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Protected trees: the experience of the city of São Carlos/SP

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Abstract

Objective of the study: to review the history of the strategy to protect trees in the city of São Carlos/SP and analyze the main reasons.
Methodology: a qualitative methodological approach, called documentary research, was adopted to conduct this study, covering the years between 1948 and 2020.
Originality/Relevance: although the protection of trees through the official declaration or listing is part of the legal framework, there is a lack of work focused on the qualitative analysis and reflection of the motivations for the special protection of these individual trees.
Results: between 2001 and 2007, 134 trees were declared protected from felling by 6 municipal decrees. The main reasons for protection were: "site/location", "ecological" and "beauty". Of note is Decree No. 133 of 2001, which protects the tree species *Araucaria angustifolia* from felling. All trees were declared protected from felling when the same political grouping was at the head of the local government, showing that this strategy is a government policy rather than a state policy.
Social/Management Contributions: This work contributes to the development of knowledge on the legal protection of tree species and the politicization of the urban forest issue, which has historically been shaped by the technical approach.

Keywords: Urban Forest. Protected Trees. Heritage Trees. Remarkable Trees. Champion trees.

Árvores Imunes de Corte: a experiência da cidade de São Carlos/SP

Resumo

Objetivo do estudo: resgatar o histórico da estratégia e analisar as principais motivações de declaração de imunidade de corte de exemplares arbóreos na cidade de São Carlos/SP, bem como analisar as principais motivações que levaram ao tratamento do poder executivo no cuidado desses exemplares.
Metodologia: para a realização deste trabalho, adotou-se uma abordagem metodológica qualitativa, denominada pesquisa documental, que teve como recorte temporal os anos entre 1948 e 2020.
Originalidade/Relevância: ainda que esteja prevista no arcabouço legal da proteção de árvores, através da declaração de imunidade de corte ou tombamento como patrimônio, verifica-se uma lacuna de trabalhos voltados à análise e reflexão de dados qualitativos sobre as motivações da proteção especial desses indivíduos.
Resultados: na cidade de São Carlos, entre os anos de 2001 e 2007, 134 árvores foram declaradas

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imunes de corte por meio de 6 Decretos Municipais. Os principais motivos de preservação foram: "localização/espacial", "ecológica" e "beleza". Destaca-se o Decreto nº 133, de 2001, que declara imune ao corte a espécie *Araucaria angustifolia*. Todas as árvores foram declaradas imunes ao corte, quando a mesma gestão municipal estava à frente da administração, indicando ser uma estratégia mais relacionada a uma política de governo do que uma política efetiva de estado.

Contribuições sociais/para a gestão: a realização deste trabalho contribui para o debate e conhecimento sobre a proteção legal de exemplares arbóreos e a politização da temática da arborização urbana historicamente marcada pela abordagem técnica.

Palavras-chave: Arborização Urbana. Árvores Imunes ao Corte. Árvores Patrimoniais. Árvores Notáveis. Árvores Campeãs.

Arboles Patrimoniales: la experiencia de la Ciudad de São Carlos/SP

Resumen

Objetivo del estudio: recuperar la historia de la estrategia y analizar las principales razones de la declaración de inmunidad por tala de árboles en la ciudad de São Carlos/SP.

Metodología: Para la realización de este trabajo se adoptó un enfoque metodológico cualitativo denominado investigación documental que tuvo como marco temporal los años comprendidos entre 1948 y 2020

Originalidad / Relevancia: Incluso con la protección de árboles a través de la declaración de inmunidad contra la tala o catalogación como patrimonio previsto en el marco legal, existe una falta de trabajo dirigido al análisis y reflexión de datos cualitativos sobre las motivaciones para la protección especial de estos individuos

Resultados: Entre 2001 y 2007, 134 árboles fueron declarados inmunes a la tala mediante 6 Decretos Municipales. Los principales motivos de conservación fueron: "ubicación / espacial", "ecológico" y "belleza". Cabe destacar el Decreto nº 133, de 2001, que declara inmune a la corta a la especie *Araucaria angustifolia*. Todos los árboles fueron declarados inmunes a la tala cuando el mismo grupo político estaba al frente de la administración municipal, lo que demuestra que esta estrategia es más una política de gobierno que una política de estado.

Contribuciones sociales / de gestión: Este trabajo contribuye a la evolución del conocimiento sobre la protección legal de las especies arbóreas y a la politización del tema de los árboles urbanos históricamente marcado por el enfoque técnico.

Palabras-clave: Arboles urbanas. Arboles protegidos Árboles patrimoniales. Árboles notables. Arboles campeones.

Introduction

The rapid and intensive development process of cities in recent decades has severely damaged or destroyed the tree vegetation in these urban areas, causing a number of negative impacts on the lives of citizens (Nobre & Young, 2011; Endreny, 2018).

These impacts include soil sealing, reduced stormwater infiltration, more frequent flooding and inundation, heat island formation, increased pollution, air quality degradation, increased noise pollution, water body degradation, soil erosion, siltation of urban streams, and impacts on human health and well-being (Ferreira, 2013; Villaseñor et al., 2014; Li et al., 2016; Delphin et al., 2016; Gao et al., 2017; Lee et al., 2018).

Based on this problem, research and measures have been developed to improve the operating conditions of the urban ecosystem. One of them is the improvement of research in the field of urban reforestation, especially with the aim of reintroducing plant elements, especially tree-sized species, in public or private, free or partially built urban areas.

