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Araceae Juss. used as an ornamental in Northeastern Brazil

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Abstract

Araceae Juss. is widely used by the local population for various purposes, including food, mysticism and crafts. The aim of this study was to conduct a survey of Araceae species used in neighborhoods in Floriano, Piauí, and to classify these species based on their origin and habit. The research employed the «Rapport» technique and semi-structured interviews with residents of the of Floriano, Piauí, along with an analysis of the species use value. Nineteen species belonging to thirteen genera were documented, categorized into two main uses: ornamental and mystical. Species such as *Aglaonema commutatum Schott*, *Dieffenbachia seguine Schott*, *Epipremnum aureum* (Linden & André) G.S.Bunting and *Zamioculca zamiifolia (Lodd.)*Engl. exhibited the highest use value (0.016 each). These species are predominantly cultivated and are of exotic origin, with varying habits including climbing, epiphytic, hemiepiphytic, and herbaceous. *Caladium bicolor*, *Monstera obliqua* and *Philodendron acutatum* are species native to Brazil, found in the Northeast region. However, only while *Philodendron acutatum* was recorded on the flora of the state. Studies like this contributes to the dissemination of local knowledge and facilitate the exploration of the Araceae flora. Further research is warranted to identify additional use categories and to catalog Araceae species specific to the state, given the limited availability of studies on this plant family in the region.

Keywords: aroid, ethnobotany, ornamental

Introduction

Araceae Juss. is a family of monocots, the Alismatales clade, with 144 genera and 4000-6000 species and a cosmopolitan distribution in the most diverse tropics. Five subfamilies are recognized in Brazil, comprising 521 species distributed across 47 genera. Within the Northeast region of the country, 33 genera and 138 species have been reported. In the state of Piauí, 19 species distributed in 14 genera have been catalogued (Mayo et al., 1997; Camelo, 2018; Flora do Brasil, 2024).

The Araceae family is characterized by perennial or seasonal herbs, which can be terrestrial or climbing. They have erect aerial stems, climbing, underground, rhizomatous or tuberous, with internodes bearing adventitious roots. The shape of the leaf blade varies widely, ranging from linear, elliptical, ovate, cordate, pinnately lobed, pinnatifid and dracontioid (Lóz, 2022). The inflorescence typically consist of a bract (spathe), with numerous small flowers known as a spadix (spike), usually erect and terminal, sometimes pendulous. The fruit is berry-like, with seeds that varying in size, to large and the presence of laticifers is common (Mayo et al., 1997; Temponi et al., 2006; Barabé & Gibernau, 2015; Stevens, 2017; Cole et al., 2020).

In terms economic and ethnobotanical significance, the family is widely utilized by the population for various purposes. Some species have therapeutic properties, such as *Anthurium affine* Schott (known as "milho-de-urubu") (Luna et al., 2016), *Sauromatum guttatum* (Schott) (Rabia et al., 2021), *Montrichardia linifera* (Arruda) Schott (known as "aninga") (Miranda et al., 2015), *Pistia stratiotes* L. (commonly "water lettuce") (Reis et al., 2019).

Additionally, certain species are cultivated for ornamental purposes, including *Alocasia* (Schott) G.Don), *Anthurium* (Schott), *Dieffenbachia*, *Spathiphyllum* Schott,

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Caladium Vent. (known as "tinhorão") (Souza, 2019). *Colocasia esculenta* var. (L.) Schott (yam), *Xanthosoma sagittifolium* Schott (known as "taioba") are some of the representatives food plantas (Assis & Sakuragui, 2005).

In handicrafts, *Philodendron corcovadense* Kunth (known as "cipó-imbé") is mentioned, as its a adventitious roots are widely used to make baskets and bags. *Heteropsis flexuosa* (Kunth) G. S. Bunting is also important for producing ropes, baskets, brooms, furniture and decorations (Mayo & Gribel, 2013; Ramos et al., 2017).

Ethnobotanical studies play a crucial role in understanding how inhabitants gather knowledge from their places of origin, how it is used, for what purposes, and how it is passed on to new generations. Despite their significance, ethnobotanical studies focusing on the use of Araceae species are scarce in the Northeast region. Thus, the objective of this study was to survey the species of Araceae Juss. used in the urban neighborhoods of Floriano, in the state of Piauí, and to identify their categories of use, origin, and habit.

