281G	Waterscreen	54	12	0	0	0	0	0	0	0	0	0	0
281H	Float	LF#89	2.5	0	0	0	0	0	0	1	0	0	0
281H	Float	LF#90	2.5	0	0	0	0	0	0	0	0	0	1
281H	Float	LF#91	2.5	0	0	0	0	0	0	0	0	0	0

Feature/Level	Type	Sample	Volume	Oxalis stricta	c.f. Spergula	Caryophyllaceae	c.f. Salvia	Mentha sp.	Datura stramonium	Solanceae	Lathyrus sp.	Trifolium sp.	Fabaceae
281H	Float	LF#92	2.5	0	1	0	0	1	0	0	0	0	0
281H	Waterscreen	85	2.5	0	0	0	0	0	1	0	0	0	1
281H	Waterscreen	86	2.5	0	0	0	0	0	0	0	0	0	1
281H	Waterscreen	87	2.5	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#57	2.5	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#58	2.5	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#59	2.5	0	0	0	0	0	0	0	0	0	0
281J	Float	LF#60	2.5	0	0	0	0	0	0	0	0	0	0
281K	Float	LF#93	2.5	0	0	0	0	0	0	1	0	0	0
281K	Float	LF#94	2.5	0	0	0	0	0	0	0	0	0	0
281K	Float	LF#95	2.5	0	0	0	0	0	0	0	0	0	0
281K	Float	LF#96	2.5	0	0	0	0	0	0	0	0	0	0
281K	Waterscreen	91	3	0	0	0	0	0	0	0	0	0	0
281K	1/4"HF	93											
285C	Float	LF#54	2.5	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#55	2.5	0	0	0	0	0	0	0	0	0	0
285C	Float	LF#56	2.5	0	0	0	0	0	0	0	0	1	0
285C	Float	LF#70	UNK	0	0	0	0	0	0	0	0	0	0
285C	Waterscreen	38	12	0	0	0	0	0	0	0	0	0	1
285C	Waterscreen	39	12	0	0	0	0	0	0	0	0	0	1
285D	Float	LF#61	2.5	0	0	0	0	0	0	0	0	0	2
285D	Float	LF#62	2.5	0	0	0	0	0	0	0	0	0	0
285D	Float	LF#63	2.5	0	0	0	0	0	0	0	0	0	1
285D	Float	LF#64	2.5	0	0	0	0	0	0	0	1	0	0
285D	Float	LF#65	0.75	0	0	0	0	0	0	0	0	0	1
285E	Float	LF#42	2.5	0	0	0	0	0	0	0	0	0	1
285E	Float	LF#43	2.5	0	0	0	0	0	0	0	0	0	1
285E	Float	LF#44	2.5	0	0	0	0	0	0	0	0	0	1
285E	Float	LF#45	2.5	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#46	1.5	0	0	0	0	0	0	0	0	0	1

Feature/Level	Type	Sample	Volume	Oxalis stricta	c.f. Spergula	Caryophyllaceae	c.f. Salvia	Mentha sp.	Datura stramonium	Solanceae	Lathyrus sp.	Trifolium sp.	Fabaceae
285E	Float	LF#47	2.5	0	0	1	0	0	0	0	0	0	0
285E	Float	LF#48	2.5	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#49	2.5	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#51	2	0	0	0	0	0	0	0	0	0	0
285E	Float	LF#52	2.5	0	0	0	0	0	0	0	0	0	0
285E	Waterscreen	12	9.75	0	0	0	0	0	0	0	0	0	1
285E	Waterscreen	13	12	0	0	0	0	0	0	0	0	0	1
285F	Float	LF#66	2.5	0	0	0	0	0	0	0	0	0	0
285F	Float	LF#67	2.5	0	0	0	0	0	0	0	0	0	2
285F	Float	LF#68	2.5	0	0	0	0	0	0	0	0	0	0
285F	Float	LF#69	2.5	0	0	0	0	0	0	0	0	0	0
285F	Waterscreen	41	8.5	0	0	0	0	0	0	0	0	0	2
285F	Waterscreen	89	2.5	0	0	0	0	0	0	0	0	0	1
285G	Float	LF#22	2.5	0	0	0	0	0	0	0	0	0	0
285G	Float	LF#23	2.5	0	0	0	0	0	0	0	0	0	0
285G	Float	LF#24	2.5	0	0	0	0	0	0	0	0	0	0
285G	Float	LF#25	2.5	0	0	0	0	0	0	0	0	0	0
285G	Waterscreen	20	10	0	0	0	0	0	0	0	0	0	1
285G	Waterscreen	21	12	0	0	0	0	0	0	0	0	0	1
285H	Float	LF#77	2.5	0	0	1	0	0	0	0	0	0	0
285H	Float	LF#78	2.5	0	0	0	0	0	0	0	0	0	0
285H	Float	LF#79	2.5	0	0	0	0	0	0	0	0	0	0
285H	Float	LF#80	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#31	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#32	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#33	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#34	2.5	0	0	0	0	0	0	0	0	0	1
285J	Float	LF#35	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#36	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#37	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#38	2.5	0	0	0	0	0	0	0	0	0	1

