

**Medicinal plants used in Atlantic Forest region, Southern of Santa Catarina-
Brazil**

**Plantas medicinais utilizadas na região de Mata Atlântica, Sul de Santa
Catarina-Brasil**

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RESUMO

A utilização das plantas para fins terapêuticos é muito antiga, mas, o uso deste conhecimento atualmente, vem se expandindo, devido às pesquisas crescentes em busca de comprovação científica de efeitos biológicos. A exploração dos ambientes naturais por povos tradicionais sem causar impactos importantes, pode nos fornecer condições de desenvolver ações de manejo e conservação ao mesmo tempo. Este estudo teve como o objetivo principal efetuar um levantamento etnobotânico de plantas medicinais. Foram realizadas 51 entrevistas com moradores de Sternthal e Nova Sibéria, localidades situadas em área rural do município de Guabiruba, Estado de Santa Catarina, Brasil – entorno do Parque Nacional da Serra do Itajaí, região coberta pelo bioma Mata Atlântica. Foram coletadas, identificadas e armazenadas 74 espécies, pertencentes a 37 famílias botânicas que a maioria dos entrevistados utiliza para fins terapêuticos. As espécies citadas foram consideradas de origem exótica (56.76%) e nativas (43.24%). As plantas são utilizadas para tratar principalmente os sintomas de doenças, como dor e febre, problemas no sistema digestório e infecções. Informações sobre estas plantas incluindo seu preparo para uso medicinal também foram estudadas. O conhecimento popular organizado neste estudo irá contribuir com outras pesquisas para tornar o uso das espécies identificadas mais seguro e eficaz trazendo benefícios para todos.

Palavras-chave: Conhecimento tradicional, Mata Atlântica, Plantas medicinais.

INTRODUCTION

Ethnobotany is the study that deals with the existing relationship between people and plants which intends to clarify the level of dependency of flora by residents from a certain area. In the case of medicinal plants some factors could influence this relation, the urban equipments out of easy reach and local traditions with medicinal plants. An increasing number of ethnobotanical studies in the Brazilian Forest has been observed in the last decade (Begossi, Hanazaki & Tamashiro, 2002; Peroni & Hanazaki, 2002; Hanazaki *et al.* 2000; Rossato, Leitão Filho & Begossi, 1999) and some studies have analyzed the knowledge and the use of plants resources by rural communities in the same biome (Silva & Andrade, 2005; Voeks, 2004; Medeiros, Fonseca & Andreato, 2004; Voeks & Leony, 2004; Di Stasi *et al.* 2002). Additionally, some studies on the use of medicinal plants by people that live in the outskirts of Serra do Itajaí National Park (SINP), a region of Atlantic Forest, also was recently published by our research group (Meyer, Quadros & Zeni, 2012; Zeni & Bósio, 2011; Pereira, Zeni & Quadros, 2011; Silva, Dreveck & Zeni, 2010).

The study of communities next to the parks is extremely important since then it is possible to figure out the way the natives see the forest. Certainly, this knowledge might be useful when it comes to the development of conservation programs, promoting sustainable activities around these same areas and supporting pharmacological research. The main objective of this survey is to contribute to the organization of the popular information regarding the use of plants for medicinal purposes concerning the species, therapeutic indications, parts used and, its preparation by the residents of Guabiruba, surroundings of SINP.

METHODS

Study area

This research was performed with inhabitants living in Sternthal and Nova Sibéria localities, Guabiruba (27° 05' 09" S, 48° 58' 52"), Santa Catarina State, Brazil. The studied rural community is located at the surroundings of the SINP, an area covered by Atlantic Forest, within an area of 174 km² and having approximately 16.094 inhabitants (Figure 1). It is located at the Middle Itajaí Valley, 21 m above the sea level, with a humid mesothermic climate and warm summers presenting an average temperature around 20 °C (Guabiruba, 2014).



Figure 1- Map of the Santa Catarina State, with location of the SINP and community involved in the study.

The localities previously mentioned are very secluded and with no urban evidences such as for instance, hospitals or drugstores. The main ethnic group is of German descendents (69%); basically living on subsistence agriculture. However, some of them have left rural activity and worked in industries or in other activities in urban areas (IBGE, 2014).

