

## Medicinal plants used in the Santo Antônio dos Pretos quilombola community (Codó Municipality, Maranhão, Brazil)

We performed an ethnobotanical survey of the medicinal plants used by the Santo Antônio dos Pretos quilombola community, located 50 km away from the urban perimeter of Codó municipality, Maranhão state, northeastern Brazil. We interviewed 20 residents: 14 females and 6 males, with ages ranging from 18 to 80 years. The plant species reported by residents were collected and photographed. We identified a total 62 medicinal plant species from 34 botanical families. Lamiaceae was the most representative family, followed by Fabaceae and Rutaceae. The most cited species were: *Dysphania ambrosioides* ('Mexican tea'), *Sansevieria trifasciata* ('Snake plant') and *Gymnanthemum amygdalinum* ('Bitterleaf'). The predominant preparation method was tea, especially by decoction (40%) and infusion (17%). The most used plant part was the leaf (40%). The majority of species were reported to be used for treating digestive diseases, followed by diseases associated with inflammation, pain and fever. We found that the quilombola residents have a deep knowledge on medicinal plants and their uses. Our findings therefore reveal the need for more ethnobotanical studies on the use of those plants, as well as for the valorization of popular knowledge.

**Keywords:** Ethnobotany; Medicinal plant species; Quilombos.

## Plantas medicinais utilizadas na comunidade quilombola Santo Antônio dos Pretos (Codó, Maranhão, Brasil)

Esse estudo objetivou realizar um inventário etnobotânico das plantas medicinais utilizadas pela comunidade quilombola Santo Antônio dos Pretos, localizada a 50 km do perímetro urbano do município de Codó/MA. Foram realizadas entrevistas com 20 moradores do quilombo, 14 pertencem ao sexo feminino e 6 ao sexo masculino, com idades de 18 a 80 anos, e foram realizadas coletas e tiradas fotografias das espécies vegetais. Foram identificadas 62 espécies de plantas com propriedades medicinais, distribuídas em 34 famílias botânicas, sendo Lamiaceae a família mais representativa, seguida de Fabaceae e Rutaceae. As espécies mais citadas foram: *Dysphania ambrosioides* (mastruz), *Sansevieria trifasciata* (espada-de-São-Jorge) e *Gymnanthemum amygdalinum* (boldo-da-Bahia). Dentre as formas mais utilizadas observou-se uma predominância de chás, sendo esses preparados por decocção (40%) e infusão (17%). A parte vegetal mais utilizada nos preparos terapêuticos foi a folha (40%). O maior número de espécies foi indicado para tratar doenças do aparelho digestivo, seguido de doenças associadas à inflamação, dor e febre. Os moradores do quilombo demonstram um profundo conhecimento sobre plantas medicinais e suas utilidades, e por isso, há necessidade de realização de mais estudos etnobotânicos para a valorização do saber popular.


**Palavras-chave:** Etnobotânica; Espécies vegetais medicinais; Quilombos.


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Rayane Frazão Olanda   
Universidade Federal do Maranhão, Brasil  
<http://lattes.cnpq.br/6004981898550182>  
<http://orcid.org/0000-0003-2825-1170>  
[rayane\\_fraza@gmail.com](mailto:rayane_fraza@gmail.com)

Ednilson Barros Barroso   
Universidade Federal do Maranhão, Brasil  
<http://lattes.cnpq.br/3447224585476878>  
<http://orcid.org/0000-0003-2137-5330>  
[e\\_barr03@live.de](mailto:e_barr03@live.de)

Manuel Losada Gavilanes   
Universidade Federal de Lavras, Brasil  
<http://lattes.cnpq.br/2610452063460164>  
<http://orcid.org/0000-0001-7480-6582>  
[mlgavilanes@ufla.br](mailto:mlgavilanes@ufla.br)

Eduardo Oliveira Silva   
Universidade Federal do Maranhão, Brasil  
<http://lattes.cnpq.br/5517282422965192>  
<http://orcid.org/0000-0002-8899-2774>  
[eoliveira12@yahoo.com.br](mailto:eoliveira12@yahoo.com.br)



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## **INTRODUCTION**

The interrelationship between plants and people has produced modes of interaction that are based on the knowledge that different peoples have – and on the use these peoples make – of natural elements and their environment, which has led to the creation of the concept of Ethnobotany. Ethnobotany can be understood as the study of the direct interrelationship between people from living cultures and the plants occurring in their environment. One of the goals of ethnobotany is to investigate the use of medicinal plants to discover new medicines (ALBUQUERQUE, 2005).