Feature/Level	Type	Sample	Volume	Oxalis stricta	c.f. Spergula	Caryophyllaceae	c.f. Salvia	Mentha sp.	Datura stramonium	Solanceae	Lathyrus sp.	Trifolium sp.	Fabaceae
285J	Float	LF#39	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#40	2.5	0	0	0	0	0	0	0	0	0	0
285J	Float	LF#41	1	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#13	2.5	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#14	2.5	0	0	0	0	0	0	0	0	0	1
285K	Float	LF#15	3	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#16	2.5	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#17	2.75	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#18	2.5	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#19	2.5	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#20	2.5	0	0	0	0	0	0	0	0	0	0
285K	Float	LF#21	2.5	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#71	2.5	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#72	2.5	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#73	2.5	0	0	0	0	0	0	0	0	0	0
285L	Float	LF#74	2.5	0	0	0	0	0	0	0	0	0	0
285L	Waterscreen	97	2.5	0	0	0	0	0	0	0	0	0	0
				7	1	2	1	1	1	2	1	1	27

Feature/Level	Type	Sample	Volume	Ranunculaceae
281C	Float	LF#81	2.5	0
281C	Float	LF#82	2.5	0
281C	Float	LF#83	2.5	0
281C	Float	LF#84	2.5	0
281C	1/4"HF	82		0
281D	Float	LF#5	2.5	0
281D	Float	LF#6	2.5	0
281D	Float	LF#7	2.5	0
281D	Float	LF#8	2.5	0
281D	Float	LF#9	2.5	0
281D	Float	LF#10	2.5	0
281D	Float	LF#11	2.5	0
281D	Float	LF#12	2.75	0
281E	Float	LF#1	2.5	0
281E	Float	LF#2	2.5	0
281E	Float	LF#3	2.5	0
281E	Float	LF#4	2.5	0
281F	Float	LF#85	2.5	0
281F	Float	LF#86	2.5	0
281F	Float	LF#87	2.5	0
281F	Float	LF#88	2.5	0
281G	Float	LF#26	2.5	1
281G	Float	LF#27	2.5	0
281G	Float	LF#28	2.5	0
281G	Float	LF#29	2.5	0
281G	Float	LF#30	1	0
281G	Waterscreen	57	10.5	0
281G	Waterscreen	54	12	0
281H	Float	LF#89	2.5	0
281H	Float	LF#90	2.5	0
281H	Float	LF#91	2.5	0

Feature/Level	Type	Sample	Volume	Ranunculaceae
281H	Float	LF#92	2.5	0
281H	Waterscreen	85	2.5	0
281H	Waterscreen	86	2.5	0
281H	Waterscreen	87	2.5	0
281J	Float	LF#57	2.5	0
281J	Float	LF#58	2.5	0
281J	Float	LF#59	2.5	0
281J	Float	LF#60	2.5	0
281K	Float	LF#93	2.5	0
281K	Float	LF#94	2.5	0
281K	Float	LF#95	2.5	0
281K	Float	LF#96	2.5	0
281K	Waterscreen	91	3	0
281K	1/4"HF	93		
285C	Float	LF#54	2.5	0
285C	Float	LF#55	2.5	0
285C	Float	LF#56	2.5	0
285C	Float	LF#70	UNK	0
285C	Waterscreen	38	12	0
285C	Waterscreen	39	12	0
285D	Float	LF#61	2.5	0
285D	Float	LF#62	2.5	0
285D	Float	LF#63	2.5	0
285D	Float	LF#64	2.5	0
285D	Float	LF#65	0.75	0
285E	Float	LF#42	2.5	0
285E	Float	LF#43	2.5	0
285E	Float	LF#44	2.5	0
285E	Float	LF#45	2.5	0
285E	Float	LF#46	1.5	0

Feature/Level	Type	Sample	Volume	Ranunculaceae
285E	Float	LF#47	2.5	0
285E	Float	LF#48	2.5	0
285E	Float	LF#49	2.5	0
285E	Float	LF#51	2	0
285E	Float	LF#52	2.5	0
285E	Waterscreen	12	9.75	0
285E	Waterscreen	13	12	0
285F	Float	LF#66	2.5	0
285F	Float	LF#67	2.5	0
285F	Float	LF#68	2.5	0
285F	Float	LF#69	2.5	0
285F	Waterscreen	41	8.5	0
285F	Waterscreen	89	2.5	0
285G	Float	LF#22	2.5	0
285G	Float	LF#23	2.5	0
285G	Float	LF#24	2.5	0
285G	Float	LF#25	2.5	0
285G	Waterscreen	20	10	0
285G	Waterscreen	21	12	0
285H	Float	LF#77	2.5	0
285H	Float	LF#78	2.5	0
285H	Float	LF#79	2.5	0
285H	Float	LF#80	2.5	0
285J	Float	LF#31	2.5	0
285J	Float	LF#32	2.5	0
285J	Float	LF#33	2.5	0
285J	Float	LF#34	2.5	0
285J	Float	LF#35	2.5	0
285J	Float	LF#36	2.5	0
285J	Float	LF#37	2.5	0
285J	Float	LF#38	2.5	0

Feature/Level	Type	Sample	Volume	Ranunculaceae	
285J	Float	LF#39	2.5	0	
285J	Float	LF#40	2.5	0	
285J	Float	LF#41	1	0	
285K	Float	LF#13	2.5	0	
285K	Float	LF#14	2.5	0	
285K	Float	LF#15	3	0	
285K	Float	LF#16	2.5	0	
285K	Float	LF#17	2.75	0	
285K	Float	LF#18	2.5	0	
285K	Float	LF#19	2.5	0	
285K	Float	LF#20	2.5	0	
285K	Float	LF#21	2.5	0	
285L	Float	LF#71	2.5	0	
285L	Float	LF#72	2.5	0	
285L	Float	LF#73	2.5	0	
285L	Float	LF#74	2.5	0	
285L	Waterscreen	97	2.5	0	
					1