The importance of this issue was highlighted at the 73rd General Assembly of the United Nations, held on March 1, 2019, which issued Resolution No. 73/284, designating the period from 2021 to 2030 as the "Decade of Restoration." The United Nations Decade for Ecosystem Restoration is a call to protect and restore ecosystems worldwide, including urban ecosystems, in order to improve human livelihoods, combat climate change, and halt the collapse of biodiversity (UN, 2019).

Currently, there are a large number of studies with numerous scientific evidences that demonstrate the importance of afforestation in cities as one of the strategies to mitigate urban problems. Trees are presented as elements to improve urban quality of life by providing environmental, cultural, social and economic services (Cormier & Pellegrino, 2008; Duinker et al., 2015; Nitoslawski et al., 2016). Therefore, there are a number of conceptual, theoretical, and practical discussions on how to address and plan for tree vegetation in cities (Magalhães, 2006).

However, despite the increasing production and dissemination of knowledge about the positive effects of trees in cities (Salbitano, 2016), tree preservation is still neglected by urban planners and managers, as it is not one of the strategic priorities for increasing the quality of life of the population (Cunha et al., 2020). This negligence is generally reflected in current legislation and ineffective control measures to protect urban forests (Nowak et al., 2014).

In conflict situations, where the option is to cut down a tree or develop a projective measure so that it is not removed, city governments opt for the first option, usually disregarding the value of the tree as an esthetic and ecological element that contributes to the health of the city and the preservation of its history (Estellita & Demattê, 2007).

Trees that are considered "remarkable" (Pakenham, 2002), "veteran" (Horák, 2017), "champion" (Úradníček et al., 2017) or "patrimonial" (Matiello et al., 2019) represent a valuable cultural and ecological asset for the inhabitants of cities, as they contribute to the construction of people's experiences of the place where they live. These trees become part of affective memory and have a symbolic character. Farah (2004) describes the potential of urban trees as time frames for experience, marking the landscape and the passage of time with their cyclical physiology.

An important strategy for appreciating these aspects is to identify and characterize notable individuals, veterans, patrimonials, or champions that stand out among the population of urban trees to promote community awareness as allies for tree vegetation conservation (Jim, 1994; Úradníček et al., 2017).

These trees serve as symbols because they are ecological cultural assets, but they also have economic value. The economic valuation of historic trees is one of the most important issues in urban land use planning (Lin et al., 2020). In addition to use value, these trees also have non-use value, such as "existence" and "heritage," values that are difficult for

the market to value (Becker & Freeman, 2009).

It is worth mentioning that in order to be considered a cultural heritage, the individual tree must be registered in the official cultural heritage institutions. This process includes the recognition, inventory and cataloging of the tree. The listing that usually applies to buildings, monuments, works of art, etc., can also be done for individual urban trees. This is justified because these individuals have historical, cultural, and ecological significance to the urban heritage (Matiello et al., 2019).

Although it is already known that these trees are important habitat for a variety of organisms, there are still gaps in our knowledge of the specific conditions that veteran trees provide. For this reason, it is critical that these tree individuals be identified, quantified, and understood so that this information can be used to plan the management of these trees in conjunction with the urbanized environment that surrounds them (Horák, 2017).

Given the arguments presented, it goes without saying that this strategy for the conservation of tree individuals should be incorporated into the realm of public policy through specific normative instruments. Legal protection through an act of the executive (Municipal Ordinance) and legislative (Municipal Law) contributes to the conservation of plant species that occur in the urban landscape and are protected from displacement (Cunha et al., 2020). In this way, important aspects that support the protection of trees are saved, whether in terms of rarity or the threat of extinction of these species, or in terms of the beauty and cultural value of urban vegetation (Cunha et al., 2020).

In several Brazilian cities, there are trees in the urban area that are considered protected from felling due to their unique characteristics. It is important that these trees be recognized by the government and receive special treatment: Listing laws or others that guarantee protection so that they remain in good condition and can fully develop their social, environmental, and cultural impacts (Estellita & Demattê, 2007).

Even though the protection of trees is provided for in the legal framework and the immunity to being cut down or toppled is declared as an equality, there is a gap in the work aimed at analyzing and reflecting qualitative data on the motivations for the special protection of these individuals (Matiello et al., 2019).

Therefore, the objective of this study is to explore the history of the immunity declaration strategy for felled trees in the city of São Carlos, in the interior of the state of São Paulo, and to analyze the main motivations that led to the executive treatment in the care of these specimens.

Methodology

The city of São Carlos is located in the central region of the state of São Paulo, about 220 kilometers from the capital, in the southeastern region of Brazil (Figure 1). It has a territorial

extension of 1,136.90 km², of which about 80 km² is urbanized (7% of the total area), with a total estimated population of 251,983 inhabitants (IBGE, 2020) and an annual growth rate of 2.4% (IBGE, 2010). With a population density of 195.15 inhabitants/km², the majority of the population (96%) lives in the urban area (IBGE, 2010).

