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### Fagus sylvatica (European Beech), #1009

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Name: Megan Trafford

Tree Species: European Beech

ID number: 1009

The species of tree chosen was a European Beech tree, identification number 1009 (figure 1). This tree has been on this campus for at least a century. At the beginning of monitoring the tree, I had noticed that there was a gaping hole on the trunk (figures 7, 8). Capable of housing any tree dweller. There was one branch that stemmed from the trunk, and grew outwards, and towards the ground (figure 3). When it finally reached the ground, it looks like it had bounced off the ground and started producing a smaller tree (figure 9-11). But it is the same tree.

People often say that the species originated in England. But there is proof that the European Beech only arrived in England around 4000BC. Possibly because the early humans moved the trees to their location. Because they used the nuts as a source of food. Studies done on the genetic makeup of the trees shows that they were intentionally introduced and planted in Denmark, prior to, and during the reign of the Vikings. Beech trees make up about ten percent of Frances tree population.

The European Beech is picky as to where it wishes to grow. For example, it will only grow in a humid or often foggy atmosphere. It will only grow in well-drained soil. The tree prefers moderately acidic and fertile ground. It can handle a harsh winter but will struggle with the frost in the spring. The budding leaves will depend on the length of the days, and the temperature. They usually bloom in mid-April to the beginning of May. Summer conditions, particularly the amount of rainfall, determine how many leave buds will be there in the following spring. In the fall, the tree starts to build up its resilience towards the winter so that it may survive to the spring.

These types of trees are fantastic for large areas. Such as expansive gardens and parks. Brookline, Massachusetts has the largest European Beech tree grove in North America. Planted before 1850, the 2.5-acre large public park is referred to as The Longwood Mall. The wood from the European Beech is used over a wide range of purposes. The short grain that the species produces helps make the wood easier to dye, work with and manipulate. There are many different tree pulps that are used to make paper. Yet the European Beech is the preferred species of tree to make paper out of. The nuts on the trees may also be consumed by animals and humans. Although if humans consume the nuts in large quantities, it becomes toxic due to the properties in the nuts. The species has many other versatile uses.

I began monitoring tree number 1009 on January 28, 2021. This was the initial observation. What was observed was that there were carvings in the tree bark. Two of which were people's initials, the other carving was "MEAT." There were no leaf buds on the tree at that time. Nothing had changed with the tree for a long time except for that the bark would be wet when it was raining; and that there would be snow when it was snowing. The leaf buds started sprouting on February 4, 2021, yet they were just baby buds (figure 13).

The leaf buds slowly grew over time. The tree bloomed around April 19<sup>th</sup>. Over the course of the semester, I checked on the tree at least once throughout the week. The only changes in the tree were subject to the temperatures and weather conditions. For example. The ground may be frozen, or the tree may be wet due to rain or covered in snow. There were no new carvings added to the tree during the time of monitoring. There was no proof that any tree dweller was living in the tree or in the hole near the base of the tree.

Specific measurements of the tree; it was concluded that the crown radius, or the distance from the base of the tree to the edge of its canopy; in this case, it was 90ft. Using the clinometer

to measure the height, I was able to determine that the height of the tree was about 15 meters high. I also measured the diameter of the tree from the Diameter at Breast Height. (DBH) It was determined that the tree was about 3.2 meters.

Figures will be on the link below.

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Sources:

[European beech | The Morton Arboretum](#)

[European Beech Tree on the Tree Guide at arborday.org](#)

[Fagus sylvatica - Wikipedia](#)

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