Plants are the raw material used to produce not only herbal medicines but also conventional drugs. According to the World Health Organization, medicinal plants are those that contain, in one or several of its organs, substances that may be used with therapeutic purposes (GONÇALVES, 2005). In that sense, in processes collectively known as folk medicine, medicinal plants are also used as homemade medicines by traditional peoples such as the quilombolas (BRASIL, 2006). Traditional populations depend directly on nature, which is why it is important to develop projects that include knowledge about medicinal plants in order to improve the health of these populations and the knowledge of their local flora and the preservation of their cultural practices. Thus, ethnobotany contributes directly to the preservation of traditional knowledge, as well as to the use of plants to the benefit of man (OLIVEIRA et al., 2016).

Since a large number of quilombola families opt for using natural medicines, knowing the efficacy and veracity of those remedies is of paramount importance, as is to know the different methods of preparation and use of such medicines. Thus, we aimed to survey and systematize the popular knowledge on the medicinal flora of the Santo Antônio dos Pretos quilombola community, as well as the sociocultural information of the community.

## **MATERIALS AND METHODS**

### **Study area**

The study was conducted at the Santo Antônio dos Pretos quilombola community, located 50 km away from the urban perimeter of Codó municipality, Maranhão state, northeastern Brazil. The community is located on the margins of highway MA 026, neighboring the municipalities of Codó and Governador Archer (Fig. 1). Santo Antônio dos Pretos was founded in the 18<sup>th</sup> century, serving as a refuge for slaves that ran from their owners. In 1993, a residents association was founded in the area, which through Article no. 68 of the Brazilian Federal Constitution was entitled Santo Antônio dos Pretos Territory. Currently, the area is formed by several villages with approximately 90 families in total, of which 37 live in the so-called 'mother community' (Fig. 2).

The vegetation type in the quilombola community is Cerrado, which occurs along with babassu-palm forests and gallery forests. The Itapecuru is the main river driving the socio-environmental reality of the quilombo. Ever since the 1990's, the community has been widely visited by members of black movements and researchers interested in the black traditions of rural areas. The community is the cultural birthplace of

the Terecô, a religious segment of African origin from Codó municipality.

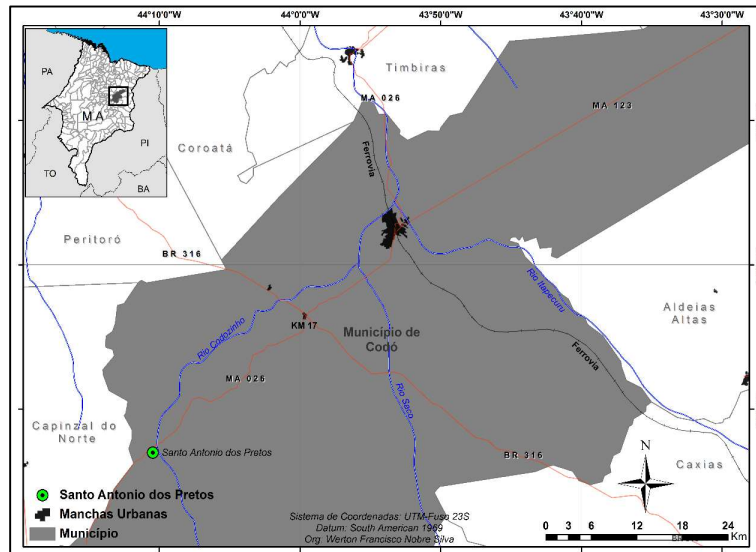


Figure 1: Geographic location of the Santo Antônio dos Pretos quilombola community. Source: ArcGis 9.3; Google Earth 2014.



Figure 2: Residential structures of the Santo Antônio dos Pretos quilombola community.

## Methodology

The fieldwork was Flora do Brasil (2020) from June through September 2016, by applying structured interviews and pre-established questionnaires to 20 residents. We gave preference to people that had a role as family caregivers, regardless of age or gender. The ethnobotanical survey consisted of two questionnaires. The first one contained socioeconomic and cultural information on the studied community, while the second one aimed to collect information on the knowledge and use of the species used by residents as medicinal plants.

The ethnobotanical study was conducted following Bodgan et al. (1994), who suggest establishing a friendship with informants. As sampling technique, we adopted the snowball method proposed by Baldin et al. (2011), which consists in each interviewee indicating the next, so that at the end of the data collection period all informants have been interviewed. We also adopted the free trail method proposed by Albuquerque et al. (2008), whereby community members guide the researchers through a trail they establish, indicating the plants they use with medicinal purposes.