Feature/ Level	Type	Sample	Volume	Poaceae wild	Panicoid	Eleusine indica	Panicum miliaceum	Poaceae-indet	Cyperaceae
281C	Float	LF#81	2.5	14	0	0	0	0	0
281C	Float	LF#82	2.5	13	1	0	0	0	0
281C	Float	LF#83	2.5	8	0	0	0	0	0
281C	Float	LF#84	2.5	12	1	0	0	0	0
281C	1/4"HF	82		1	0	0	0	0	0
281D	Float	LF#5	2.5	78	3	0	0	0	0
281D	Float	LF#6	2.5	37	1	0	0	0	0
281D	Float	LF#7	2.5	94	0	0	0	0	0
281D	Float	LF#8	2.5	105	0	0	0	0	0
281D	Float	LF#9	2.5	64	2	0	0	0	0
281D	Float	LF#10	2.5	36	3	0	1	1	0
281D	Float	LF#11	2.5	83	2	0	0	0	0
281D	Float	LF#12	2.75	54	0	0	0	1	0
281E	Float	LF#1	2.5	133	3	0	0	0	0
281E	Float	LF#2	2.5	162	15	0	0	0	0
281E	Float	LF#3	2.5	144	4	0	0	1	0
281E	Float	LF#4	2.5	150	4	0	0	0	0
281F	Float	LF#85	2.5	29	0	0	0	0	0
281F	Float	LF#86	2.5	136	2	0	0	0	0
281F	Float	LF#87	2.5	123	8	0	0	0	0
281F	Float	LF#88	2.5	188	7	0	0	0	0
281G	Float	LF#26	2.5	157	3	0	0	0	0
281G	Float	LF#27	2.5	90	7	0	0	0	1
281G	Float	LF#28	2.5	281	2	0	0	0	0
281G	Float	LF#29	2.5	179	7	0	0	0	1
281G	Float	LF#30	1	62	0	0	0	0	0
281G	Waterscreen	57	10.5	0	0	0	0	0	0
281G	Waterscreen	54	12	1	0	0	0	0	0
281H	Float	LF#89	2.5	244	4	0	0	0	0
281H	Float	LF#90	2.5	67	1	0	0	0	2
281H	Float	LF#91	2.5	59	0	0	0	0	0
281H	Float	LF#92	2.5	363	0	0	0	0	0
281H	Waterscreen	85	2.5	1	0	0	0	0	0
281H	Waterscreen	86	2.5	0	0	0	0	0	0
281H	Waterscreen	87	2.5	3	0	0	0	0	0
281J	Float	LF#57	2.5	58	0	0	0	0	0
281J	Float	LF#58	2.5	19	0	0	0	0	0
281J	Float	LF#59	2.5	28	0	0	0	0	0
281J	Float	LF#60	2.5	38	1	0	0	0	1
281K	Float	LF#93	2.5	5	0	0	0	0	0
281K	Float	LF#94	2.5	3	0	0	0	0	0
281K	Float	LF#95	2.5	2	0	0	0	0	0
281K	Float	LF#96	2.5	3	0	0	0	0	0
281K	Waterscreen	91	3	1	0	0	0	0	0

Feature/ Level	Type	Sample	Volume	Poaceae wild	Panicoid	Eleusine indica	Panicum miliaceum	Poaceae-indet	Cyperaceae
281K	1/4"HF	93		1					
285C	Float	LF#54	2.5	0	0	0	0	0	0
285C	Float	LF#55	2.5	1	0	0	0	0	0
285C	Float	LF#56	2.5	0	0	0	0	0	0
285C	Float	LF#70	UNK	0	0	0	0	0	0
285C	Waterscreen	38	12	0	0	0	0	0	0
285C	Waterscreen	39	12	0	0	0	0	0	0
285D	Float	LF#61	2.5	1	0	1	0	0	0
285D	Float	LF#62	2.5	1	0	0	0	0	0
285D	Float	LF#63	2.5	2	0	0	0	0	0
285D	Float	LF#64	2.5	0	0	1	0	0	0
285D	Float	LF#65	0.75	0	0	0	0	0	0
285E	Float	LF#42	2.5	2	0	0	0	0	0
285E	Float	LF#43	2.5	2	0	0	0	0	0
285E	Float	LF#44	2.5	0	0	0	0	0	0
285E	Float	LF#45	2.5	2	0	0	0	0	0
285E	Float	LF#46	1.5	0	0	0	0	0	0
285E	Float	LF#47	2.5	0	0	0	0	0	0
285E	Float	LF#48	2.5	0	0	0	0	0	0
285E	Float	LF#49	2.5	2	0	0	0	0	0
285E	Float	LF#51	2	0	0	0	0	0	0
285E	Float	LF#52	2.5	0	0	0	0	0	0
285E	Waterscreen	12	9.75	0	0	0	0	0	0
285E	Waterscreen	13	12	0	0	0	0	0	0
285F	Float	LF#66	2.5	0	0	0	0	0	0
285F	Float	LF#67	2.5	0	0	0	0	0	0
285F	Float	LF#68	2.5	0	0	0	0	0	0
285F	Float	LF#69	2.5	0	0	0	0	0	0
285F	Waterscreen	41	8.5	0	0	0	0	0	0
285F	Waterscreen	89	2.5	1	0	0	0	0	0
285G	Float	LF#22	2.5	0	0	0	0	0	0
285G	Float	LF#23	2.5	0	0	0	0	0	0
285G	Float	LF#24	2.5	0	0	0	0	0	0
285G	Float	LF#25	2.5	0	0	0	0	0	0
285G	Waterscreen	20	10	0	0		0	0	0
285G	Waterscreen	21	12	0	0	0	0	0	0
285H	Float	LF#77	2.5	3	0	0	0	0	0
285H	Float	LF#78	2.5	3	0	0	0	0	1
285H	Float	LF#79	2.5	0	0	0	0	0	0
285H	Float	LF#80	2.5	1	0	0	0	0	1
285J	Float	LF#31	2.5	1	0	0	0	0	0
285J	Float	LF#32	2.5	0	0	0	0	0	0
285J	Float	LF#33	2.5	1	0	0	0	0	0
285J	Float	LF#34	2.5	0	0	0	0	0	0