Data collection and analysis

This study was based on 51 interviews, carried on with adult inhabitants (mainly between the ages of 30 to 60 years old), using semi-structured questionnaires related to the demographic characterization traditional, use of medicinal plants and, different forms of preparing them in order to cure ailments (Martin, 1995). This study was conducted through orientations of Comissão de Ética em Pesquisa/Conselho Nacional da Saúde/Ministério da Saúde (CONEP/CNS/MS). The research protocol was approved by the Comitê de Ética na Pesquisa em Seres Humanos da Universidade Regional de Blumenau (FURB) under document nr. 042/2010.

Regular visits have been attended to the interviewees in order to gather the information on the use of the mentioned plants. The species of the plants were collected at different occasions according to their blooming period and the availability of the interviewees for the indication of the correct site and plants used by them during the period between 2010 and 2011. Species were identified in the field, specialized literature, comparing the specimens with herbarium deposits and by experts in botany. The identification was performed according to Angiosperm Phylogeny Group III

Classification (APG III - 2009) and voucher numbers were provided by the Herbarium Dr. Roberto Miguel Klein at the Regional University of Blumenau. Regarding the nomenclature of the plants, references were revised according online databases, Missouri Botanical Garden (MOBOT) (available at <http://www.tropicos.org>) and the List of Species of the Brazilian Flora (available at <http://floradobrasil.jbrj.gov.br>).

The diseases or disorders treated with the use of medicinal plants cited were classified according to the medical literature International Classification of Diseases (ICD-10) from the World Health Organization (WHO, 2000).

RESULTS AND DISCUSSION

In this study, the respondents are principally women with incomplete elementary school (84%) and 80% use medicinal plants frequently. The knowledge comes from family (61%) and from physicians (13%) mainly. In Sternthal and Nova Sibéria were identified 74 species belonging to 37 botanical families were identified (Table 1). Therefore, 53 different herbs together with various kinds of trees, shrubs and lianas being their distribution in accordance to other previous researches (Pinto, Amorozo & Furlan, 2006; Hanazaki, Souza & Rodrigues, 2006; Silva & Andrade, 2005; Medeiros, Fonseca & Andreato, 2004; Voeks & Leony, 2004; Di Stasi *et al.* 2002).

The most used part of the plants was the leaf (50 species), but in some cases the stem (9), the whole plant (7), the fruit (4), the flower (5), the rhizome (2), the twig (2), the stem bark (2), the shoot, the bulb, the spathe and/or sap. Moreover, previously the same information was verified in other studies in Atlantic Forest within rural communities by Pereira, Oliveira & Lemos (2005) and Meyer, Quadros & Zeni (2012). Furthermore, one possible explanation why the leaves were mainly chosen in this study was highlighted by Castellucci *et al.* (2000) related to the easiness of collecting them and also because they are available all year long.

It was observed that the most used species related to their medicinal properties as regards to their botanical families are as follow: Lamiaceae (11 species), Asteraceae (10), Fabaceae (3), Rutaceae (3) and Verbenaceae (3). Lamiaceae and Asteraceae are the most cited families in rural communities (Pinto, Amorozo & Furlan, 2006; Di Stasi *et al.* 2002) and also in communities known as *caiçaras* (indigenous people - Begossi, Hanazaki & Tamashiro, 2002; Hanazaki *et al.* 2000), being all located in Atlantic forest areas. Moreover, the most cited families were reported having certain chemical compounds that exert pharmacological actions (Mimica-Dukic *et al.* 2004; Opalchenova & Obreshkova, 2003). In addition, these mentioned families could be cultivated or could grow spontaneously. Probably the efficacy at the therapeutic action in the treatment of some diseases and the readiness to collect the vegetal material made the use more frequent.

These plants are used for treatment of several diseases, including influenza, gastrointestinal and respiratory problems, approximately 56 different ailments were related. The respondents obtain the species in the backyard (46%), drugstore (36%) or forest (3%). And they use them by “efficacy” (28%), “as medicine” (28%) and “is healthy” (2%), among others.

The residents use plants for medicinal purposes mainly for symptoms and signs (20.37%), diseases in general, such as, pain or fever, digestive system problems (12.96%) and infections (11.73%) (Table 2). Also, Meyer, Quadros & Zeni (2012) and Zeni & Bósio (2011) related similar results in the same biome.

Table 2. Categories of illness treated of medicinal plants and use citations by residents of Guabiruba, Santa Catarina State.