As well as to identify the categories of use, origin and habit of the species.

Material and Methods

Characterization of the study area

The municipality of Floriano, Piauí, Brazil (**Figure 1**), located at 112 m above sea level with minimum temperatures of 29° C and maximum temperatures of 39° C, has a warm tropical climate, with annual rainfall of between 800 and 1,400 mm, approxyimately 5 to 6 months of heavt rainfall, while the remainder of the year is characterized by dry conditions. The landforms mainly include low plateaus, high plateaus, flat surfaces, mountains, and hills. Floriano is bordered by the Parnaíba, Uica, Gurguéia and Itaueira rivers; the Bom Jardim and Tábua lagoons and; the Éguas, Caldeirão and Alegrete streams (Brazil, 1976).

The region's soils come from the alteration of sandstones, siltstones, shales, limestones, argillites, laterite, and basalt. They comprise lithic, alkalic and dystrophic soils, with deciduous forest and/or sub-deciduous forest/ cerrado, and vegetation transitions of sub-deciduous forest/caatinga, hyperxerophilous and/or sub-deciduous cerrado/sub-deciduous forest (IBGE, 2017).

The sample size was determined based on Bernard`s (1988) recommendation of 380 interviews for a sample area with over 50,000 inhabitants. The survey was carried out in 12 neighborhoods in the urban area of Floriano, Piauí, located at different points on the urban perimeter, some close to the center and others in more peripheral locations. As for the criteria for including neighborhoods and participants, we took into account neighborhoods with people who habitually grew plants, as well as their willingness to participate in the survey.

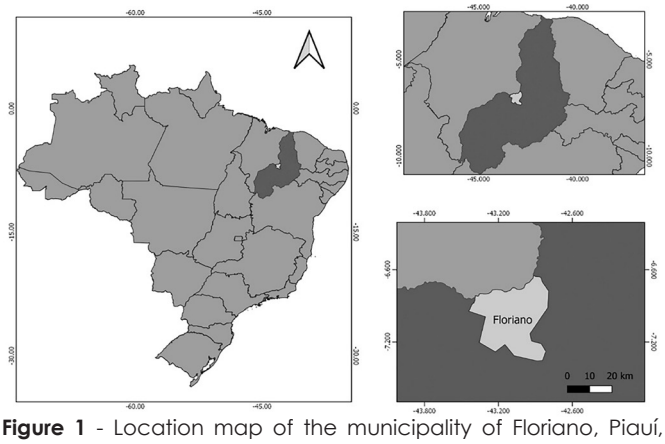

Figure 1 - Location map of the municipality of Floriano, Piauí, Brazil.

It should be noted that the research was conducted during the COVID-19 pandemic, necessitating a significant reduction in the sample size of neighborhoods and interviewees. Difficulty in accessing research volunteers and interruptions in data collection due to worsening cases of infection led to this decision.The neighborhoods surveyed were: Ibiapaba, Catumbi, Pau ferrado, Caixa d'água, Alto da cruz, Vila Leão, Tiberão, Alto da guia, Irapuá II, Cajueiro II, Meladão and Campo velho. There were 10 interviews per neighborhood, with 12 neighborhoods surveyed, making a total of 120 interviews.

Collecting ethnobotanical information

This study employed a qualitative and quantitative approach (Albuquerque et al., 2010). Visits were made between October 2020 and October 2022. The "Rapport" technique proposed by Bernard (2006) was utilized, in which the researcher introduced themselves at the informants' homes to gain their trust. After five visits, the importance of the research was explained. Initially, meetings were held at Basic Health Units (UBS) to establish contact with community health agents in the neighborhoods. In neighborhoods where community health workers were not available, religious leaders were contacted to facilitate initial contact with the local population. Subsequently, interviews were conducted with volunteers.

The informants responsible for cultivating plants in their homes were selected to participate in semi-structured interviews. To identify the plants and collect Araceae species, the "guided tour" technique proposed by Philips & Gentry (1993) was employed. This technique involved

accompanying the informants to their backyards, where they confirmed and showcased the cultivated plants. Araceae species were collected during these tours, and information obtained through informal conversations was documented, supplemented by photographs.