Feature/ Level	Type	Sample	Volume	Poaceae wild	Panicoid	Eleusine indica	Panicum miliaceum	Poaceae-indet	Cyperaceae
285J	Float	LF#35	2.5	0	0	0	0	0	0
285J	Float	LF#36	2.5	0	0	0	0	0	0
285J	Float	LF#37	2.5	0	0	0	0	0	0
285J	Float	LF#38	2.5	0	0	0	0	0	0
285J	Float	LF#39	2.5	0	0	0	0	0	0
285J	Float	LF#40	2.5	0	0	0	0	0	0
285J	Float	LF#41	1	0	0	0	0	0	0
285K	Float	LF#13	2.5	0	0	0	0	0	0
285K	Float	LF#14	2.5	0	0	0	0	0	0
285K	Float	LF#15	3	0	0	0	0	0	0
285K	Float	LF#16	2.5	0	0	0	0	0	0
285K	Float	LF#17	2.75	0	0	0	0	0	0
285K	Float	LF#18	2.5	0	0	0	0	0	0
285K	Float	LF#19	2.5	0	0	0	0	0	0
285K	Float	LF#20	2.5	1	0	0	0	0	0
285K	Float	LF#21	2.5	0	0	0	0	0	0
285L	Float	LF#71	2.5	0	0	0	0	0	0
285L	Float	LF#72	2.5	0	0	0	0	0	0
285L	Float	LF#73	2.5	0	0	0	0	0	0
285L	Float	LF#74	2.5	0	0	0	0	0	0
285L	Waterscreen	97	2.5	1	0	0	0	0	0
Total			336.5	3354	81	2	1	3	7

Feature /Level	Type	Sample	Volume	Unidentified	Starchy Material Ct.	Starchy Material Wt.
281C	Float	LF#81		2.5	0	3 0.09
281C	Float	LF#82		2.5	0	6 0.06
281C	Float	LF#83		2.5	0	0 0
281C	Float	LF#84		2.5	1	0 0
281C	1/4"HF		82		0	0 0
281D	Float	LF#5		2.5	0	4 0.07
281D	Float	LF#6		2.5	0	0 0
281D	Float	LF#7		2.5	0	0 0
281D	Float	LF#8		2.5	4	0 0
281D	Float	LF#9		2.5	1	0 0
281D	Float	LF#10		2.5	0	0 0
281D	Float	LF#11		2.5	4	0 0
281D	Float	LF#12		2.75	0	4 UNK
281D	Waterscreen		4		0	1 0.01
281D	Waterscreen		7		0	3 0.04
281E	Float	LF#1		2.5	6	0 0
281E	Float	LF#2		2.5	7	0 0
281E	Float	LF#3		2.5	0	0 0
281E	Float	LF#4		2.5	0	0 0
281E	Waterscreen		17	20	0	4 0.05
281E	Waterscreen		43	12	0	3 0.62
281E	Waterscreen		49	12	0	3 0.04
281E	Waterscreen		50	11	0	1 <0.01
281E	Waterscreen		51	12	0	2 0.04
281F	Float	LF#85		2.5	0	0 0
281F	Float	LF#86		2.5	0	4 UNK
281F	Float	LF#87		2.5	0	3 0.08
281F	Float	LF#88		2.5	0	0 0
281F	Waterscreen		59	13.25	0	2 0.07
281F	Waterscreen		61	13.25	0	9 0.47
281G	Float	LF#26		2.5	0	0 0
281G	Float	LF#27		2.5	0	0 0
281G	Float	LF#28		2.5	1	0 0
281G	Float	LF#29		2.5	0	0 0
281G	Float	LF#30		1	0	0 0
281G	Waterscreen		57	10.5	1	1 0.11
281G	Waterscreen		54	12	0	4 0.02
281H	Float	LF#89		2.5	0	0 0
281H	Float	LF#90		2.5	0	0 0
281H	Float	LF#91		2.5	2	0 0
281H	Float	LF#92		2.5	4	1 0.05
281H	Waterscreen		53	12.25	0	2 0.37
281H	Waterscreen		85	2.5	0	0 0
281H	Waterscreen		86	2.5	0	0 0