Categories	Use citations	%
Digestive diseases	21	12.96
Certain infectious and parasitic diseases	19	11.73
Diseases of the genitourinary system	17	10.49
Symptoms and signs	33	20.37
Diseases of the respiratory system	17	10.49
Mental and behavioral disorders	11	6.79
Endocrine, nutritional and metabolic diseases	17	10.49
Diseases of the circulatory system	12	7.41
Skin and subcutaneous tissue diseases	10	6.17
Others	05	3.10
Total	162	100

The use of native species (43.24%) reflects people’s knowledge on local flora. Certainly is an obtained wisdom when man establishes a strong bond with nature which can later be strategically used as a tool for the development and maintenance of these same areas contributing for its preservation and conservation (Hanazaki *et al.* 2000).

On the other hand, it was verified that among the plants used by the researched population some species were exotic (56.76%). Several species with medicinal properties are exotic, as for instance, *Mentha* sp, *Artemisia absinthium*, *Plectranthus barbatus* and *Foeniculum vulgare*. It probably happens because the most used plants are cultivated species (72.97%), and also due to, the easiness of harvesting these plants (yard, garden or orchard) which makes their applicability more common. Besides, German cultural aspects could have influenced the preference for certain species, as well as, the same fact could be related to the *caiçaras*’ culture, whose were in some cases influenced by the Portuguese (Albuquerque & Andrade 2002). Similar results were obtained by other

researchers (Meyer, Quadros & Zeni, 2012; Zeni & Bósio, 2011; Pinto, Amorozo & Furlan, 2006; Begossi, Hanazaki & Tamashiro, 2002).

Table 1 - Medicinal species with their vernacular names, voucher numbers, therapeutic indications, plant part used, habit, source and status cited by residents of Guabiruba rural community, Santa Catarina State, Brazil.

Botanical families/Species/Voucher number	Vernacular name	Habit	Source	Status	Therapeutic indications	Part used
Adoxaceae						
<i>Sambucus australis</i> Cham. & Schltdl. (3364)	Sabugueiro	Tree	Yard	C/N	Skin infection	Leaves
Aizoaceae						
<i>Tetragonia tetragonoides</i> (Pall.) Kuntze*	Espinafre	Herb	Yard	C/Ex	Vitamine C source	Leaves
Alismataceae						
<i>Echinodorus grandiflorus</i> (Cham. & Schltr.) Micheli *	Chapéu-de-couro	Herb	Yard	E/N	Prostate diseases	Leaves
Amaranthaceae						
<i>Alternanthera dentata</i> (Moench) Stuchlík ex R.E.Fr. (1500)	Penicilina, terramicina	Herb	Yard	C/N*	Infection	Leaves
<i>Alternanthera paronychioides</i> A. St.-Hil. (5140)	Anador	Herb	Yard	C/N*	Pain	Leaves and stem

Amaryllidaceae

<i>Allium fistulosum</i> L. (4108)	Cebolinha verde	Herb	Yard	C/ Ex	Cholesterol, tryglicerides, blood pressure	Leaves
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<i>Allium sativum</i> L. *	Alho	Herb	Yard	C/ Ex	Cholesterol, blood pressure, headache	Bulb
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Apiaceae

<i>Foeniculum vulgare</i> Mill. (3363)	Erva-doce	Herb	Yard	C/Ex	Colic pain in babies, sedative, stomachache, pain	Seed
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Araceae

<i>Zantedeschia aethiopica</i> (L.) Spreng *	Copo-de-leite	Herb	Garden	C/Ex	Bronchitis	Spathe
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Arecaceae

<i>Bactris setosa</i> Mart. (2694)	Tucum	Tree	Forest	E/N	Headache	Root
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<i>Syagrus romanzoffiana</i> (Cham.) Glassman (1772)	Coqueiro, coquinho	Tree	Forest	E/N	Bodypain, renal diseases	Root
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Asteraceae