A total of 120 individuals responsible for maintaining backyard gardens were interviewed. The age range of the interviewees followed IBGE (2010) recommendations: young people (18 to 24 years old), adults (25 to 59 years old), and the elderly (60 years old and above). The questionnaire was divided into two sections: one related to the interviewees' profiles (age, gender, profession), and the other focusing on ethnobotanical data (origin of knowledge about the plants, categories of use, and forms of cultivation). Individual interviews were conducted to avoid interruptions or direct influence from others. The data were organized and tabulated using Excel 2019 software, followed by a descriptive analysis of the results. Interviewees' responses were described in the text to discuss the results.

During the "guided tour" technique, species were photographed, and then specimens were collected at the fertile, sterile, and/or juvenile stages for better identification. Botanical material collection followed the methodology proposed by Fidalgo & Bononi (1984). All the sample collected weres deposited in Parnaíba Delta Herbarium (HDELTA) of the Federal University of Delta of the Parnaíba, UFDPar.

Species were identified using specialized literature, comparison with specimens in the HDELTA herbarium of the Federal University of Delta do Parnaíba (UFDPar), and consultation with specielists in Araceae. The scientific names of the taxa were verified using the Species List of the Flora do Brasil 2020 website (Flora do Brasil 2020, 2022) and the Tropicos website of the Missouri Botanical Garden (Tropicos, 2023).

Quantitative analysis of information

For the quantitative analysis of the ethnobotanical study, we followed the methodology proposed by Phillips & Gentry (1993) and adapted by Rossato et al. (1999). This involved calculating the "Use Value" index for each species, which represents the total number of uses mentioned by informants for that species, divided by the total number of informants (n=135).

The formula for the "Use Value" of a species by the informant is as follows:

VUs = ΣUis / ns, where, VUs = Use Value of the species; Us = number of uses mentioned by each informant for the species; ns = total number of informants (n=135, total informants).

Ethical aspects

Regarding ethical considerations, the study underwent review by the Research Ethics Committee of the Federal University of Piauí. Approval was granted under number 40376620.9.0000.5214. . The participants were informed of the nature of the work, any doubts were answered and they agreed to take part in the research by signing the Free and Informed Consent Form (FICF) which was signed in two copies, one for the participant and one for the researcher. The information was recorded for later analysis and dissertation of the research. The research was also registered with Brazil's national system for the management of genetic heritage and associated traditional knowledge (SISGEN) under the number A451A14, requesting authorization to study and collect the botanical material.

Results and Discussion

The age of the interviewees ranged from 18 to 85 years with an average of 52 years. The adult age group predominated, representing 57.5%, followed by the elderly at 39.72%. A similar age distribution was reported by Freitas et al. (2012) for Rio Grande do Norte and Carniello et al. (2010) for Mato Grosso. The results revealed that the majority of interviewees (93.03%) were female. This demographic distribution suggests a correlation with the traditionally assigned roles of women, who often dedicate more time to household chores, childcare, and backyard maintenance. The proximity of plants used for various purposes to their homes allows women to invest more time in tending to them (Vásquez et al., 2014. His observation is supported by Lobato, Lucas, and Morais-Júnior (2017), who noted that plant care is typically perceived as the responsibility of women due to their extensive involvement in domestic activities. They frequently exchange plant species and varieties based on personal and familial needs, contributing to biodiversity management and conservation. Caring for plants is viewed as a pleasurable activity that provides distraction and relaxation, as expressed by the interviewees:

> "Looking after plants is very good for me, it gives me peace, I'm filled with joy when I see them looking beautiful and full of flowers" (interviewee 8).
>
> "I love my plants, I look after them as if they were my daughters, they make me happy and calm me down, the house seems to be more beautiful and peaceful" (interviewee 13).

The activities associated with cultivating vegetables serve as powerful tools for occupational therapy, fostering improved social interaction. The

interaction between individuals and plants offers stability by connecting them with nature, facilitating interpersonal relationships, and enhancing the aesthetic appeal of surroundings. This not only adds beauty to environments but also promotes greater well-being, stimulates creativity, and instills happiness.