Feature /Level	Type	Sample	Volume	Unidentified	Starchy Material Ct.	Starchy Material Wt.
281H	Waterscreen		87	2.5	0	0	0
281H	Waterscreen		88	2.5	0	1	0.01
281H	Dry screen				0	1	0.23
281J	Float	LF#57		2.5	0	2	0.04
281J	Float	LF#58		2.5	0	1	0.05
281J	Float	LF#59		2.5	0	0	0
281J	Float	LF#60		2.5	0	0	0
281J	Waterscreen		44	12.5	0	4	0.22
281J	Waterscreen		45	13	0	12	0.23
281J	Waterscreen		46	10	0	15	0.64
281J	Waterscreen		47	10	0	14	0.51
281J	Waterscreen		48	13	0	11	0.15
281J	Waterscreen		64	10.75	0	12	0.18
281J	Waterscreen		65	12	0	10	0.23
281J	Waterscreen		75	2.5	0	9	0.21
281J	Waterscreen		76	2.5	0	12	0.4
281J	Waterscreen		77	2.5	0	7	1.06
281J	Waterscreen		78	2.5	0	4	0.14
281J	Waterscreen		79	2.5	0	1	0.1
281J	Waterscreen		81	2.5	0	10	0.25
281J	Waterscreen		82	2.5	0	9	0.1
281J	Waterscreen		83	2.5	0	9	0.36
281J	Waterscreen		84	2	0	11	0.1
281J	Dry screen				0	15	3.59
281K	Float	LF#93		2.5	0	3	0.15
281K	Float	LF#94		2.5	0	0	0
281K	Float	LF#95		2.5	0	0	0
281K	Float	LF#96		2.5	0	6	0.05
281K	Waterscreen		91	3	0	0	0
281K	1/4"HF		93		0	0	0
285C	Float	LF#54		2.5	0	0	0
285C	Float	LF#55		2.5	0	0	0
285C	Float	LF#56		2.5	0	0	0
285C	Float	LF#70	UNK		0	0	0
285C	Waterscreen		11	15.25	0	6	0.07
285C	Waterscreen		37	12	0	16	0.26
285C	Waterscreen		38	12	0	7	0.13
285C	Waterscreen		39	12	0	7	0.07
285C	Waterscreen		40	10	0	7	0.11
285C	Dry screen		38		0	1	0.14
285D	Float	LF#61		2.5	0	6	0.07
285D	Float	LF#62		2.5	0	1	0.03
285D	Float	LF#63		2.5	0	4	0.15
285D	Float	LF#64		2.5	0	0	0

Feature /Level	Type	Sample	Volume	Unidentified	Starchy Material Ct.	Starchy Material Wt.
285D	Float	LF#65		0.75	0	0
285E	Float	LF#42		2.5	0	0
285E	Float	LF#43		2.5	0	0
285E	Float	LF#44		2.5	0	0
285E	Float	LF#45		2.5	1	5
285E	Float	LF#46		1.5	0	6
285E	Float	LF#47		2.5	1	11
285E	Float	LF#48		2.5	0	8
285E	Float	LF#49		2.5	0	4
285E	Float	LF#51		2	0	9
285E	Float	LF#52		2.5	0	13
285E	Waterscreen		12	9.75	0	4
285E	Waterscreen		13	12	0	6
285E	Waterscreen		14	7	0	6
285F	Float	LF#66		2.5	0	0
285F	Float	LF#67		2.5	0	3
285F	Float	LF#68		2.5	0	3
285F	Float	LF#69		2.5	0	0
285F	Waterscreen		41	8.5	0	32
285F	Waterscreen		89	2.5	0	1
285F	Waterscreen		90	2.5	0	3
285F	Dry screen		41	8.5	0	2
285G	Float	LF#22		2.5	0	2
285G	Float	LF#23		2.5	0	0
285G	Float	LF#24		2.5	0	0
285G	Float	LF#25		2.5	0	2
285G	Waterscreen		20	10	0	0
285G	Waterscreen		21	12	0	0
285G	Waterscreen		30	6	0	1
285H	Float	LF#77		2.5	0	0
285H	Float	LF#78		2.5	0	1
285H	Float	LF#79		2.5	0	2
285H	Float	LF#80		2.5	0	0
285J	Float	LF#31		2.5	0	1
285J	Float	LF#32		2.5	0	0
285J	Float	LF#33		2.5	0	0
285J	Float	LF#34		2.5	0	0
285J	Float	LF#35		2.5	0	0
285J	Float	LF#36		2.5	0	0
285J	Float	LF#37		2.5	0	0
285J	Float	LF#38		2.5	1	0
285J	Float	LF#39		2.5	0	1
285J	Float	LF#40		2.5	0	3
285J	Float	LF#41		1	0	0

Feature /Level	Type	Sample	Volume	Unidentified	Starchy Material Ct.	Starchy Material Wt.
285J	Dry screen			0	8	1.23
285K	Float	LF#13	2.5	0	0	0
285K	Float	LF#14	2.5	0	3	0.02
285K	Float	LF#15	3	0	2	0.02
285K	Float	LF#16	2.5	0	1	<0.01
285K	Float	LF#17	2.75	0	2	0.06
285K	Float	LF#18	2.5	1	0	0
285K	Float	LF#19	2.5	0	0	0
285K	Float	LF#20	2.5	0	0	0
285K	Float	LF#21	2.5	0	0	0
285K	Waterscreen	34	12	0	5	0.08
285K	Waterscreen	35	12	0	9	0.17
285K	Waterscreen	36	10	0	7	0.11
285K	Dry screen	34		0	1	0.03
285K	Dry N 1/2			0	6	2.61
285L	Float	LF#71	2.5	0	1	0.01
285L	Float	LF#72	2.5	0	0	0
285L	Float	LF#73	2.5	0	0	0
285L	Float	LF#74	2.5	0	0	0
285L	Waterscreen	97	2.5	0	0	0
Total				35	468	18.99