<i>Achillea millefolium</i> L. (1767)c	Pronto-álvio	Herb	Yard	C/Ex	Fever, heart pain	Leaves Leaves
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<i>Artemisia absinthium</i> L. *	Amargosa	Herb	Yard	C/Ex	Stomachache, ant bite, problems pos-pregnancy	
<i>Baccharis crispa</i> Spreng. (1516)	Carqueja	Herb	Yard	E/N	Indigestion, cholesterol, improve circulatory system, diabetes, constipation, to reduce weight, pre-hepatic jaundice	Leaves and stem
<i>Bidens pilosa</i> L. (1785)	Picão	Herb	Yard	E/Ex	Infection, chicken pox, ant bite, jaundice, septic wound, clean blood, renal diseases	Whole plant
<i>Elephantopus mollis</i> Kunth (3325)	Mata-pasto, chamarrita	Herb	Yard	E/N	Rheumatism	Leaves
<i>Gymnanthemum amygdalinum</i> (Delile) Sch.Bip. ex Walp (3357)	Fel-de-índio	Shrub	Garden	C/N*	Stomachache	Leaves
<i>Lactuca sativa</i> L.*	Alface	Herb	Yard	C/Ex	Sedative, renal, gall bladder calculi	Leaves
<i>Matricaria chamomilla</i> L. (2714)	Camomila	Herb	Yard	E/Ex	Colic, stomachache, abdominal pain	Flowers
<i>Mikania glomerata</i> Spreng. (3337)	Guaco	Liana	Yard	C/N		Leaves

						Stomachache, influenza, cough, lung diseases	
<i>Sphagneticola trilobata</i> (L.) Pruski (1778)	Arnica	Herb	Yard	E/N	Cut and wound, circulatory system, septic wound	Flowers	
Boraginaceae							
<i>Symphytum officinale</i> L. (1777)	Confrei	Herb	Yard	C/Ex	Infection, healing	Leaves	
Brassicaceae							
<i>Coronopus didymus</i> (L.) Sm. (1513)	Mastruz	Herb	Yard	E/N	Inflamation	Whole plant	
Bromeliaceae							
<i>Ananas sp.</i>	Abacaxi	Herb	-	P/N	Vitamine C source, influenza	Fruit	
Cactaceae							
<i>Pereskia aculeata</i> Mill. (2697)	Ora-pro-nóbis	Herb	Yard	C/N	Osteoporosis	Leaves	
Celastraceae							
<i>Maytenus ilicifolia</i> Mart. ex Reissek *	Espinheira-santa	Tree	Garden	C/N	Stomachache	Leaves	
Commelinaceae							
<i>Dichorisandra sp.</i> *	Cana-do-brejo	Herb	Garden	C/N	Renal diseases	Leaves	

Costaceae

<i>Costus spicatus</i> (Jacq.) Sw. (1504)	Cana-do-brejo	Herb	Garden and Yard	C/Ex	Renal diseases	Leaves
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Equisetaceae

<i>Equisetum hyemale</i> L. (2652)	Cavalinha	Herb	Garden	C/Ex	Renal diseases	Twig
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Fabaceae

<i>Cajanus cajan</i> (L.) Huth (2661)	Feijão andú	Herb	Garden	C/Ex	Fever, measles	Leaves
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<i>Cassia angustifolia</i> Vahl	Sene	Tree	-	P/Ex	Sedative, constipation, to reduce weight	Leaves
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<i>Desmodium incanum</i> (Sw.) DC. (1501)	Carrapicho	Herb	Yard	E/N	Gall bladder	Whole plant
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Geraniaceae

<i>Pelargonium graveolens</i> L'Hér. ex Aiton *	Malva	Herb	Yard	C/Ex	Infection, tooth, mouth, uterus, bladder and renal, inflammation, sedative	Leaves
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Lamiaceae

<i>Cunila microcephala</i> Benth. (3355)	Poejo	Herb	Yard	C/ N	Colic pain in babies	Leaves and stem
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<i>Melissa officinalis</i> L. (4106) NT	Erva-cidreira	Herb	Yard	C/ Ex	Colic pain in babies, gastro-intestinal, to reduce blood pressure, influenza	Leaves
<i>Mentha arvensis</i> L. (2662)	Hortelã	Herb	Yard	C/Ex	Colic pain in babies, stomachache, influenza, colic, nausea	Leaves and stem
<i>Mentha x piperita</i> L. (2669)	Hortelã	Herb	Yard	C/Ex	Colic pain in babies, stomachache , influenza, colic, nausea	Leaves and stem
<i>Mentha</i> sp. 1 (4101)	Hortelã	Herb	Yard	C/ Ex	Colic pain in babies, stomachache, influenza, colic, nausea	Leaves and stem
<i>Mentha</i> sp. 2 (4100)	Hortelã	Herb	Yard	C/ Ex	Colic pain in babies, stomachache, influenza, colic, nausea	Leaves and stem
<i>Ocimum carnosum</i> (Spreng.) Link & Otto ex Benth. (2663)	Anis	Herb	Yard	C/ N	Colic pain in babies	Leaves
<i>Origanum vulgare</i> L. (4102)	Orégano	Herb	Yard	C/ Ex	Colic and stomachache	Leaves
<i>Plectranthus barbatus</i> Andrews (2665)	Boldo	Herb	Yard	C/ Ex		Leaves