In economic and ethnobotanical terms, Araceae is widely used by the population for the most diverse categories of use, having representatives with therapeutic properties such as *Anthurium affine* (corn-of-the-urubu) (Luna et al., 2016), *Sauromatum guttatum* (Rabia et al., 2021), *Montrichardia linifera* (aninga) (Miranda et al., 2015*), Pistia stratiotes* (water lettuce) (Reis et al., 2019). There are also those that are used for ornamental purposes or as "decorative plants", especially the genera *Alocasia* (alocasia), *Anthurium* (anthurium*), Dieffenbachia* (comedo), *Spathiphyllum* (peace lily), *Caladium* (tinhorão) (Souza, 2019*), Epipremnum* (jiboia), *Monstera* (adam's rib), *Philodendron* (philodendrons, imbés), *Syngonium* (syngonium) and *Zantedeschia* (copo-de-leite) (Assis & Sakuragui, 2005).

Colocasia esculenta (yam) and *Xanthosoma sagittifolium* (taioba) are some of the species more representatives of the Araceae (Assis & Sakuragui, 2005). For handicrafts, *Philodendron corcovadense* (cipó-imbé) is mentioned, whose adventitious roots are widely used to make baskets and bags, and *Heteropsis flexuosa* is an important source for producing ropes, baskets, brooms, furniture and decorations for bottles and baskets (Soares et al., 2013; Ramos et al., 2017). Species such as *Dieffenbachia seguine*, *Colocasia esculenta*, *Pistia stratiotes* and *Caladium* are used as mystical plants (Barabé & Gibernau, 2015; Alves, 2019; Guimarães et al., 2020).

> In this study, certain participants noted that their engagement in plant care and utilization heightened during the Covid-19 pandemic. For some, this involvement served as a therapeutic approach to managing conditions like depression, anxiety, and panic syndromes. One informant shared their experience:"When the pandemic started, due to social isolation, I had a crisis of anxiety and depression, I did several therapies and I couldn't get well, here at home I had a few ornamental plants, so I started taking care of them and I felt good, When I noticed an improvement, my therapist suggested I continue growing plants as a form of therapy, so many friends helped me by donating lots of ornamental plants (interviewee 38)."

Ornamental plants provide essential environmental, economic, social and aesthetic benefits, enhancing the well-being and beautification of indoor and outdoor spaces. Gardening activities serve as occupational therapy and play a crucial role in health preservation and recovery, mitigating the health impacts of stressful events (Van Den Berg et al., 2010; Reis et al., 2020).

Regarding occupations,, housewife, teacher, farmer and artisan were the most prominent, comprising 21%, 19.17%, 13.69% and 6.84%, respectively. Other occupatinos reported by informants include machine operator, lawyer, shopkeeper, bricklayer, service assistant, and furniture assembler.

Crafts in the region are practiced by 6.84% of those interviewed. Materials such as roof tiles, gourds (*Lagenaria siceraria* (Molina) Standl), tires, lids and pet bottles are reused and transformed into various items for personal use and for sale (**Figure 2**). In addition to providing pleasure and serving as a form of distraction for the producers, the importance of these practices in protecting and reducing solid waste in the environment was emphasized. Hertzog (2018) highlights that crafts using recycled materials as a effective process contributing to sustainability and environmental preservation. However, such practices are still not widely adopted by the majority of the population in Brazil.

The interviewees' homes were found to have backyards with plants used by the residents for food, ornamental and mystical purposes, as well as for medicinal purposes. The affinity for plants is a characteristic of the interviewees, who use species grown in the preserved areas of their backyards in vertical gardens or in pots.

As for the origin of the knowledge acquired, this study shows that 47.94% of the knowledge came from friends/neighbors, 41.09% from parents or grandparents, and 11% from reports and tips on cultivation and use on television programs and the internet. Lozada et al. (2006) reported that ethnobotanical knowledge can occur through vertical transmission, which consists of socialization within the kinship group, and/or horizontal transmission, between individuals of the same generation. It is worth noting that knowledge was transmitted horizontally and vertically, predominantly through parents, grandparents and groups of friends/neighbors.