Figure 1

Location of the city of São Carlos-SP
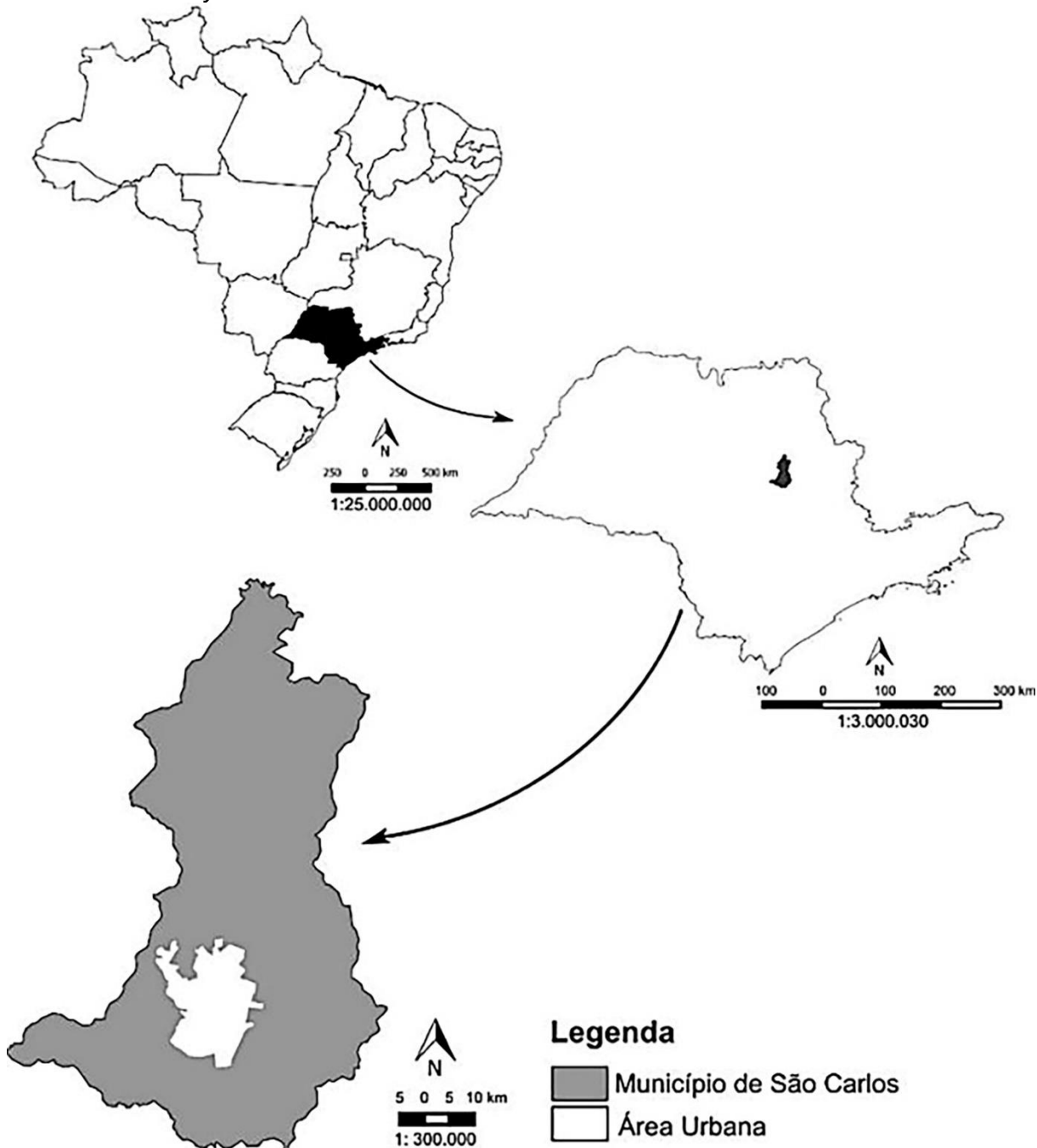
Source: Scarpinella et al. (2016).

According to the research conducted by Lima (2008) on the history of urban planning in the city of São Carlos, it can be noted that its urban development process is similar to several

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medium-sized cities in the state of São Paulo, which were influenced by the spread of the coffee culture and the arrival of the railroad. These factors were also fundamental in creating conditions and expanding industrial activities in the city.

The city, strongly agricultural and industrial, had relationships with arboreal elements since the beginning of its development, which can be evidenced by some symbolic aspects, such as: the historical-cultural appreciation of the Araucaria species (Araucaria angustifolia), the definition of the old name of the municipality, "São Carlos do Pinhal", and the symbols associated with vegetation in the coat of arms (Municipal Law No. 1.023/1948) and in the flag of the city (Municipal Law No. 4.319/1961).

However, studies have shown that the structure and condition of urban vegetation have changed significantly in recent decades. Oliveira (1996) and Viana (2013) indicate that the city of São Carlos fits the profile of cities with low tree cover. About 26% of the urban area is covered with trees (Viana, 2013). However, this distribution is irregular and uneven. Some sectors of the city have values as low as 2 to 4% tree cover, while the most forested region has a cover of about 40%.

Studies of sidewalk trees and street beds have shown that there are conflicts between urban forestation and elements of the built environment, indicating a low qualitative and quantitative value of urban vegetation. Sucomine and Sales (2010) inventoried the sidewalk trees in the city center and found a low index of urban vegetation in this area, which was classified as "very poor" in quantitative terms. In the qualitative analysis, 45% of the 2,626 inventoried specimens had some conflict with urban infrastructure, while 76% of the individuals had an inadequate permeable surface (construction site). Caiche et al. (2016) analyzed the motivations for municipally approved removal of sidewalk trees between 2004 and 2013. The results found by the authors indicate that approximately 51% of removals were motivated by conflicts with other infrastructure elements and approximately 27% of these removals were motivated by inadequate bed space.