						Stomachache, pre-hepatic jaundice	
<i>Plectranthus neochilus</i> Schltr. (4104)	Boldo	Herb	Yard	C/ Ex		Stomachache, pre-hepatic jaundice	Leaves
<i>Rosmarinus officinalis</i> L. (2656)	Alecrim	Herb	Yard	C/ Ex		Inflamed eyes, cholesterol, circulatory system, sedative, influenza, headache	Leaves
Lauraceae							
<i>Ocotea odorifera</i> (Vell.) Rohwer *	Sassafrás	Tree	Forest	E/N		Rheumatism	Stem
<i>Persea americana</i> Mill. (2646)	Abacate	Tree	Orchard	C/ Ex		Bladder infection	Leaves
Lytraceae							
<i>Cuphea racemosa</i> (L. f.) Spreng. (2667)	Sete sangrias, mata- pasto vermelho	Herb	Yard	E/N		Circulatory system, blood pressure, rheumatism	Whole plant
Musaceae							
<i>Musa</i> sp. (1505)	Bananeira	Tree	Yard	C/Ex		Hemorrhoids	Sap
Myrtaceae							
<i>Eugenia uniflora</i> L. (1775)	Pitanga	Tree	Orchard	C/N		Diarrhea	Stem bark

<i>Psidium guajava</i> L. (1766)	Goiabeira	Tree	Orchard and Yard	C/Ex	Vermifuge, colics, diarrhea, pains, colic pain in babies	Shoot, young leaves and stem bark
Nyctaginaceae						
<i>Mirabilis jalapa</i> L. (3362)	Boa noite	Herb	Garden	C/ Ex	Protective liver	Leaves
Passifloraceae						
<i>Passiflora edulis</i> Sims *	Maracujá	Liana	Yard and Orchard	C/N	Sedative	Leaves and fruit
Phyllanthaceae						
<i>Phyllanthus niruri</i> L. (2668)	Quebra-pedra	Herb	Yard	E/N	Renal calculi, inflammation, jaundice	Whole plant
<i>Phyllanthus tenellus</i> Roxb. (1509)	Quebra-pedra	Herb	Yard	E/N	Renal calculi, inflammation, jaundice	Whole plant
Phytolaccaceae						
<i>Petiveria alliacea</i> L. (2655)	Guiné	Herb	Yard	C/Ex	Constipation	Whole plant

Plantaginaceae

<i>Plantago australis</i> Lam. (3354)	Tanchagem	Herb	Yard	E/N	Infection, cough, fever, renal infection	Leaves
<i>Plantago major</i> L. (2653)	Tanchagem	Herb	Yard	E/ Ex	Infection, cough, fever, renal infection	Leaves

Poaceae

<i>Cymbopogon citratus</i> (DC.) Stapf *	Cana-de-cheiro	Herb	Yard, Garden	C/ Ex	Sedative, colic, cough, blood pressure	Leaves
<i>Coix lacryma-jobi</i> L. (3365)	Baguinha –de-rosário	Herb	Yard	E/Ex	Renal diseases	Fruit

Rosaceae

<i>Rubus rosifolius</i> var. <i>coronarius</i> Sims (3356)	Amora branca	Herb	Yard	C/ N	Cholesterol and sugar	Leaves
<i>Rubus idaeus</i> L.*	Framboesa vermelha	Tree	Orchard	C/ Ex	Blood pressure	Fruit
<i>Rosa</i> sp. *	Rosa branca	Shrub	Garden	C/ Ex	Uterine and tooth infection	Flowers