As for the survey of Araceae and the diversity of species used by the local population, 19 species belonging to 13 genera were identified (**Table 1**) where the most cultivated species were *Dieffenbachia seguine*

Figura 2. Handcrafted pieces produced by interviewees in neighborhoods in the municipality of Floriano, Piauí.a-Tires reused as plant cultivation supports; b; c - Pitcher made from roof tiles and vegetable peel, pitchers made from bottles.

Table 1. List of Araceae species used in neighborhoods in the municipality of Floriano, Piauí Types of use: mystical (MI) and ornamental (OR). ΣUs: sum of uses, VU: use value. Origin: Cultivated (C); Habit: Climbing (TR), Epiphytic (E), Hemiepiphytic (HE) and Herbaceous (H). To calculate the use value: 120 informants.

Species	Popular name	ΣUs	Use	Origin	VU	Habitat	Distribution
Aglaonema commutatum Schott	Prickly pear	2	OR,MI	C	0.016	H	Malásia Central
Aglaonema spp.	Café-de-salão, amarantu	1	OR	C	0.008	H	Tropical forests of Asia
Aglaonema costatum NEBr.	Aglaonema	1	OR	C	0.008	H	
Alocasia cucullata (Lour.) G. Don	Alocasia	1	OR	C	0.008	H	India
Alocasia x amazônica	Alocasia; Drill-face	1	OR	C	0.008	H	Southwest Asia
Anthurium andraeanum Linden ex André	Anthurium	1	OR	C	0.008	H	Colombia
Caladium bicolor (Aiton) Vent.	Tinhorão, tajá	1	OR	C	0.008	H	Brazil
Colocasia esculenta (L.) Schott	Taro	1	OR	C	0.008	H	Ásia tropical
Dieffenbachia seguine (Jacq.) Schott.	With me-nobody can; with my life-nobody can	2	OR, MI	C	0.016	H	Tropical regions
*Epipremnum aureum (*Linden & André) G.S. Bunting	Climber; boa constrictor	2	OR, MI	C	0.016	E	Solomon Islands
Epipremnum pinnatum (linden & andré) g.s.bunting	Adam's rib; monstera	1	OR	C	0.008	TR	Mexico
Monstera obliqua Miq.	Rib of eva; monstera	1	OR	C	0.008	TR	Central and South America
Monstera deliciosa Liebm.	Adam's rib; monstera	1	OR	C	0.008	H	Central America
Philodendron acutatum Schott. Schott ex Endl.	Imbé; horse face	1	OR	C	0,008	HE	Amazon basin
Thaumatophyllum bipinnatifidum (Schott ex Endl.) Sakur., Calazans & Mayo	-	1	OR	C	0.008	HE	South America.
Syngonium podophyllum Schoot.	Singonium	1	OR	C	0.008	HE	South America.
Spathiphyllum wallisii Regel	Lily of peace	1	OR	C	0.008	H	Central America
Zamioculcas zamiifolia (Lodd.) Engl.	Zamioculcas; tree of fortune	2	OR, MI	C	0.016	H	Africa
Zantedeschia aethiopica (L.)	Cup of milk	1	OR	C	0.008	H	South Africa

(37%), *Caladium bicolor* (22.96%) and *Epipremnum aureum* (22.22%). *Thaumatophyllum bipinnatifidum* (2.22%) and *Zantedeschia aethiopica* (1.48%) were the species with the fewest citations.

In contrast to findings in other regions, our study reveals a relatively low number of Araceae species in the surveyed area, primarily utilized for ornamental purposes, commonly referred to as 'decorative plants'. Unlike Oliveira (2011), who conducted a comprehensive survey of Araceae species in the Lower Rio Negro region, identifying 51 species across 15 genera, with 23 species serving various utilitarian purposes including handicrafts, food, medicinal, ornamental, and mystical uses. Notably, *Philodendron solimoesense* and *Heteropsis flexuosa* were recognized for their utility in crafting handicraft utensils

The ornamental category emerged as the most cited in the study area. Ornamental plants are typically placed in front of or beside houses, often in plastic

containers like pots, basins, and buckets. While lacking a specific utilitarian purpose like food or medicinal plants, they are cultivated primarily for aesthetic pleasure. These plants are frequently shared among friends and neighbors, predominantly by women. Requiring more care, they serve to enhance the beauty of homes. Notably, women tend to care for these plants, viewing it not as an obligation but rather as a source of relaxation, contributing to the beautification and coziness of their hom (Barreto & Freitas, 2017; Lobato et al., 2017).

