8/24/2024

John & Julie Jones
1234 Oak Dr.
Houston, TX 77006

Dear Mr. and Mrs. Durbin,

Enclosed is the arborist report following my inspection of the mature Southern Live Oak located in your neighbor's backyard at **1234 Oak Dr.** This report provides a comprehensive evaluation of the tree's **health, structural integrity**, and **potential risks** associated with its canopy and overhanging limbs, as observed during my site visit on **August 14, 2020**.

The report details the findings from my **visual inspection** and **soil testing**, highlighting concerns about the limb extending over your roof. Specifically, the **decay, pruning history, and imbalances in the canopy** raise potential risks of limb failure. The recommendations in the report include **weight reduction pruning, the application of a growth regulator (Paclobutrazol)**, and the installation of **support cables** to mitigate the risk.

Please review the enclosed report carefully. I am available to discuss the findings further and help coordinate the recommended next steps to ensure the safety of your home and preserve the tree's health. If access to the neighboring property is required, obtaining permission will be essential to proceed with the recommended treatments.

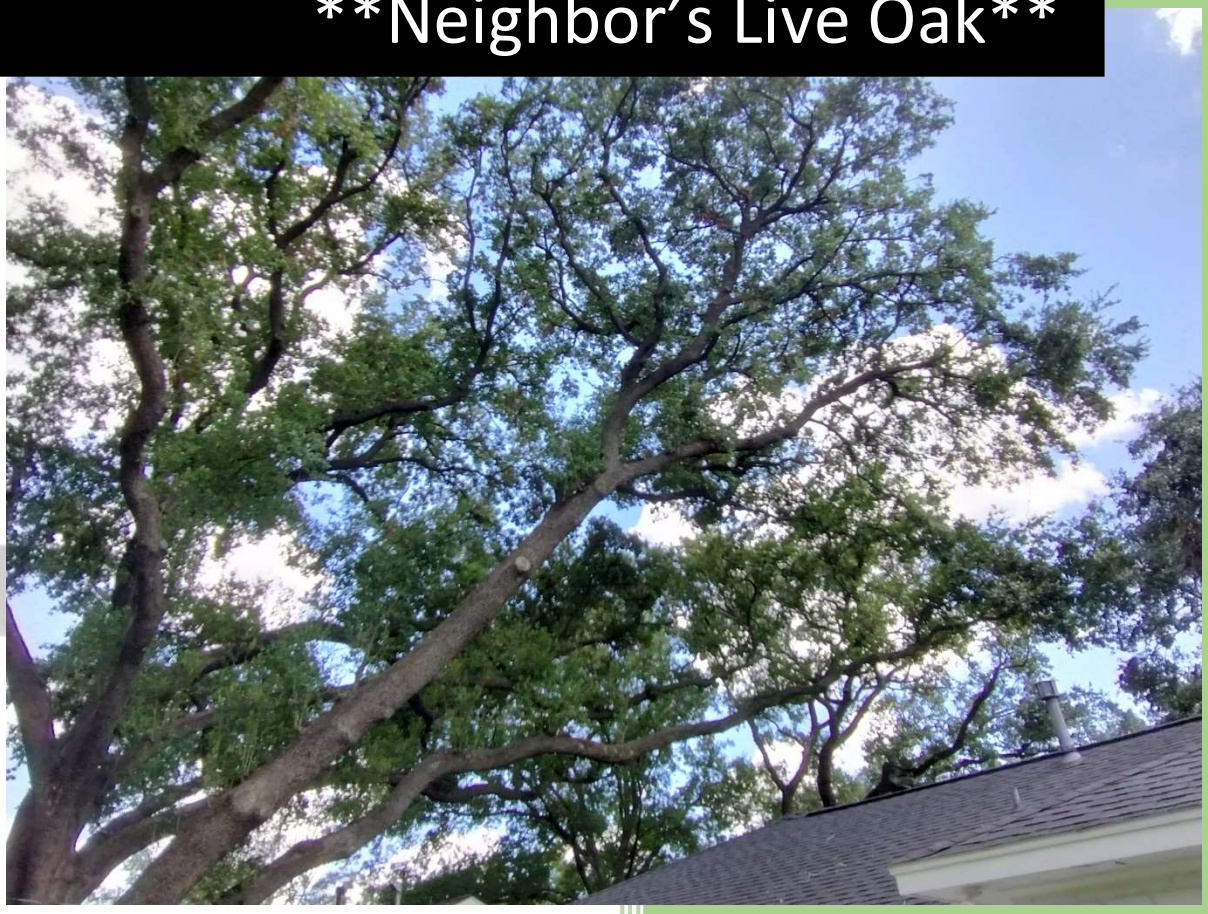
Thank you for the opportunity to assist with this assessment. Please feel free to contact me at your earliest convenience if you have any questions or need additional information.