Medicinal plant species were recognized in loco by the common name given by informants. The species were photographed, collected and taxonomically identified. Species identification was made by

consultation to identification keys, specialized literature and specialist botanists. Taxonomic classification followed APG IV (2016) and scientific names followed the Flora do Brasil (2020) and The Plant List (2020) database. The collected species were deposited in the Professor Deusiano Bandeira de Almeida Herbarium (HENAC) at Federal University of Maranhão – Codó campus.

## RESULTS AND DISCUSSION

Of the 20 interviewees, 14 were women (70%) and six were man (30%). Women showed to have higher contact with medicinal plants and deeper knowledge on their therapeutic properties. We also found that interviewees from 18 through 28 years old prefer to use drugstore medicine, due to, as they reported, the possibility of treating diseases more easily and more rapidly that way. On the other hand, interviewees from 52 through 80 years old adopt the traditional use of medicinal plants as primary treatment method, while also stating that going to the hospital would only be considered in case of emergency (Table 1).

**Table 1:** Synopsis of the socioeconomic information of interviewees from the Santo Antônio dos Pretos quilombola community. Period: December 2004 through November 2005.

RELEVANT INFORMATION	INTERVIEWEES (n=20)	%
Gender representativeness	Female	70%
	Male	30%
Education level	Illiterate or up to the 4 <sup>th</sup> grade of Elementary School	80%
	Complete Elementary School	10%
	Up to High School	10%
	University education	0%
Professional activity	Retirees	90%
	Self-employed	10%
Source of knowledge on the use of medicinal plants	Grandmother, mother and the elderly	100%
Preference of interviewees for the use of medicines	For speed and efficiency (industrialized)	20%
	For tradition and efficiency (plants)	80%

In the ethnobotanical survey, we recorded 62 species from 34 botanical families (Table 2). The most species-rich families were Lamiaceae, with seven species, and Fabaceae, with six. Both these families have been reported as the most frequent ones in several other ethnobotanical surveys conducted in Brazil (ARAÚJO et al., 2015; SANTOS et al., 2015; FARIAS et. al., 2015) and also, more specifically, in the Brazilian state of Maranhão, as found by Oliveira et al. (2016a) and (2016b) in the municipalities of Coelho Neto and Aldeias Altas, respectively.

**Table 2:** Medicinal plant species used in the Santo Antônio dos Pretos quilombola community at Codó municipality, Maranhão state, northeastern Brazil. Family, species, vernacular name, plant part used, preparation method, indicated therapeutic use, and number of reports (NR).

Family / Species	Vernacular name <sup>1</sup>	Plant part used	Preparation method <sup>2</sup>	Indicated therapeutic use	NR
<b>Amaranthaceae</b> <i>Alternanthera ramosissima</i> (Mart.) Chodat & Hassl.	Joseph's coat ['meracilina']	Leaves	Tea (decoction)	Anti-inflammatory	1
<i>Dysphania ambrosioides</i> (L.) Mosyakin & Clemants	Mexican tea ['mastruz']	Whole plant	Tea (decoction); juice	Anti-inflammatory	20
<b>Anacardiaceae</b> <i>Mangifera indica</i> L.	Mango ['mangueira']	Leaves	Tea (decoction)	Sinusitis; bellyache	2
<i>Anacardium occidentale</i> L.	Cashew ['cajueiro']	Bark	'Garrafada'	Anti-inflammatory	2
<i>Myracrodruon urundeuva</i> Allemão	Urunday ['aroeira']	Bark	Tea (decoction)	Stomach; anti-inflammatory	10