Aglaonema commutatum (**Figure 3**a) features a white petiole and leaf blades marked with yellow and green stains and white veins. The leaves are narrow, elliptical, light green and heavily mottled with irregular spots. This species, easily naturalized, thrives outdoors in well-drained, moist soils, requiring attentive care. Studies have primarily focused on genetic improvement in *Aglaonema* cultivars, emphasizing beautiful variation and color, as species within this genus are popularly cultivated in homes due to their stunning foliage and hues(Bown, 2000; Yeh et al., 2007).

Dieffenbachia seguine (fig. 3b), *Epipremnum aureum* (fig. 3c) and *Zamioculcas zamiifolia* (fig. 3d) exhibited the highest use value (0.016). *Dieffenbachia seguine*, commonly known as 'dumb cane' or 'mother-in-law's tongue,' was the most cultivated species, serving ornamental and mystical purposes. Its dark green leaves adorned with light spots and large size attract growers' attention. Positioned near entrances or in front of houses, locals believe they ward off evil spirits and negative energies like envy and the 'evil eye´.

Apart from its ornamental and mystical uses, *Dieffenbachia* seguine has been studied by Barnei & Fox (1955), who identified its stem extract's use in arrows in the West Indies, while mentioned its role in preparing zombie poison. Common in backyards of Rio Branco, Acre, it is revered for its mystical attributes in warding off evil intentions, envy, and curses, often termed 'plants of strength' or 'power plants,' used in religious rituals or protective baths utilizing its leaves or entire plant. *Zamioculcas zamiifolia* (fig. 3d) serves ornamental and mystical purposes. Locals may be unfamiliar with its name, but it stands out for its bright green, elongated leaves and robust branches, symbolizing peace and prosperity within households. Its ornamental value lies in its distinctive appearance, daptability to low light, and tolerance to water stress (Chen & Henny, 2003). Souza (2019) also noted its prevalence in gardens and household balconies, often exchanged between family and friends.

The capability of Z. zamiifolia leaves to absorb volatile organic compounds like benzene, toluene, ethylbenzene, and xylene from the air makes it an excellent choice for air purification, particularly indoors, with significant potential for enhancing air quality. Additionally, the plant's antioxidant and cytotoxic effects provide intriguing prospects for future resource management. Ornamental plants serve not only as decorative elements but also contribute to air quality improvement (Sriprapat et al., 2014; Sivilla & Santos, 2019).

Epipremnum aureum (fig. 3c) is a hemiepiphytic plant that typically grows by clinging to tree trunks, fences, or walls. In the neighborhoods of Floriano, however, they are exclusively utilized as ornamental plants. Despite being highly toxic due to the presence of calcium oxalate crystals, it is widely used as an ornamental plant in households. Recent years have seen increased attention towards ethnobotanical studies exploring the traditional uses of natural compounds, particularly those of plant origin. This species exhibits potential properties such as insecticidal and antihyperlipidemic activities, as well as anti-inflammatory and analgesic effects (Linet et al., 2010; Meshram & Srivastava, 2015; Pranitha et al., 2019).

Research conducted by Yang (2011) highlighted

Figure 3. Species Araceae used in Floriano municipality, Piauí, Brazil: a. *Aglaonema commutatum* ; b. *Dieffenbachia seguine*; c. *Epipremnum aureum*; d. *Zamioculcas zamiifolia*.

E. aureums ability to absorb and metabolize internal pollutants like formaldehyde, along with its capacity to reduce benzene and trichloroethylene levels. Furthermore, Srivastava, Shwarupa, and Bhagyawant (2011) demonstrated its significant antimicrobial activity against various pathogens.