Sincerely,

Matthew T. Latham
ISA Board Certified Master Arborist #TX-3737B
ASCA Registered Consulting Arborist #859
Lazy Bucket Babies Tree Consulting, LLC

2020

Arborist Report –John and Julie Jones **Neighbor's Live Oak**



Matthew T Latham – BCMA, RCA
Lazy Bucket Babies Tree Consulting, LLC
8/24/2024

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8/28/2024

Arborist Report for John & Julie Jones

Neighbor's Southern Live Oak

Introduction

Summary

I was contacted by John &Julie Jones on the 12th of August 2020 to assess the mature Southern Live Oak tree (Quercus virginiana) located on their neighbor's property at 1234 Oak Dr., Houston, TX. The Jones' expressed concerns about the tree's canopy extending over their roof and wanted to understand the potential risks it posed to their home. They also requested recommendations on maintaining the tree's health and mitigating any risks associated with overhanging limbs.

During my site visit on August 14, 2020, I performed a detailed visual inspection of the tree and evaluated its structural integrity. The canopy exhibited signs of previous "lion's tail pruning" and some decay at the base of the primary limb overhanging Mr. and Mrs. Jones' home, which could compromise stability. Additionally, soil conditions and pruning history were reviewed to assess how these factors influence the tree's growth, and the risks posed by its proximity to the Durbins' roof.

Based on my findings, I concluded and codified in this report that the tree requires structural pruning to reduce the weight of overhanging limbs, along with the installation of structural support cables to enhance stability. Applying a growth regulator, such as Paclobutrazol, would redirect energy to the root system and improve long-term health. To ensure the safety of the property, I recommend monitoring the tree regularly and coordinating with the neighbor to perform the necessary treatments.

Assignment

After a discussion with Mr. & Mrs. Jones, we agreed upon the following assignment:

1. Perform a Level one tree risk assessment to evaluate the overall health and stability of the tree.
2. Document all observations, test results, and analyses.
3. Compile these findings into a "Letter-Form Arborist Report" adhering to the standards of the American Society of Consulting Arborists (ASCA) and the International Society of Arboriculture (ISA)

Limitations

During my assessment, I was limited by the following:

- I was unable to perform an aerial inspection or climb the tree.
- I could not communicate directly with the neighbor.
- I did not have access to the neighbor's property.
- I was unable to conduct internal imaging tests or sound the woody tissue due to restricted access.

Observations

Site Observations

During my visit, I noted that the tree is in the neighbor's backyard, north of the Mr. and Mrs. Jones' home and property. I was unable to access the neighbor's yard to perform a thorough inspection from all sides of the tree due to lack of permission. The surrounding soil type in Mr. and Mrs. Jones' backyard is a clay/loam mix, with a small percentage of sandy matter.

Tree Observations

The Southern Live Oak (Quercus virginiana) in question is a mature specimen with a large canopy. A significant limb extends towards the southeast, overhanging Mr. and Mrs. Jones' house. The tree exhibits signs of stress, including a notable decay point on the compression side of the limb, stemming from an old pruning wound on the neighbor's property. The leaves also showed some signs of stress, and the canopy was over pruned during the last pruning cycle, causing a large quantity of epicormic sprouts to grow on the top side of the limb. The canopy of the limb in question overhanging the Jones' home is slightly thinning. The canopy has a slight separation in the upper canopy, indicating a potential imbalance between the limb over Mr. and Mrs. Durbin's house and the rest of the canopy. There is a cavity at the base of the limb which may further impact its structural integrity.