The methodological structure of the work was structured by combining two methods: "documentation research" and "qualitative approach with case study character" (following Cunha et al., 2020).

In the documentation research, the "documents" considered were the files coming from official sources, such as rules, laws and regulations with legal value, registered and organized to regulate a specific subject (Garcia Junior et al., 2017).

For this purpose, a consultation of the virtual public information database of the Executive Branch of the Municipality of São Carlos was carried out to identify the documents (ordinances) that regulate the legal protection of urban trees of this city between the years 1948 and 2020 (period with documents available for virtual consultation).

To be included in the sample, documents (ordinances) should contain the search terms

"trees" and "law protection" in the summary of city regulations. This criterion was chosen in the population selection method used by (Caiche & Peres, 2021), based on the principles of legislative technique, which aims to provide a clear and objective explanation of the subject matter regulated in the law (Brasil, 2012; Godoy, 1995; Gil, 2002; Gomes & Campos Alves, 2016).

After inclusion in the population, the content of the prescription was analyzed. In this phase, the following study variables were considered: the year of publication of the regulation, the number of specimens declared protected, the botanical family, the scientific and popular names of the species, and the motivations that led to the declaration.

Based on the systematization of the data, analyzes were carried out to show the beginning, distribution and end of the strategy to preserve protected specimens of urban trees over time. Then, we analyzed the distribution of legally protected specimens in relation to botanical-taxonomic aspects such as family names and popular and scientific names of species.

Finally, an analysis of the rationales explaining the immunity of the specimens was performed. After reading the rationales included in the normative instruments, 9 categories were listed. This categorization was based on Article 70 of Federal Law No. 12,651 of 2012, also known as the Forest Law (Brasil, 2012), which provides the possibility of protecting any tree based on its location, rarity, beauty or condition as a seed owner. In addition, the categories listed in the works of Cunha et al. (2020) and Matiello et al. (2019) were added. The categories used for this work were:

- Ecological
- Size/Age
- Cultural
- Medicinal
- Seed holder/matrix
- Threatened/Rare
- Beauty
- Location

The category "ecological" refers to aspects of the relationships between living things or between living things and the environment in which they live. In the justifications of the enactments declaring immunity, phrases such as "representative species for the ecosystem" and "provide shelter and food for wildlife" were notable for inclusion in this category.

The "size/age" category includes tree specimens declared protected for the primary reason of their advanced age and/or imposing and grandiose size. Expressions such as

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"impressive size," "outstanding size," "foliage size," and "absolutely exceptional size and age" are examples of justifications for inclusion in this category.

The "cultural" category concerned legally protected trees on the grounds that they are associated with behaviors, traditions, knowledge, and expertise of local people. Expressions such as "signify the tradition of the culture", "are part of the most important official symbols" illustrate these connections

The category "medicinal" included trees declared protected on the basis of justifications based on the healing properties and the use of parts of the trees as remedies. Expressions such as "therapeutic qualities", "indicated for wound healing and as anti-inflammatory" represent the justifications for inclusion in this category.

The category "seed matrix" was included in the analysis because some justifications very explicitly declare some tree individuals immune to felling because the municipality uses them as seed matrix for seedling production, since some decrees state that "it is important to preserve them as seed matrix for seedling production in the urban garden".

The "endangered/rare" category included trees declared unfellable because their populations declined to extinction or because they are rare in the community, e.g., using the phrase "worthy of protection because it is a representative of a highly endangered species."

The "beauty" category included trees that were declared free from felling because of the well-being evoked in the community by esthetic aspects such as "impressive ornamental elements" and "its beautiful bloom".

Finally, the "location" category included trees that were declared non-felling, with justifications based on the effect of the presence of these individuals themselves in the spatial recognition of the landscape by the local community, giving as examples the expressions "significantly marking the landscape around them", "territorial landmark" and "acting as a dominant characterizing element of the landscape".

Results

Six norms were found, all in the form of municipal decrees originated and published by the Executive Branch to identify 134 tree species and one immunological pruning species in the city of São Carlos/SP, as shown in Table 1:

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Table 1

Norms and respective menus and number of specimens declared immune to cutting

Decreto nº 133/01	Declara imune de corte as árvores da espécie Araucária Angustifólia	*espécie
Decreto nº 125/02	Declara imune de corte várias árvores	97
Decreto nº 141/03	Declara imunes de corte vários exemplares de árvores	20
Decreto nº 207/04	Declara imunes de corte vários exemplares de árvores	6
Decreto nº 319/06	Declara imunes de corte vários exemplares de árvores	4
Decreto nº 430/07	Declara imunes de corte vários exemplares de árvores	7

Source: Own elaboration.

The decrees declaring immunity for cutting urban trees began in 2001, the year in which a decree was published that immunized not specifically an individual, but a species: Araucaria angustifolia (Bertol.) Kuntze. The last decree was published in 2007, as shown in Figure 2. Since then, no other tree specimen has been protected by legal regulations.