			Quercus sp.		Castanea sp.		Carya sp.		Acer sp.		Gymnocladus	
Feature/ Level	Type	Sample	Count	Weight	Count	Weight	Count	Weight	Count	Weight	Count	Weight
281C	Float	81	7	0.07	0	0	0	0	0	0	0	0
281C	Float	83	1	0.02	0	0	0	0	0	0	0	0
281C	Float	84	4	0.13	0	0	0	0	0	0	0	0
281C	Dry Screen		25	3.32	0	0	0	0	0	0	0	0
281D	Float	5	25	1.6	0	0	0	0	0	0	0	0
281D	Float	6	17	0.5	0	0	0	0		0	0	0
281D	Float	7	13	0.2	0	0	0	0	0	0	1	0.01
281D	Float	8	21	0.57	1	0.13	0	0	0	0	0	0
281D	Float	9	13		0	0	1	0.03	0	0	0	0
281D	Float	10	11	0.2	0	0	0	0	0	0	0	0
281D	Float	11	8	0.08	0	0	0	0	0	0	0	0
281D	Float	12	3	0.02	0	0	1	0.06	0	0	3	0.06
281E	Float	1	22	1.41	0	0	0	0	0	0	0	0
281E	Float	2	25	2.06	0	0	0	0	0	0	0	0
281E	Float	3	25	1.91	0	0	0	0	0	0	0	0
281E	Float	4	20	0.49	0	0	0	0	0	0	0	0
281F	Float	85	25	1.43	0	0	0	0	0	0	0	0
281F	Float	86	21	2.95	0	0	0	0	0	0	0	0
281F	Float	87	25	2.56	0	0	0	0	0	0	0	0
281F	Float	88	25	2.21	0	0	0	0	0	0	0	0
281G	Float	26	25	1.09	0	0	0	0	0	0	0	0
281G	Float	27	25	1.41	0	0	0	0	0	0	0	0
281G	Float	28	20	2.19	0	0	0	0	0	0	0	0
281G	Float	29	24	1.73	0	0	0	0	0	0	0	0
281G	Float	30	16	0.4	0	0	0	0	0	0	0	0
281H	Float	89	21	2.11								
281H	Float	90	18	1.1	0	0	0	0	0	0	0	0
281H	Float	91	20	1.85	0	0	0	0	0	0	2	0.06
281H	Float	92	21	1.68	0	0	0	0	0	0	4	0.19
281J	Float	57	6	0.09	0	0	3	0.06	0	0	0	0

			Quercus sp.		Castanea sp.		Carya sp.		Acer sp.		Gymnocladus	
Feature/ Level	Type	Sample	Count	Weight	Count	Weight	Count	Weight	Count	Weight	Count	Weight
281J	Float	58	13	0.28	0	0	0	0	0	0	0	0
281J	Float	59	9	0.23	0	0	0	0	0	0	0	0
281J	Float	60	4	0.14	0	0	0	0	0	0	0	0
281K	Float	93	10	0.26	0	0	0	0	0	0	0	0
281K	Float	94	15	0.49	0	0	1	0.06	0	0	0	0
281K	Float	95	21	0.56	0	0	1	0.02	0	0	1	0.05
281K	Float	96	13	0.46	0	0	0	0	1	0.05	0	0
285C	Float	53	23	1.01	0	0	0	0	0	0	0	0
285C	Float	54	16	0.71	0	0	0	0	0	0	0	0
285C	Float	55	19	0.89	0	0	3	0.14	0	0	0	0
285C	Float	56	21	0.55	0	0	0	0	0	0	0	0
285D	Float	61	21	1.56	0	0	0	0	0	0	0	0
285D	Float	62	20	1.24	0	0	2	0.14	0	0	0	0
285D	Float	63	19	1.99	0	0	0	0	0	0	0	0
285D	Float	64	15	1.15	0	0	4	0.21	0	0	0	0
285D	Float	65	13	0.38	0	0	4	0.28	0	0	0	0
285E	Float	42	15	1.51	0	0	0	0	0	0	0	0
285E	Float	43	12	0.85	0	0	1	0.03	0	0	0	0
285E	Float	44	16	0.63	0	0	1	0.03	0	0	1	0.04
285E	Float	45	21	0.74	0	0	0	0	0	0	0	0
285E	Float	46	15	0.5	0	0	1	0.16	0	0	0	0
285E	Float	47	15	0.68	0	0	4	0.18	0	0	0	0
285E	Float	48	17	1.05	0	0	1	0.11	0	0	0	0
285E	Float	49	17	1.48	0	0	1	0.08	0	0	0	0
285E	Float	51	14	0.82	0	0	2	0.18	0	0	0	0
285E	Float	52	19	1.3	0	0	0	0	0	0	0	0
285F	Float	66	19	2.26	0	0	0	0	0	0	1	0.06
285F	Float	67	22	1.18	0	0	0	0	0	0	1	0.05
285F	Float	68	16	1.05	0	0	2	0.59	0	0	0	0