Mrs. Jones provided a history of the tree, mentioning previous removals of other mature trees in the area due to structural integrity issues. The Southern Live Oak has undergone heavy lion's tail pruning over the last two decades, by one arborist who has been the primary caregiver of the tree, leading to an imbalanced distribution of weight and potential weakening of the limb structure.

Testing and Analysis

To assess the tree's condition, I performed a visual inspection on August 14, 2024, and utilized a soil probe and a soil penetrometer to test soil conditions. The soil was very compacted indicating that the tree's root system is under stress. This is possibly due to the excessively rainy summer that Houston and surrounding coastal regions have experienced in 2024.

Discussion

Live Oaks rely primarily on the compression side of the woody tissue for strength. Therefore, it can be reasonably presumed that at least some structural integrity has been lost on both the tree as a whole and the individual limb in question. The tree has been pruned heavily using lion's-tail pruning techniques forcing new foliage growth at the furthest 1/3 to 1/4 of the limbs. This pruning method is detrimental to most trees as it reduces structural integrity, increasing the risk of failure during inclement weather, as well as stressing the tree out. The observed decay on the compression side of the limb further compromises the limb's strength. The slight separation in the upper canopy indicates that the limb overhanging house carries more weight than it can safely support. The cavity at the base of the tree compounds these concerns, suggesting a heightened risk of structural failure.

The structural integrity of the Southern Live Oak presents a significant concern due to the size, weight distribution, and proximity of its canopy to the Durbin's roof. Large trees like live oaks develop expansive canopies with heavy lateral limbs, and when these limbs extend over structures, they can create a hazard during extreme weather events. Clark and Matheny (1998) emphasize in *Trees and Development* that improper weight distribution, especially without regular pruning, increases the chance of limb failure. Although this tree has undergone periodic pruning, the canopy as a whole, and particularly the limbs overhanging Mr. and Mrs. Jones' home and property remains partially unbalanced, placing added stress on the limbs that extend toward the house.

The length and weight of the limbs overhanging Mr. and Mrs. Jones' home increases the mechanical load on the attachment points, which, as mentioned before has some decay on the compression side at the base where it attaches to the trunk of the tree. In storm events, overextended limbs are more prone to failure due to increased leverage, as described in Gilman (2002), An Illustrated Guide to Pruning. Without intervention, such limbs can become more and more structurally hazardous over time, posing a serious risk to the Durbin's roof and potentially endangering the residents.

To mitigate the risk, structural pruning is necessary to reduce weight on overextended limbs and restore balance to the canopy. Additionally, support cables, as outlined in the ANSI A300 standards, can provide additional stability by redistributing the mechanical load across the canopy. Applying a plant growth regulator (PGR), such as Paclobutrazol, will also promote root development and enhance the tree's ability to recover from pruning stress (Lilly, 2020). Regular monitoring and maintenance are essential to ensure the tree remains stable and safe over the long term. Following these best practices will help safeguard the Durbin's home while preserving the health and integrity of the tree.

Conclusions

Based on my observations and analysis, the Southern Live Oak in question poses a significant risk due to the decay and the structural impact of previous lion's tail pruning. The limb extending over the roof is particularly concerning because of its compromised structural integrity. Without intervention, there is an increased likelihood of limb failure, which could result in substantial property damage or personal injury.