<b>Apocynaceae</b> <i>Calotropis procera</i> (Aiton) Dryand	Roostertree ['ciumeira']	Latex; leaves; roots	Tea (decoction) and topical use	Heart; skin injury; tranquilizer	1
<b>Arecaceae</b> <i>Cocos nucifera</i> L.	Coconut palm ['coco-da-praia']	Water	Serum obtained from the coconut water	Diarrhea; intestine	1
<b>Asparagaceae</b> <i>Sansevieria trifasciata</i> Prain	Snake plant ['espada-de-São-Jorge'; 'língua-de-cobra']	Roots	'Garrafada'; tea (decoction)	Anti-inflammatory; STDs	15
<b>Asteraceae</b> <i>Helianthus annuus</i> L.	Common sunflower ['girassol']	Juice	Tea (infusion)	Stroke prevention; headache	1
<i>Ageratum conyzoides</i> (L.) L.	Goatweed ['catinga-de-bode']	Roots	Tea (decoction)	Colic	2
<i>Gymnanthemum amygdalinum</i> (Delile) Sch.Bip. ex Walp	Bitterleaf ['caboclo'; 'boldo-da-Bahia']	Leaves	Tea (decoction)	Intestine; liver; analgesic	12
<b>Bignoniaceae</b> <i>Handroanthus impetiginosus</i> (Mart. ex DC.) Mattos	Pink trumpet tree ['pau-d'arco-roxo']	Leaves; bark	'Garrafada'	Headache; toothache; earache	1
<b>Bixaceae</b> <i>Bixa orellana</i> L.	Annatto ['urucum']	Fruit (pulp)	Syrup; tea (decoction)	Cough; respiratory problems; digestive	2
<b>Cleomaceae</b> <i>Cleome spinosa</i> Jacq.	Spiny spiderflower ['mussambé']	Roots	Tea (decoction)	Asthma; bronchitis; cough; headache	1
<b>Crassulaceae</b> <i>Bryophyllum pinnatum</i> (Lam.) Oken	Cathedral bells ['Santa-Quitéria'; 'Santa-Filomena']	Leaves	Tea (infusion)	Gastritis	10
<b>Costaceae</b> <i>Costus</i> sp.	Spiral ginger ['cana-da-Índia']	Leaves	Tea (infusion)	Tranquilizer; hypertension; diuretic	3
<b>Cucurbitaceae</b> <i>Momordica charantia</i> L.	Balsampear ['melão-de-São-Caetano']	Whole plant	Topical use	Skin problems	1
<i>Luffa operculata</i> (L.) Cogn	Loofah ['buchinha-paulista']	Fruit	Bath/shower; tea (decoction)	Inflammation; flu; sinusitis	1
<b>Euphorbiaceae</b> <i>Jatropha gossypifolia</i> L.	Bellyache bush ['pião-roxo']	Leaves	Tea (decoction)	Headache	1
<i>Croton heliotropiifolius</i> Kunth	velame	Leaves	Tea (decoction)	Indigestion	1
<i>Ricinus communis</i> L.	Castor-oil plant ['mamona']	Seeds	Seed oil	Laxative	3
<b>Fabaceae</b> <i>Senna occidentalis</i> (L.) Link	Coffee senna ['fedegoso']	Roots	'Garrafada'; tea (decoction)	Flu; fever; abortive	3
<i>Cajanus cajan</i> (L.) Millsp.	Pigeon pea ['feijão-guandu']	Leaves; seed	Bath/shower	Stroke	1
<i>Dioclea violacea</i> Mart. ex Benth.	['coronha']	Pod; bark	'Garrafada'; tea (decoction)	Convulsion; lack of appetite	1
<i>Tamarindus indica</i> L.	Tamarind ['tamarindo']	Fruit; leaves	Juice; tea (infusion)	Anemia; laxative	3
<i>Libidibia ferrea</i> (Mart. ex Tul.) L.P. Queiroz	Brazilian ironwood ['jucá; pau-ferro']	Fruit; bark	Tea (decoction)	Kidney stone; bellyache; back pain	3
<i>Bauhinia</i> cf. <i>forficata</i> Link	Brazilian orchid tree ['pata-de-vaca']	Leaves	Tea (decoction)	Inflammation	3
<b>Lamiaceae</b> <i>Leonotis nepetifolia</i> (L.) R.Br.	Lion's ears ['cordão-de-São-Francisco'; 'cordão-de-frade']	Stem; leaves; flower	Tea (infusion)	Diuretic; anti-rheumatic; anti- asthmatic	3
<i>Mentha</i> cf. <i>suaveolens</i> Ehrh.	Mint ['hortelã']	Leaves	Syrup; tea (infusion)	Flu; cough; fever	3
<i>Ocimum gratissimum</i> L.	Clove basil ['manjeriçã']	Leaves	Tea (infusion)	Flu; digestion	2
<i>Ocimum americanum</i> L.	Hoary basil ['estoraque']	Leaves; seed	Bath/shower	Flu	3
<i>Plectranthus ornatus</i> Codd	Spurflower ['boldo-miúdo'; 'boldo-do-Chile']	Leaves	Tea (infusion)	Stomach; abortive	2
<i>Plectranthus barbatus</i> Andrews	Forskohlii ['falso-boldo']	Leaves	Tea (infusion)	Liver; stomach	10
<i>Plectranthus amboinicus</i>	Country borage	Leaves	Syrup; tea	Flu	3