Rutaceae

<i>Citrus aurantium</i> L. (1758)	Laranja	Tree	Orchard	C/ Ex	Influenza, diarrhea, vitamine C source	Leaves, fruit and flower
<i>Citrus x limonia</i> (L.) Osbeck (3352)	Limão	Tree	Orchard	C/ Ex	Influenza	Leaves
<i>Ruta graveolens</i> L. (1514)	Arruda	Herb	Yard	C/ Ex	Termination of pregnancy, menstrual problems, colic	Leaves

Solanaceae

<i>Solanum paniculatum</i> L. (3340)	Jurubeba	Shrub	Yard	C/N	Pre-hepatic jaundice	Leaves
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Theaceae

<i>Camellia sinensis</i> (L.) Kuntze	Chá preto	Tree	-	P/Ex	Stomatitis	Leaves
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Verbenaceae

<i>Aloysia gratissima</i> (Gillies & Hook.) Tronc. (2658)	Erva-santa, erva santa-maria	Shrub	Yard	C/N	Sedative, stomatitis, cholesterol, sugar	Leaves
<i>Lippia alba</i> (Mill.) N. E. Br. ex Britton & P. Wilson (2809)	Salvia, sene	Herb	Yard	C/N	Cough, influenza	Leaves
<i>Verbena litoralis</i> Kunth (3353)	Fel-da-terra	Herb	Garden	C/N	Stomatitis	Leaves

Xanthorrhoeaceae

<i>Aloe arborescens</i> Mill. (2666)	Babosa	Shrub	Yard and Garden	C/ Ex	Inflammation, burn, renal diseases, eruptions, cuts, wounds, mouth dermatitis	Leaves
<i>Aloe vera</i> (L.) Burm. f. *	Babosa	Shrub	Yard	C/ Ex	Inflammation, burn, renal diseases, eruptions, cuts, wounds, mouth dermatitis	Leaves

Zingiberaceae

<i>Curcuma longa</i> L. *	Batata-açafirão	Herb	Yard /Garden	C/Ex	Jaundice	Rhizome
<i>Zingiber officinale</i> Roscoe (2657)	Gengibre	Herb	Yard	C/Ex	Cough, cold body, vomit	Rhizome

N/Ex = plant status: N = native, Ex = exotic; C = cultivated plant, E = plant that grow spontaneously, P = plant purchased; *= plant identified in the field and/or comparison with specimens deposited.

Comparing our botanical data with the ones presented in Brazilian Official Pharmacopoeia (FBRAS) (2006, 1988-1996; 1977; 1959; 1926), 27 species are reported, such as, *Echinodorus grandiflorus*, *Foeniculum vulgare*, *Artemisia absinthium*, *Baccharis crispa*, *Matricaria chamomilla*, *Mikania glomerata*, *Sambucus australis*, *Maytenus ilicifolia*, *Phyllanthus niruri*, *Phyllanthus tenellus*, *Cunila microcephala*, *Melissa officinalis*, *Mentha avrensis*, *Mentha x piperita*, *Ocotea odorifera*, *Persea americana*, *Allium sativum*, *Eugenia uniflora*, *Psidium guajava*, *Cymbopogon citratus*, *Rubus rosifolius*, *Citrus aurantium*, *Ruta graveolens*, *Solanum paniculatum* and *Zingiber officinale*.

Our results showed an effective use of native and exotic plants, although, as related by Brandão *et al.* (2006). It has been observed that the plants, throughout the years have been highly substituted by synthetic medicine according to the Brazilian Official Pharmacopoeia. Its Fourth Edition includes a number of monographs referring to medicinal plants and botanical products, a fact that is insignificant in the face of the vast Brazilian biodiversity and yet not much known its medicine usage. For those matters special efforts are urgent and more than necessary to validate and protect this available knowledge on the medicinal plants handled in the surrounding Atlantic Forest areas such as Guabiruba.

Besides, in this study most of the cultivated species are originally from the forest, and some are still collected in site, as for instance, *Syagrus romanzoffiana* (Cham.) Glassman and *Ocotea odorifera* (Vellozo) Rohwer, suggesting a relation among people and local flora. Therefore, it is important to systematize this knowledge, and return it to the community, through environmental educational programs. Aside from that, the treatment for sickness, using plants can also be a helpful instrument of conservation of natural environmental, valuing cultural aspects, self-respect and citizenship, in this way, giving credit to popular wisdom. Finally, it is necessary to perform phytochemical and pharmacological studies to support the use of these plants by the population regarding aspects of quality and safe benefits.

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