Matthew T Latham – 409.995.7940
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Recommendations

To mitigate the risks associated with the Southern Live Oak, I recommend the following actions:

1. Obtain explicit permission from the neighbor's attorney or the neighbor directly to access the property and perform the necessary tree care.
2. Reduce the branch tip weight by 20-25% through subordinate and/or reduction pruning techniques to balance the canopy and reduce physical stress on the overextended limb.
3. Apply paclobutrazol tree growth regulator to slow outward growth and enhance the overall health and structural integrity of the wood.
4. Install two structural support cables from the limb to opposite parts of the canopy on the neighbor's side to provide additional support.
5. Conduct biannual deep root fertilization with a complete "bio-stimulant" type fertilizer and cover spray all above and below-ground parts to promote overall tree health and stability.
6. Arrange for an ISA Certified Arborist or Board Certified Master Arborist, trained in modern structural pruning standards such as ANSI and ISA Best Management Practices (BMPs), to inspect the tree every three to six months. The current tree company is causing more harm using their current "lion's tail" pruning techniques

Please let me know if you have any questions or if you need further clarification on my findings or recommendations. I am here to assist you in any way possible to ensure the safety and health of both your property and the tree in question.

My Best,

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Appendix 1: Glossary of Terms

1. **ANSI A300 Standards**: A series of standards developed by the American National Standards Institute (ANSI) outlining best practices for tree care operations, including pruning, cabling, and fertilization.
2. **Arboricultural Assessment**: A professional evaluation of a tree's health, structure, and stability, typically performed by a certified arborist.
3. **Callous Tissue**: A type of protective tissue that forms over a wound on a tree, helping to seal it and protect against infection or decay.
4. **Canopy**: The upper part of a tree, consisting of branches, leaves, and limbs, providing shade and habitat for wildlife.
5. **Cavity**: A hollow or decayed area inside a tree, which can weaken its structure and increase the risk of failure.
6. **Compression Side**: The side of a branch or trunk under pressure due to bending or leaning, providing stability to the tree.
7. **Critical Root Zone (CRZ)**: The area surrounding a tree's trunk that contains its essential roots; damage within this zone can severely affect the tree's health and stability.
8. **Decay Point**: A section of wood within the tree where rot has begun to develop, weakening the tree's structure.
9. **Epicormic Sprouts**: Shoots that emerge from dormant buds on the trunk or branches, often in response to stress or improper pruning.
10. **Fertilization (Bio-Stimulant)**: The application of nutrients and growth stimulants to improve the health and vigor of a tree.
11. **Lion's Tailing**: A poor pruning technique that removes too many interior branches, leaving foliage only at the ends, which can weaken the tree and increase the risk of limb failure.
12. **Paclobutrazol**: A plant growth regulator that slows canopy growth, encouraging the tree to allocate resources to root development.
13. **Plant Growth Regulator (PGR)**: A substance used to influence tree growth, often applied to promote root production and reduce canopy expansion.
14. **Pruning (Structural Pruning)**: The selective removal of branches or stems to improve a tree's structure and reduce the risk of damage during storms.
15. **Root Stress**: A condition where environmental factors, such as compacted soil or poor drainage, impair the health of a tree's root system.
16. **Soil Penetrometer**: A tool used to measure soil compaction by gauging the resistance of soil to penetration.
17. **Structural Integrity**: The stability and strength of a tree, ensuring it can withstand environmental stresses such as high winds or storms.
18. **Structural Support Cable**: A high-tensile cable installed to provide additional stability to weak or overextended branches, reducing the risk of limb failure.

Appendix 2: References

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2. **Tree Care Industry Association (TCIA)**. *ANSI A300 Standards for Tree Care Operations, Parts 1–8*. Londonderry, NH: Tree Care Industry Association.
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16. Lilly, Sharon J. *BCMA Guide for Exam Preparation*. Champaign, IL: International Society of Arboriculture, 2020.

Appendix 3: Site Visit Photos

Figure 1 - Tree and Primary Limb in question overhanging Mr. and Mrs. Jones' Home

Figure 2 - Full Canopy of Neighbor's tree with Limb overhanging powerline house drop and large portion of house (fisheye lense)