(Lour.) Spreng.	['malva-do-reino']		(infusion)		
<b>Malvaceae</b> <i>Luehea grandiflora</i> Mart. & Zucc.	açoita-cavalo	Bark	'Garrafada'	Gastritis; kidneys; prostate	1
<b>Meliaceae</b> <i>Cedrela fissilis</i> Vell.	Cedar ['cedro']	Stem	Tea (decoction)	Stroke; gastritis	1
<b>Moraceae</b> <i>Maclura tinctoria</i> (L.) D. Don. ex Steud.	Fustic tree ['amoreira']	Bark	Syrup; tea (decoction)	Cough; flu	10
<b>Myrtaceae</b> <i>Eucalyptus globulus</i> Labill.	Tasmanian blue gum ['eucalipto']	Leaves	Tea (decoction)	Flu; fever	2
<i>Psidium guajava</i> L.	Guava ['goiabeira']	Leaves	Tea (infusion)	Bellyache; digestion	2
<i>Syzygium cumini</i> (L.) Skeels	Java plum ['oliveira'; 'jamelão'; 'azeitona-preta']	Bark; leaves; seed	'Garrafada'	Inflammation in the uterus	1
<i>Gossypium hirsutum</i> L.	Upland cotton ['algodão']	Leaves	Juice	Anti-inflammatory	2
<i>Hibiscus sabdariffa</i> L.	Roselle ['cuchá-vermelho'; 'vinagreira']	Leaves	Pickling in water	Anemia; lack of appetite; colic; obesity	1
<b>Oxalidaceae</b> <i>Averrhoa carambola</i> L.	Star fruit ['carambola']	Fruit	Juice	Kidneys; liver; high blood pressure	1
<b>Passifloraceae</b> <i>Turnera subulata</i> Sm.	White alder ['chanana']	Leaves; roots	Tea (infusion)	Liver; anti-inflammatory	3
<b>Pedaliaceae</b> <i>Sesamum indicum</i> L.	Sesame ['gergelim-preto']	Seed (latex)	Topical use	Menopause; stroke	1
<b>Plantaginaceae</b> <i>Scoparia dulcis</i> L.	Licorice weed ['vassourinha']	Leaves	Juice	Conjunctivitis	2
<b>Phytolaccaceae</b> <i>Petiveria alliacea</i> L.	Guinea henweed ['tipi']	Roots; leaves	'Garrafada'; tea (decoction)	Regulates menstruation; disrupted puerperal care ['resguardo quebrado']; rheumatic pain	1
<b>Phyllanthaceae</b> <i>Phyllanthus niruri</i> L.	Gale of the wind ['quebra-pedra']	Roots	Tea (infusion)	Kidney stone	3
<b>Piperaceae</b> <i>Piper aduncum</i> L.	Spiked pepper ['pimenta-longa']	Fruit	Tea (infusion)	Body pain; weakness; diuretic	10
<b>Poaceae</b> <i>Cymbopogon citratus</i> (DC.) Stapf	Lemon grass ['capim-limão']	Leaves	Tea (infusion)	Colic; hypertension; tranquilizer	3
<i>Saccharum officinarum</i> L.	Sugarcane ['cana-de-açúcar']	Straw	Tea (decoction)	Hypertension; heart	3
<b>Rubiaceae</b> <i>Morinda citrifolia</i> L.	Indian mulberry ['noni']	Leaves; fruits	'Garrafada'	Arthritis; high cholesterol; gastritis	2
<i>Cinchona calisaya</i> Wedd.	Quinine ['quina']	Bark	Tea (decoction)	Colic; wound healing; abortive	1
<b>Rutaceae</b> <i>Citrus x limon</i> (L.) Burm f.	Lemon ['limão']	Fruit; bark; leaves	Tea (infusion); inhalation	Indigestion; nausea; fever; flu; cough	10
<i>Citrus reticulata</i> Blanco	Mandarin orange ['tangerina']	Leaves; fruit bark	Tea (decoction)	Indigestion	1
<i>Citrus X aurantium</i> L.	Bitter orange ['laranja']	Leaves; bark; fruit	Tea (decoction)	Indigestion; nervousness; cold	10
<b>Solanaceae</b> <i>Capsicum frutescens</i> L.	Tabasco pepper ['pimenta-malagueta']	Leaves	Topical use; tea (decoction)	Rheumatic pain; poor circulation; cold	1
<b>Urticaceae</b> <i>Cecropia glaziovii</i> Sneathl.	Red cecropia ['embaúba']	Leaves; water	Tea (infusion)	Kidney stone; anemia; anti-inflammatory	2
<b>Verbenaceae</b> <i>Lippia alba</i> (Mill.) N.E.Br. ex Britton & P. Wilson	Bushy matgrass ['erva-cidreira']	Leaves	Tea (infusion)	Tranquilizer; analgesic; fever	1
<i>Stachytarpheta cayennensis</i> [Rich.] Vahl	Blue snakeweed ['gervão']	Leaves	Topical use, tea (decoction)	High cholesterol; stomachache; liver	2
<b>Xanthorrhoeaceae</b> <i>Aloe vera</i> (L.) Burm. f.	Aloe ['babosa']	Leaves	Topical use	Burns; skins disease; laxative; gastritis; wound healing	3
<b>Zingiberaceae</b> <i>Alpinia zerumbet</i> (Pers.) B.L. Burtt. & R.M. Sm	Shell ginger ['jardineira']	Leaves	Tea (decoction); bath/shower	Fever; chickenpox	3