Caladium bicolor (**Figure 4**a) features a peltate leaf blade adorned with white, red, and sometimes pink spots. Cultivated caladiums exhibit various other variations, attracting attention for ornamental purposes. It was cited in the study and falls under the category of ornamental use. According to Vázquez, Estrada, and Limón (2010) and Salaco et al. (2015), this species possesses medicinal properties and is utilized as an antidiuretic due to its antimortility, anticonvulsant, anxiolytic, and antidepressant effects (Akhigbemen et al., 2019). The species is employed as a hunting amulet by indigenous groups in Guyana, serving to ensure good luck in hunting, fishing, agriculture, love, and war. Its tubers facilitate easy transportation, and its natural morphological variability allows associations with a diversity of game animals, aiding in the attraction of animals during hunts. A hunter would carry a leaf or a tuber with him into the forest. If he encountered a particular type of animal multiple times, that animal would be drawn to the specific plant he was carrying (Andel et al., 2015). Esteves et al. (2007) identified the use of this species in treating wounds caused by Leishmania, where the roots are grated and applied to the wounds. *Alocasia cucullata* (Figure 4.b) falls under the category of ornamental use, corroborating the findings of Xiong et al. (2020). Nauheimer, Boyce, and Renner (2012) highlight the ethnobotanical value of this species, presenting it as an important food and ornamental plant. Besides serving as an "ornamental plant," it can also contribute to the ecological control of indoor air pollution (Wang et al., 2020). The species has also been cited for its therapeutic properties. Its rhizomes and leaves, after being decocted, have been used to treat gastroenteropathies and stomach aches. Otero et al. (2000) indicated its use in treating snake bites through decoctions, external baths, and poultices using ripe fruit. Fang et al. (2018) conducted research demonstrating the species has anti-malignant melanoma activity, reducing the size and weight of tumors, underscoring the importance of conducting further studies on the species given its diverse therapeutic actions. Wei et al. (2015) tested extracts of *A. cucullata* on gastric cancer cells and fobserved tumor reduction.

With technological advances, some ornamental species of Araceae are derived through genetic modification. According to Henny & Chen (2009), these breeding innovations have led to the production of many new hybrid cultivars over the last 20 years by both public and private breeders worldwide to cater to the consumer market. In Floriano, Piauí, the species *Alocasia* x *amazonica* and *Alocasia* x *amazonica* Poly are hybrid species, originating from the crosses between t *Alocasia sanderiana* W. Bull and *Alocasia lowii* Hook.f.

Philodendron acutatum (Fig. 4c) is primarily used as an ornamental plant but has been mencioned in studies as a medicinal plant (David & Pasa, 2017), employed in treating rheumatism, bursitis, and erysipelas, through eaf or bark baths, teas, and compresses. hey feature feeder roots, a sympodial stem, a leaf with an inconspicuous sheath, a conspicuous smooth or green petiole, an axial inflorescence with a short peduncle shorter than the spathe, flowers with short stamens, and berry-like fruits. Due to their ease of propagation, adaptability to different environments, and widespread use for ornamental purposes, the species holds priority in landscaping plans (Costa et al., 2017; Sakuragui et al., 2020).