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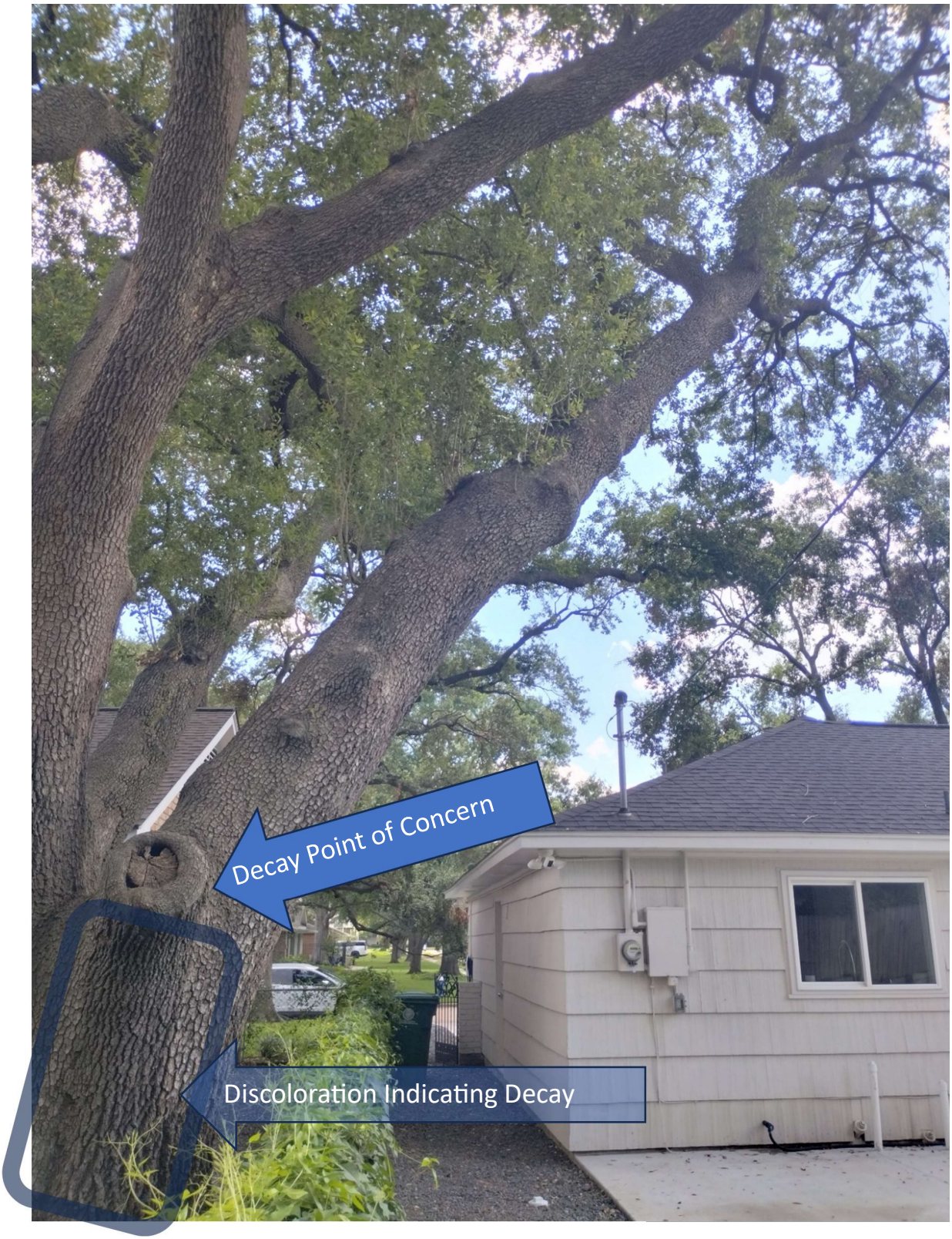

Figure 3 - Looking from back side of large primary branch overhanging roof. Note decay point and discoloration of woody support tissue on back side of lean.

Figure 4 - Closeup of Decay Point. Note how the limb is compartmentalizing, but not at a rate effective to completely close wound before internal tissue decays.