<sup>1</sup>Vernacular names in Portuguese, as informed by the residents, are provided in square brackets.

<sup>2</sup>Garrafada a preparation made by macerating plant parts in aqueous and/or alcoholic mediums for a few days. Garrafadas are a widespread component of Brazilian folk medicine. The name derives from the Portuguese word 'garrafa', which means 'bottle'.

The most cited species were *Dysphania ambrosioides* (Mexican tea ['mastruz']), with 20 citations; *Sansevieria trifasciata* (snake plant ['espada-de-São-Jorge']), with 15; and *Gymnanthemum amygdalinum* (bitterleaf ['boldo-da-Bahia']), with 12 citations. According to reports by the resident of the Santo Antônio dos Pretos quilombola community, *Dysphania ambrosioides* is indicated for the treatment of tuberculosis, gastritis, inflammation and bone fractures. According to Morais et al. (2005), this species is largely used in northeastern Brazil, where leaves are mixed with milk in a blender to treat the flu and help in the recovery of bone fractures in animals. This has also been observed by Almeida Neto et al. (2015) in the rural communities from the Serra do Passa-Tempo at Piauí state, northeastern Brazil.

A representative of the Asparagaceae family, *Sansevieria trifasciata*, was the second most cited species by interviewees. According to them, the species rhizome is used to make tea, which is employed to treat sexually transmitted diseases (STDs) and inflammations of the genitourinary system. There is still no scientific proof of the efficacy of such use. According to Lorenzi et al. (1995), *S. trifasciata* has toxic substances in all parts of the plant body. Symptoms of ingestion of the plant may include: edema on the lips, tongue and palate, which might progress to respiratory disorders; difficulty in swallowing; nausea; and vomiting.

The third most relevant species was *Gymnanthemum amygdalinum*. According to interviewees, the species leaves are used as analgesic as well as to treat intestine and liver diseases. The species was brought from Africa to the Brazilian state of Bahia, being presently cultivated in domestic gardens for the sole use of its leaves. *G. amygdalinum* is traditionally used against intestinal gases, liver failure and gallbladder inflammation (LORENZI et al., 2008). The main methods of preparation of the medicinal plants are: tea, topical use, 'garrafada', syrup, bath/shower, juice, and other less frequent ones (Fig. 3). The predominant preparation method was tea, by either decoction (40%) or infusion (17%).

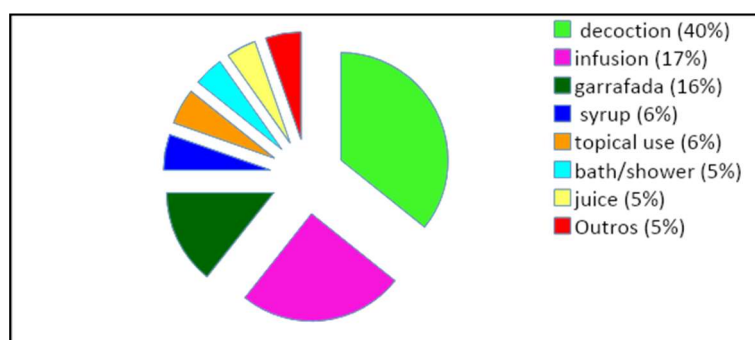


Figure 3: Methods of preparation of the medicinal plants.

The most used plant part in therapeutic preparations is the leaf (40%), followed by the bark (18%), fruit (14.3%), roots (7%), stem (7%), whole plant (7%) and others (6.7%). In 'others' we included the use of latex, flower and seed, which were gathered in a single category since there were very few reports of their use. Similar results have been reported in other ethnobotanical studies, such as the one performed by Nascimento et al. (2011), which was conducted in the Olho d'água do Raposo quilombola community at

Caxias municipality, Maranhão state, northeastern Brazil. The authors surveyed 83 species, of which the leaf was the plant part most used to prepare homemade medicines, representing a total 44% of all the reported plant parts used.