Figure 2

Trees protected by law per year

Árvores Imunes de Corte - Tempo
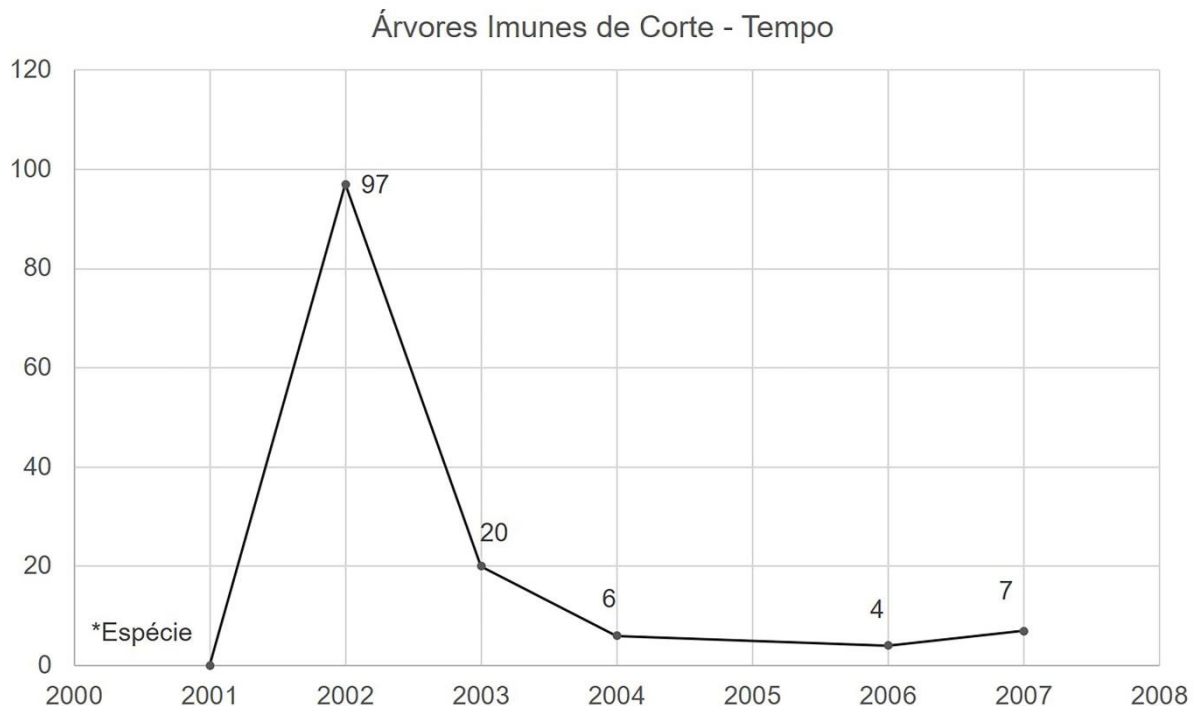
Source: Own elaboration.

The year with the most legally protected trees was 2002, with 97 specimens. the year 2003 was the second year with the highest number of trees declared protected, with 20 specimens. After that, a decrease in declarations was observed, with 6, 4 and 7 specimens in 2004, 2006 and 2007, respectively. no tree was declared legally protected in 2005.

The 134 protected specimens are distributed in 20 families, with the Palmae family
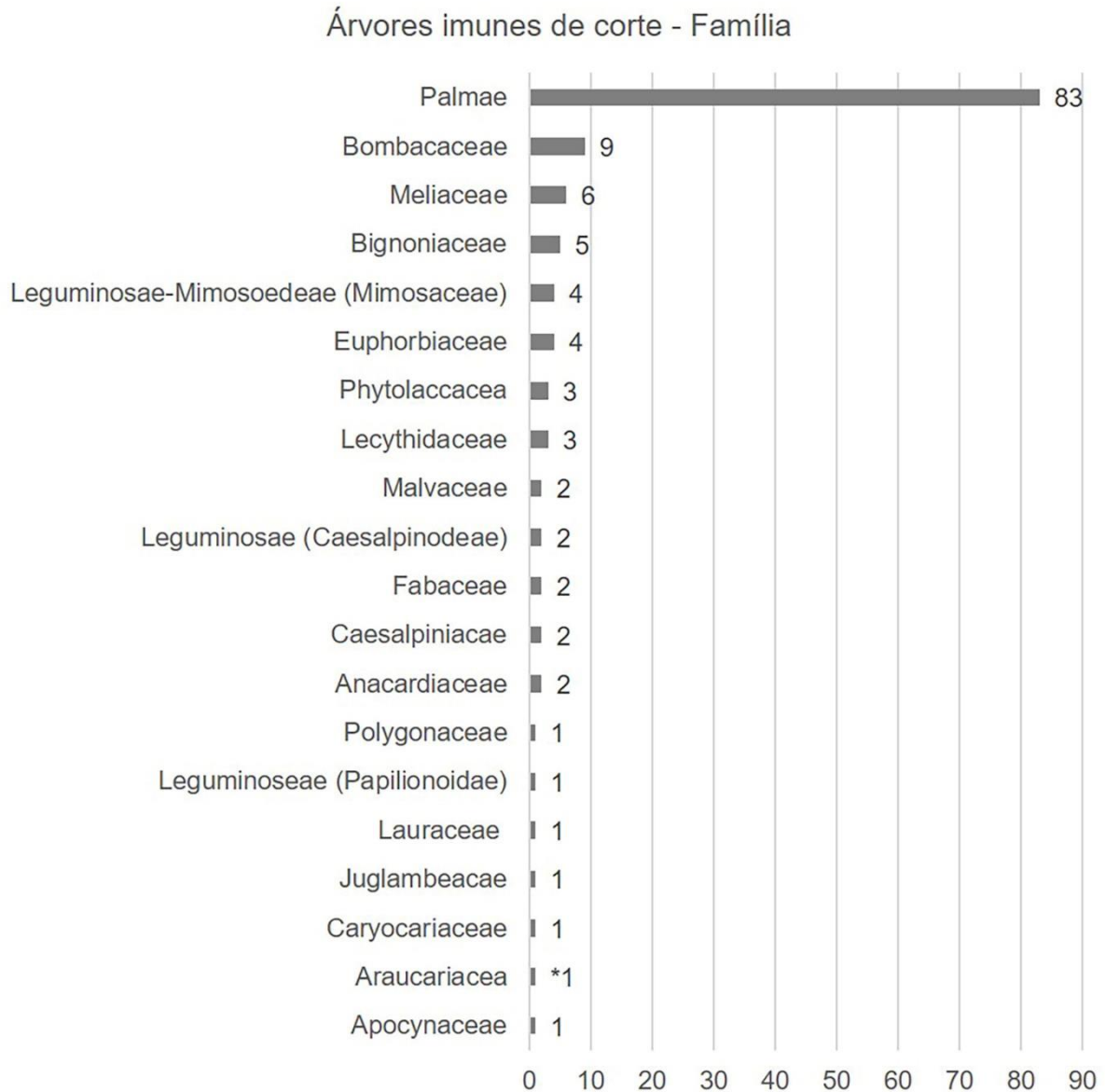
having the most individuals with 83 (61.9%), followed by the Bombacaceae family with 9 individuals (6.7%) and the Meliaceae family with 6 individuals (4.4%). The families with the fewest individuals were Apocynaceae, Araucariacea, and Caryocariaceae, all with 0.7%, as shown in Figure 3.