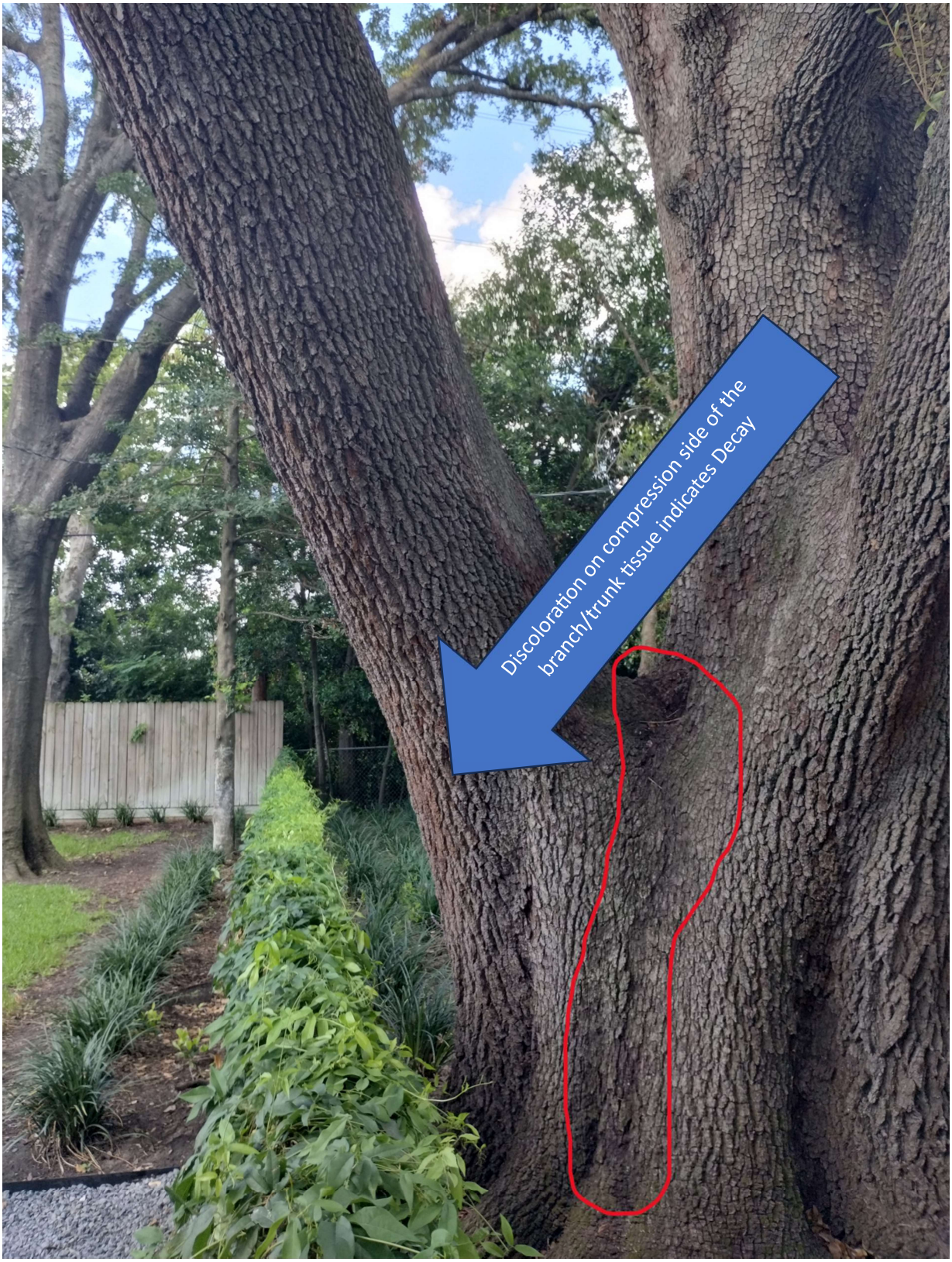

Figure 5 - Base of the Attachment Point of the Limb in question - note the slight cavity and significant crack (branch/Bark Ridge). This is looking opposite the decay point at the base of the limb.

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Figure 6 - Limb in Question hanging over hanging Mr. and Mrs. Jones' home - note the separation in the upper canopy, indicating that there is too much weight for the limb to suppor