Interviewees reported a total 50 therapeutic indications, which were grouped in eight categories of medicinal use. The highest number of indications was for treating diseases of the digestive system, with 34 reports, followed by treating diseases associated with inflammation, pain and fever, with 30 reports (Fig. 4). Frequently, a same species was reported to have more than one use. Similar results have been reported to other regions of Brazil (AMOROZO et al., 1988; ALBERTASSE et al., 2010; OLIVEIRA et al., 2015). According to Albertasse et al. (2010), plants used as medicine have higher relevance when they are indicated for the treatment of simpler health problems that are part of primary health care, such as gastritis, nausea, wounds, the flu, inflammation and pains.

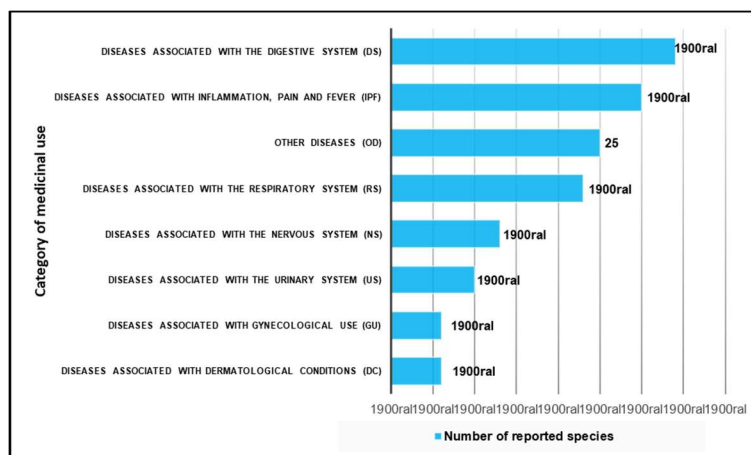


Figure 4: Number of reported species by category of medicinal use in the Santo Antônio dos Pretos quilombola community.

Due to their religiousness, residents of the Santo Antônio dos Pretos quilombola community have a greatly intimate relationship with elements of nature. In that sense, interviewees also cited several plant species that are used as medicinal and mystical (Table 3). According to Albuquerque (2005), people-plant interactions do not occur solely at the medical-therapeutic level, but rather mainly at the magical-religious one. In order to preserve the integrity of residents, only the names of the plant species are reported here. The modes of mystical use of the plants were not published, in order to respect the role of each individual in the society.

Table 3: Ritualistic plants used in the Santo Antônio dos Pretos quilombola community.

Scientific name	Vernacular name
<i>Sansevieria trifasciata</i>	Snake plant [espada-de-São-Jorge]
<i>Lippia alba</i>	Bushy matgrass [erva-cidreira]
<i>Mentha cf. suaveolens</i>	Mint [hortelã]
<i>Plectranthus ornatus</i>	Spurflower [boldo-do-Chile]
<i>Alpinia zerumbet</i>	Shell ginger [jardineira]
<i>Dysphania ambrosioides</i>	Mexican tea [mastruz]
<i>Plectranthus amboinicus</i>	Country borage [malva-do-reino]
<i>Macluria tinctoria</i>	Fustic tree [amoreira]
<i>Ocimum gratissimum</i>	Clove basil [manjeriçao]
<i>Eucalyptus globulus</i>	Tasmanian blue gum [eucalipto]
<i>Jatropha gossypifolia</i>	Bellyache bush [pião-roxo]



<i>Ricinus communis</i>	Castor-oil plant [mamona]
<i>Stachytarpheta cayennensis</i>	Blue snakeweed [gervão]
<i>Helianthus annuus</i>	Common sunflower [girassol]
<i>Mangifera indica</i>	Mango [mangueira]
<i>Myracrodruon urundeuva</i>	Urunday [aroeira]
<i>Senna occidentalis</i>	Coffee senna [fedegoso]

## CONCLUSIONS

The medicinal plants used to treat infirmities in the Santo Antônio dos Pretos quilombola community are based on traditional lore, yet they also share a relationship with scientific knowledge. The use of such plants represents a cultural tradition that is based on personal experience and which is passed down from one generation to the next.

The interviewees have deep knowledge on those plants and make frequent use of them. One of the major factors determining such habitual use may be the low purchasing power of the quilombola residents. Having no means to purchase conventional medications, residents resort to using medicinal plants to meet their basic health-related needs, since the community has no hospital or health center. We expect this research to be continued, aiming to collaborate with the conservation of the reported plant species as well as with the valorization and enrichment of popular knowledge.