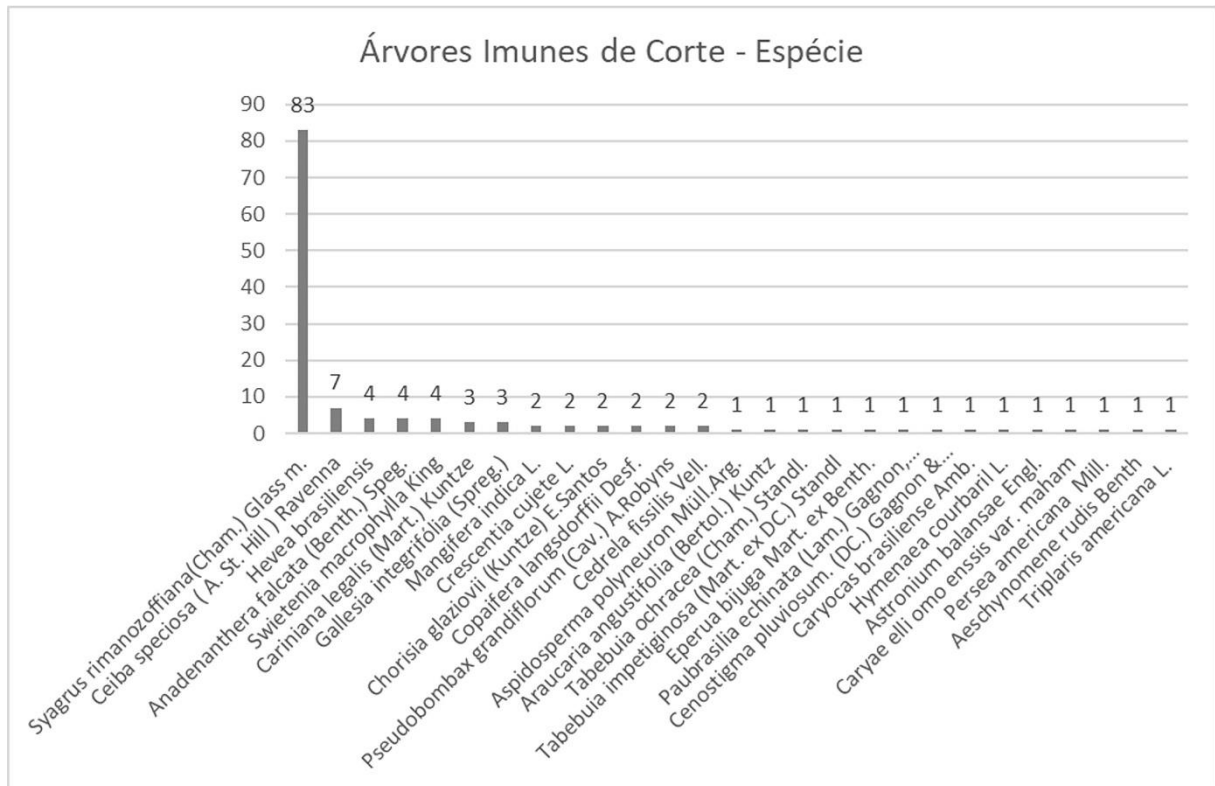**Figure 3**

Number of legally protected tree individuals

Source: Own elaboration.

27 tree species were identified, at least one of which was declared cut-off immune, as shown in Figure 4.

Figure 4

Tree individuals declared legally protected by species

Source: Own elaboration.