			Quercus sp.		Castanea sp.		Carya sp.		Acer sp.		Gymnocladus	
Feature/ Level	Type	Sample	Count	Weight	Count	Weight	Count	Weight	Count	Weight	Count	Weight
285F	Float	69	19	1.68	0	0	1	0.09	0	0	1	0.1
285G	Float	22	6	0.38	0	0	1	0.12	0	0	18	0.7
285G	Float	23	2	0.06	0	0	0	0	2	0.05	13	0.38
285G	Float	24	12	0.35	0	0	1	0.04	0	0	7	0.25
285G	Float	25	14	0.61	0	0	0	0	0	0	8	0.3
285H	Float	78	15	0.64	0	0	3	0.26	1	0.01	5	0.25
285H	Float	79	14	0.87	0	0	0	0	0	0	1	0.05
285H	Float	80	16	0.78	0	0	0	0	0	0	4	0.12
285J	Float	31	15	0.25	0	0	1	0.01	0	0	0	0
285J	Float	32	18	0.52	0	0	0	0	0	0	0	0
285J	Float	33	15	0.49	0	0	0	0	0	0	0	0
285J	Float	34	12	0.39	0	0	0	0	0	0	0	0
285J	Float	35	10	0.27	0	0	1	0.01	1	0.01	0	0
285J	Float	36	15	0.61	0	0	1	0.04	0	0	0	0
285J	Float	37	15	1.01	0	0	7	0.13	0	0	0	0
285J	Float	38	8	0.43	0	0	1	0.02	0	0	0	0
285J	Float	39	19	1.05	0	0	0	0	0	0	0	0
285J	Float	40	17	0.42	0	0	2	0.04	0	0	0	0
285J	Float	41	13	0.23	0	0	0	0	0	0	0	0
285K	Float	13	14	0.27	0	0	0	0	0	0	0	0
285K	Float	14	9	0.32	0	0	3	0.05	0	0	2	0.04
285K	Float	15	14	0.86	0	0	2	0.06	0	0	0	0
285K	Float	16	14	0.8	0	0	1	0.03	0	0	0	0
285K	Float	17	15	0.33	0	0	0	0	0	0	0	0
285K	Float	18	15	0.6	0	0	1	0.05	0	0	0	0
285K	Float	19	10	0.41	0	0	0	0	0	0	0	0
285K	Float	20	15	0.44	0	0	0	0	2	0.02	0	0
285K	Float	21	18	0.4	0	0	1	0.01	0	0	0	0
285L	Float	71	5	0.04	0	0	0	0	0	0	0	0
285L	Float	73	6	0.15	0	0	0	0	0	0	0	0

Feature/ Level	Type	Sample	Quercus sp. Count	Quercus sp. Weight	Castanea sp. Count	Castanea sp. Weight	Carya sp. Count	Carya sp. Weight	Acer sp. Count	Acer sp. Weight	Gymnocladus Count	Gymnocladus Weight
285L	Float	74	3	0.01	0	0	0	0	0	0	0	0
			1395	77	1	0.13	60	3.32	7	0.14	73	2.71

Feature/ Level	Type	Sample	Liriodendron Count	Liriodendron Weight	Ring Porous Count	Ring Porous Weight	Diffuse Porous Count	Diffuse Porous Weight	Hardwood Count	Hardwood Weight	Monocot Stem Count	Monocot Stem Weight	Pinus sp. Count	Pinus sp. Weight
281C	Float	81	0	0	2	0.01	1	0.01	0	0	0	0	0	0
281C	Float	82	0	0	8	0.07	0	0	0	0	0	0	0	0
281C	Float	83	0	0	0	0	0	0	2	0.01	0	0	0	0
281C	Float	84	0	0	3	0.01	0	0	0	0	0	0	0	0
281D	Float	6	0	0	6	0.08	1	0.02	1	0.01	0	0	0	0
281D	Float	7	0	0	8	0.14	3	0.05	0	0	0	0	0	0
281D	Float	8	0	0	3	0.08	0	0	0	0	1	0.02	0	0
281D	Float	9	0	0	0	0	5	0.17	0	0	0	0	0	0
281D	Float	10	0	0	5	0.03	8	0.05	1	0.01	0	0	0	0
281D	Float	11	0	0	8	0.03	6	0.17	3	0.01	0	0	0	0
281D	Float	12	0	0	15	0.12	3	0.07	0	0	0	0	0	0
281E	Float	1	0	0	2	0.04	0	0	0	0	0	0	1	0.01
281E	Float	4	0	0	5	0.12	0	0	0	0	0	0	0	0
281F	Float	86	0	0	3	0.11	1	0.02	0	0	0	0	0	0
281G	Float	26	0	0	0	0		0	0	0	2	0.06	0	0
281G	Float	27	0	0	0	0	0	0	0	0	1	0.32	0	0
281G	Float	28	0	0	5	0.09	0	0	0	0	0	0	0	0
281G	Float	29	0	0	1	0.02	0	0	0	0	4	0.14	0	0
281G	Float	30	0	0	9	0.11	0	0	0	0	3	0.05	0	0
281H	Float	89	0	0	4	0.08	0	0	0	0	0	0	0	0
281H	Float	90	0	0	7	0.09	0	0	0	0	7	0.21	0	0
281H	Float	91	0	0	2	0.08	0	0	1	0.01	2	0.03	0	0
281H	Float	92	0	0	0	0	0	0	0	0	8	0.14	0	0
281H	Waterscreen	53	0	0	0	0	0	0	0	0	48	0.89	0	0
281H	Dry Screen		0	0	0	0	0	0	0	0	7	0.51	0	0
281J	Float	57	0	0	8	0.05	0	0	6	0.01	0	0	0	0
281J	Float	58	0	0	10	0.09	0	0	2	0.01	0	0	0	0
281J	Float	59	0	0	16	0.13	0	0	0	0	0	0	0	0
281J	Float	60	0	0	21	0.17	0	0	0	0	0	0	0	0
281J	Waterscreen	46	0	0	0	0	0	0	0	0	1	0.05	0	0