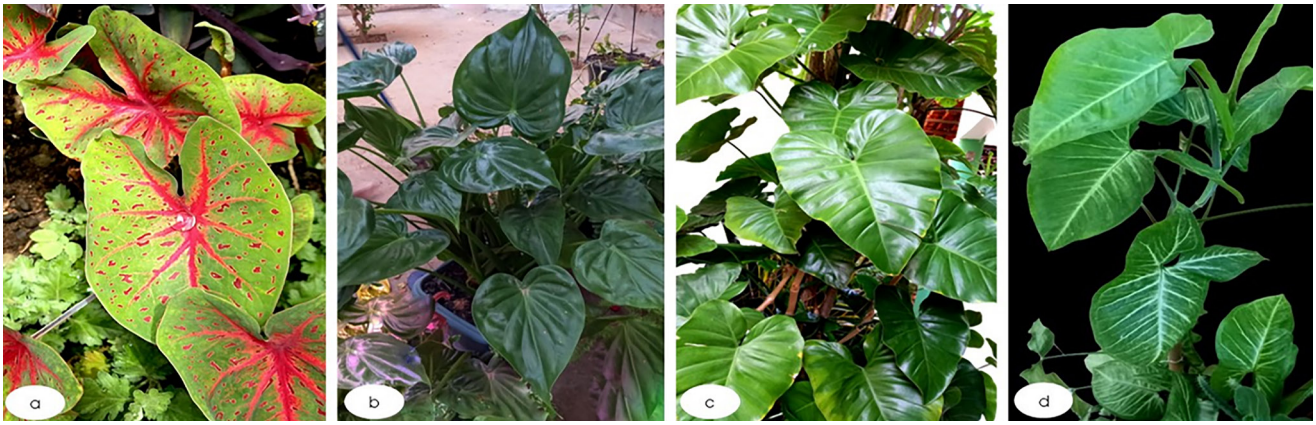

Figure 4: Caladium bicolor (Figure 4a); Alocasia cucullata (Figure 4.b); Philodendron acutatum (Fig. 4c); Syngonium podophyllum (Fig. 4d).

Philodendron is considered to be the genus with the second largest number of species in Araceae family. It is found in all Brazilian states and biomes, especially in the Atlantic, Amazon and Cerrado forests, with a total of 152 species, 70 of which are endemic. The species hold economic importance in horticulture due to their lush foliage, utilized for interior and exterior decoration, and are considered significant elements of neotropical forests (Mayo et al., 1997; Vasconcelos, 2018; Sakuragui et al., 2020).

The plants were obtained through donations from friends and family, or purchased at fairs. This data corroborates Oliveira (2011) and Aguiar & Barros (2012), who emphasize that many many plants grown in backyards are acquired through seedlings received or exchanged with neighbors, demonstrating the backyard's importance for interaction and socialization between individuals, in municipal markets, or brought from other regions by the residents themselves.

Syngonium podophyllum (Fig. 4d) is a climbing plant that spreads rapidly in the yard and/or pots. Young and adult individuals were identified the interviewees as distinct species due to the morphological modification of this species in the two life stages. *S. podophyllum* features glabrous leaves with several divisions when adult and simple in the young stage and may exhibit white variegation and striated veins (Lorenzi, 2015). Besides its ornamental use, S. podophyllum has demonstrates antibacterial and cytotoxic potential (Kumar et al., 2014).

Regarding the origin and distribution of Araceae species, *Aglaonema commutatum*, *Alocasia cucullata*, *Epipremnum aureum*, *Spathiphyllum wallisii*, *Zamioculcas zamiifolia*, *Zantedeschia aethiopica*, *Colocasia esculenta*, are cited as exotic plants cultivated in Brazil, but not identified for the state of Piauí.

Syngonium podophyllum is a species naturalized in Brazil and originated in Central America. *Caladium bicolor* and *Monstera obliqua* are native species in Brazil, occurring in the Northeast region; however there was no record for the state of Piauí, and only *Philodendron acutatum* showed a record for the state.

Conclusions

The interviewees demonstrated a tendency to cultivate a limited diversity of Araceae species, predominantly valuing their ornamental and mystical aspects. The absence of other utilitarian categories is attributed to cultural factors, with the local culture placing greater emphasis on the ornamental value of these plantas. He act of cultivating these plants involves more than just basic care; it often serves as a form of occupational therapy and, in some cases, aids in managing emotional problems, particularly during the COVID-19 pandemic. Sharing these plants with neighbors and friends is common practice, although the species are often known only by their popular names. The community cultivates these plants primarily for their aesthetic appeal and their ability to enhance the beauty of their homes. While handicrafts are practiced by some individuals in the region, none of the interviewees reported using Araceae species for such purposes, highlighting their primary role as ornamental plants. The Araceae species identified in the neighborhoods of Floriano, Piauí, have not been catalogued with occurrences for the state of Piauí, as most of them are exotic, cultivated, or naturalized (such as *Syngonium podophyllum*), with records for the Northeast region, but lacking identification for the state of Piauí.

This study contributes to the dissemination of knowledge about the cultivation of Araceae species and enriches local culture for both society and the scientific community. The information presented in this study holds significance for the state of Piauí in terms of cultural practices related to Araceae cultivation and contributes to new records for the state.

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