The species with the highest number of protected specimens was Syagrus romanzoffiana (Cham.) Glass m., with 61.9% of the total, followed by the species Ceiba speciosa (A. St. Hill) Ravenna, with 5.22%. Thirteen species had the lowest number of individuals declared protected, with only one specimen (0.74% of the total).
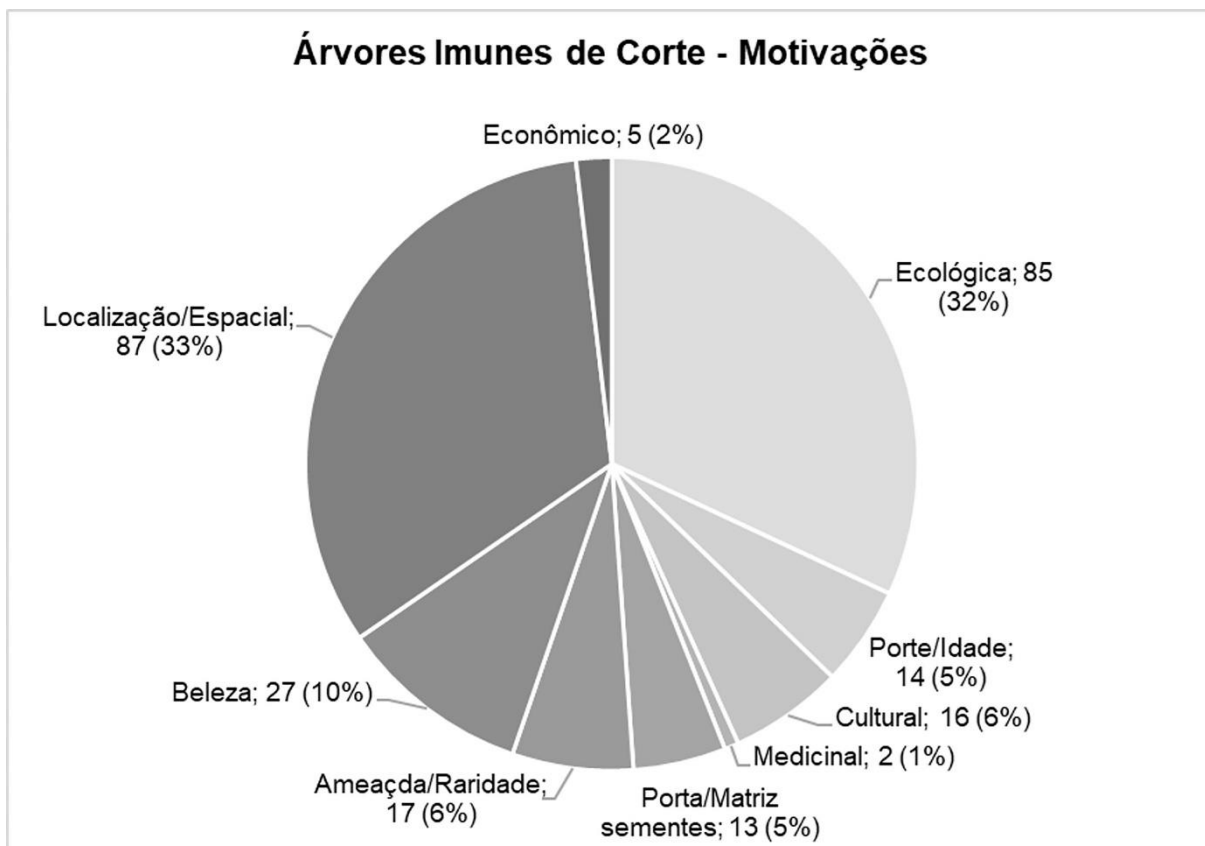
The objectives of ecological heritage conservation are diverse and represent intense historical, cultural, spatial and ecological relationships between humans and trees, as shown in Figure 5, which illustrates the motivations of the protection decrees.

It is noteworthy that the same specimen can fall into more than one category, according to the rationales in the six municipal decrees that protected 134 tree specimens.

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Figure 5

Motivations for the declaration of protection

Source: Own elaboration.

When analyzing the reasons for protecting tree specimens, it was found that the most common reasons were related to location/space (33%), ecological factors (32%), and beauty (10%). The motivation that least justified the protection of tree specimens was the medical category, with only 1%.

Discussion

A first analysis that can be carried out consists in the temporal issue related to the publication of protective decrees. Even in a city with a historical relationship with trees (Lima, 2008; Viana, 2013), as in the case of the city of São Carlos, the strategy to identify and preserve notable tree individuals only begins in the 2000s.

However, it turned out that this strategy was implemented within a short period of time. The last decree for the protection of seven tree species dates back to 2007, and if we look at the periods related to local political administration (four-year government cycles), we can see that in the period between 2001 and 2007, the same party (Labor Party) held the executive power. Thus, there is a greater presence of a governmental policy than a state policy that is entrenched and perpetuated throughout the state apparatus (Rocha, 2009).

The analysis of the protected species in terms of taxonomic characteristics showed some diversity, both in the number of families and species. However, due to the fact that Decree No. 125 of 2002 declared a group of 83 jeriva palms - Syagrus rimanozoffiana (Cham.) Glass - as protected at one time and distinguished them from the other species, which had an average of 2 specimens per protected species, there was a bias in terms of sampling distribution of species.

In a study by Sucomine and Sales (2010), considered the most comprehensive characterization of the tree population of the city of São Carlos to date, the researchers found a total of 103 species. In this way, it is possible to make a comparison and conclude that, with the declaration of judicial immunity of the specimens present in the municipal decrees that are the subject of this work, at least one specimen of about 27% of the species present in the urban area of the municipality is under special protection. However, it should be noted that the study conducted by the researchers was only for the central region of the municipality; therefore, the total number of species found may be underestimated.