Feature/ Level	Type	Sample	Liriodendron Count	Liriodendron Weight	Ring Porous Count	Ring Porous Weight	Diffuse Porous Count	Diffuse Porous Weight	Hardwood Count	Hardwood Weight	Monocot Stem Count	Monocot Stem Weight	Pinus sp. Count	Pinus sp. Weight
281J	Waterscreen	47	0	0	0	0	0	0	0	0	1	0.05	0	0
281J	Dry Screen		0	0	0	0	0	0	0	0	5	0.41	0	0
281K	Float	93	0	0	14	0.23	0	0	0	0	0	0	1	0.03
281K	Float	94	0	0	9	0.14	0	0	0	0	0	0	0	0
281K	Float	95	0	0	0	0	0	0	1	0.01	0	0	1	0.01
281K	Float	96	0	0	9	0.11	0	0	0	0	0	0	2	0.04
285C	Float	53	0	0	0	0	2	0.18	0	0	0	0	0	0
285C	Float	54	0	0	8	0.1	1	0.12	0	0	0	0	0	0
285C	Float	55	0	0	3	0.07	0	0	0	0	0	0	0	0
285C	Float	56	0	0	4	0.02	0	0	0	0	0	0	0	0
285D	Float	61	0	0	3	0.16	0	0	0	0	0	0	1	0.04
285D	Float	62	0	0	3	0.11	0	0	0	0	0	0	0	0
285D	Float	63	0	0	6	0.26	0	0	0	0	0	0	0	0
285D	Float	63	0	0	6	0.35	0	0	0	0	0	0	0	0
285D	Float	65	0	0	8	0.25	0	0	0	0	0	0	0	0
285E	Float	42	0	0	10	0.37	0	0	0	0	0	0	0	0
285E	Float	43	0	0	11	0.48	1	0.08	0	0	0	0	0	0
285E	Float	44	0	0	7	0.23	0	0	0	0	0	0	0	0
285E	Float	45	0	0	3	0.05	0	0	0	0	0	0	1	0.03
285E	Float	46	0	0	8	0.41	1	0.02	0	0	0	0	0	0
285E	Float	47	0	0	6	0.13	0	0	0	0	0	0	0	0
285E	Float	48	0	0	7	0.6	0	0	0	0	0	0	0	0
285E	Float	49	0	0	7	0.25	0	0	0	0	0	0	0	0
285E	Float	51	0	0	9	0.33	0	0	0	0	0	0	0	0
285E	Float	52	0	0	6	0.23	0	0	0	0	0	0	0	0
285F	Float	66	0	0	5	0.31	0	0	0	0	0	0	0	0
285F	Float	67	0	0	2	0.11	0	0	0	0	0	0	0	0
285F	Float	68	0	0	7	0.45	0	0	0	0	0	0	0	0
285F	Float	69	0	0	4	0.23	0	0	0	0	0	0	0	0

Feature/ Level	Type	Sample	Liriodendron Count	Liriodendron Weight	Ring Porous Count	Ring Porous Weight	Diffuse Porous Count	Diffuse Porous Weight	Hardwood Count	Hardwood Weight	Monocot Stem Count	Monocot Stem Weight	Pinus sp. Count	Pinus sp. Weight
285G	Float	23	0	0	8	0.25	0	0	0	0	0	0	0	0
285G	Float	24	0	0	5	0.12	0	0	0	0	0	0	0	0
285G	Float	25	0	0	3	0.08	0	0	0	0	0	0	0	0
285H	Float	78	0	0	0	0	0		0	0	0	0	0	0
285H	Float	79	0	0	8	0.43	0	0	2	0.08	0	0	0	0
285H	Float	80	0	0	2	0.15	0	0	3	0.12	0	0	0	0
285J	Float	31	0	0	9	0.12	0	0	0	0	0	0	0	0
285J	Float	32	0	0	7	0.14	0	0	0	0	0	0	0	0
285J	Float	33	0	0	10	0.08	0	0	0	0	0	0	0	0
285J	Float	34	0	0	13	0.09	0	0	0	0	0	0	0	0
285J	Float	35	0	0	9	0.11	0	0	4	0.08	0	0	0	0
285J	Float	36	0	0	9	0.11	0	0	0	0	0	0	0	0
285J	Float	37	0	0	3	0.05	0	0	0	0	0	0	0	0
285J	Float	38	0	0	16	0.2	0	0	0	0	0	0	0	0
285J	Float	39	0	0	6	0.13	0	0	0	0	0	0	0	0
285J	Float	40	0	0	5	0.1	0	0	0	0	0	0	1	0.01
285J	Float	41	0	0	10	0.13	1	0.01	0	0	0	0	1	0.01
285K	Float	13	0	0	10	0.19	0	0	1	0.02	0	0	0	0
285K	Float	14	0	0	11	0.24	0	0	0	0	0	0	0	0
285K	Float	15	0	0	9	0.17	0	0	0	0	0	0	0	0
285K	Float	16	0	0	10	0.55	0	0	0	0	0	0	0	0
285K	Float	17	0	0	10	0.17	0	0	0	0	0	0	0	0
285K	Float	18	0	0	9	0.13	0	0	0	0	0	0	0	0
285K	Float	19	0	0	12	0.18	0	0	3	0.05	0	0	0	0
285K	Float	20	0	0	8	0.14	0	0	0	0	0	0	0	0
285K	Float	21	1	0.04	4	0.11	0	0	0	0	0	0	0	0
285L	Float	71	0	0	17	0.06	0	0	0	0	0	0	0	0
285L	Float	72	0	0	1	0.01	0	0	4	0.01	0	0	0	0
285L	Float	73	0	0	9	0.09	0	0	1	0.01	0	0	0	0
285L	Float	74	0	0	14	0.05	0	0	2	0.01	0	0	0	0

Feature/ Level	Type	Sample	Liriodendron Count	Liriodendron Weight	Ring Porous Count	Ring Porous Weight	Diffuse Porous Count	Diffuse Porous Weight	Hardwood Count	Hardwood Weight	Monocot Stem Count	Monocot Stem Weight	Pinus sp. Count	Pinus sp. Weight
			1	0.04	41	0.21		0	7	0.03	0	0	0	0