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## REFERENCES

ALBERTASSE, P. D.; THOMAZ, L. D.; ANDRADE, M. A.. Plantas medicinais e seus usos na comunidade da Barra do Jucu, Vila Velha, ES. **Revista Brasileira de Plantas Medicinais**, Paulínia, v.12, n.3, p.250-260, 2010.

ALBUQUERQUE, U. P.. **Introdução à etnobotânica**. 2 ed. Rio de Janeiro: Interciência, 2005.

ALBUQUERQUE, U. P.; LUCENA, R. F. P.; CUNHA, L. V. F. C. C.. **Métodos e técnicas na pesquisa etnobotânica**. 2 ed. Recife: Comunigraf, 2008.

ALMEIDA NETO, J. R.; BARROS, R. F. M.; SILVA, P. R. R.. Uso de plantas medicinais em comunidades rurais da Serra do Passa-Tempo, estado do Piauí, Nordeste do Brasil. **Revista Brasileira de Biociências**, Porto Alegre, v.13, n.3, p.165-175, 2015.

AMOROZO, M. C. M.; GÉLY, A. L.. Uso de plantas medicinais por caboclos do baixo Amazonas, Barcarena, PA, Brasil. **Boletim do Museu Paraense Emílio Goeldi**, Belém, v.4, n.1, p.47-131, 1988.

APG IV. Angiosperm Phylogeny Group. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants. **Botanical Journal of the Linnean Society**, Oxford, v.181, n.1, p.1-20 2016. DOI: <https://doi.org/10.1111/boj.12385>

BALDIN, N.; MUNHOZ, E. M. B.. Educação ambiental comunitária: experiência com a técnica de pesquisa snowball (bola de neve). **Revista Eletrônica do Mestrado em Educação Ambiental**, Carreiros, v.27, 2011.

BODGAN, R.; BIKLEN, S.. **Investigação qualitativa em educação**. Porto: Porto, 1994.

BRASIL. Secretaria de Ciência, Tecnologia e Insumos Estratégicos. **A fitoterapia no SUS e o Programa de Pesquisa de Plantas Medicinais da Central de Medicamentos**. Brasília: Ministério da Saúde, 2006.

FLORA DO BRASIL. **Em construção**. Rio de Janeiro: Jardim Botânico do Rio de Janeiro, 2020.

GONÇALVES, H. A.. **Manual de Metodologia da Pesquisa Científica**. São Paulo: Avercamp, 2005.

LORENZI, H.; SOUZA, H. M. S.. **Plantas ornamentais no Brasil**: arbustos, herbáceas e trepadeiras. Nova Odessa: Plantarum, 1995.

LORENZI, H.; MATOS, F. J. A.. **Plantas medicinais no Brasil**: nativas e exóticas. 2 ed. Nova Odessa: Instituto Plantarum, 2008.

MORAIS, S. M.; DANTAS, J. D. P.; SILVA, A. R. A.; MAGALHAES, E. F.. Plantas medicinais usadas pelos índios Tapebas do Ceará. **Revista brasileira de farmacognosia**, Curitiba, v.15, n.2, p.169-177, 2005. DOI: <https://doi.org/10.1590/S0102-695X2005000200017>

NASCIMENTO, J. M.; CONCEIÇÃO, G. M.. Plantas medicinais e indicações terapêuticas da comunidade quilombola Olho D'água do Raposo, Caxias, Maranhão, Brasil. **Revista de Biologia e Farmácia**, Campina Grande, v.6, n.2, p.138-151, 2011.

OLIVEIRA, G. B.; Conceição, G. M.. **Conhecimento etnobotânico dos usuários do Sistema Único de Saúde**

**(SUS) na comunidade do povoado Km 17, Codó, Maranhão.** Monografia (Graduação em Biologia) - Centro de Estudos Superiores de Caxias, Maranhão, 2015.

OLIVEIRA, M. S.; SILVA, E. O.; GUARÇONI, E. A. E.; FERREIRA, A. W. C.. Espécies vegetais de uso popular no município de Coelho Neto, Maranhão, Brasil. **Enciclopédia Biosfera**, Centro Científico Conhecer, Goiânia, v.13 n.23, p.1411 - 1422, 2016. DOI: [https://doi.org/10.18677/Enciclopedia\\_Biosfera\\_2016\\_125](https://doi.org/10.18677/Enciclopedia_Biosfera_2016_125)

THE PLANT LIST. **A working list of all plant species.** 2020.

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