Another highlight related to the species is City Ordinance No. 13 of 2001, which protects all arboreal specimens of Araucaria angustifolia from logging (not just one specimen), as the species has a strong historical relationship with the city. However, despite this symbolic tribute, there are currently few specimens of the Araucaria species in the city, and all remaining specimens are considered legally protected (Viana, 2013).

Regarding the motivations that protected the 134 tree specimens from deforestation, it was found that the categories related to "spatial/local" and "ecological" aspects were the most frequent (32% and 33%, respectively), followed by the category related to "beauty/esthetics" (10%). Other studies have highlighted the affective and symbolic relationship of the population with urban trees, emphasizing their value and importance (Loboda & De Angelis, 2005; Van Dillen et al., 2012; Sinton, 2017; Whitburn et al., 2018).

Cunha et al. (2020), in a study conducted in the city of Juiz de Fora (MG), came to different conclusions, noting that in the case studied, the geographical issue, that is, aspects related to space and location, were not taken into account in the explanation of the 10 specimens protected by decree in the city.

Old and large trees, also called ancient or veteran trees, usually arouse a sentimental attraction and a corresponding interest in their preservation (Úradníček et al., 2017). In this study, only 5% of the justifications for declaring protection were based on the "size/age" category. There are groups of arborists who strive to discover the most imposing, long-lived, and majestic tree individuals, with databases and even competitions in which some countries vie for the largest trees. In the United States, there is the National Registry of Champion Trees of the American Forest (www.americanforests.org), in Europe, the Registry of Great Britain is one of the most important databases (www.treeregister.org) (Úradníček et al., 2017), and in

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Brazil, the SOS Atlantic Forest (2013) is an example of this conservation interest.

The categories "ecological" and "endangered/rarity" were present in 38% of the justifications for protection. Cunha et al. (2020) pointed out other results for these categories, indicating that these justifications were present in 100% of the analyzed protected trees. The authors of this study concluded that in this municipality, the policy of preserving tree specimens through the declaration of protection took into account the affective and symbolic elements of the relationships between trees and the population. Roy et al. (2017), in a study conducted in the city of Queensland (Australia), based on interviews with the citizens there, found that the main reasons influencing the choice of trees in the city were related to the aspects of ecology and beauty, while in the city of São Carlos only 10% of the justifications were attributed to the category of "beauty", which is directly related to esthetic characteristics.

Also relevant is the justification of the protection of three trees - a hose, an angico and an avocado tree - that were protected and categorized as "culture" in Municipal Decree No. 319 of 2006. These specimens were legally protected after collective consultations of local residents and visitors to local spaces, who asked the government for the deed because of the symbolic, cultural and historical dynamics between the trees and local communities (a neighborhood and a school, respectively). These two cases highlight the importance of trees in building a local imaginary, as emphasized by the authors (Cunha et al., 2020).

These examples show that it is desirable that the initiative to protect certain tree species of importance to a community comes from the people, and that this demand is put forward and accepted by the local executive (from the bottom up) through spaces of participation such as councils, conferences, and municipal audiences.

In order to maintain the dynamism of the urban forest, the protection of veteran, remarkable trees must be taken into account and, above all, recognized institutionally by placing them under protection by law. However, it is also known that the cost of maintaining these trees is sometimes higher than the cost of maintaining trees that are at the beginning of the development process, as pointed out by the authors (Cariñanos et al., 2017; Lin et al., 2020).

Therefore, it is essential that the government treats protected trees in a special way by providing resources, elaborating specific programs, and training teams to take appropriate management actions to preserve the ecological heritage of trees in Brazilian cities (Estellita & Demattê, 2007).

An important consideration of the conservation declaration strategy refers to the gaps in dissemination and communication, such as the lack of available information, the creation of records to update the monitoring of the phytosanitary status of the listed specimens, with photographic and site records of the tree specimens that are considered ecological heritage and that eventually decline and are suppressed. In general, the population is not aware of

these trees. The gap in communication is also that the general population is not made aware of the remarkable example or even environmental education initiatives that could be developed from the history of these very special trees.

Conclusion

The strategies used to explain the impunity for cutting down trees in the city of São Carlos were dealt with in the context of a government policy that was not internalized by subsequent administrations and, therefore, did not become an effective public policy of the state. This rupture of a political order expresses different administrative attitudes regarding the presence of vegetation in the city and proves detrimental to the establishment of continuous planning and a culture that creates a sense of heritage identity in the urban landscape.

While the strategy has been active, it can be considered to have achieved the protection of relevant biodiversity based on the number of species with at least one protected specimen compared to the sample inventories already conducted in the city. However, since the municipality does not yet have a qualitative and quantitative inventory that covers all trees in the municipality, this conclusion may be underestimated.

A limitation with this strategy is the dissemination of the data. It was not possible to find a platform, database or public register (analog or digital) with information about the trees protected by law. This information can only be found in municipal ordinances. This gap in the availability of knowledge and communication could be one of the reasons for the lack of continuity of action, as the community appropriates what it knows. When information is limited to the institutional environment of the municipal secretariats, programs and actions relevant to the common good may be interrupted and forgotten

In addition to the creation of long-term policies and normative instruments, the construction of portals or digital spaces with the identification of the characteristics of each specimen and the granting of awards to incentives and caretakers of heritage trees could represent new strategies and initiatives for the valorization of this issue in the city, as well as in several Brazilian cities.

Acknowledgments

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