B A S E *Biotechnol. Agron. Soc. Environ.* 2020 **24**(2), 117-141 OPEN ACCESS Focus on:

Plants used in traditional medicine in the Comoros archipelago. A review

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Received 23 June 2019, accepted 1 april 2020, available online 22 April 2020.

Introduction. In the Comoros archipelago, as in many places in Africa, traditional medicine is the first reflex people have when it comes to finding a cure. This work illustrates the diversity of remedies found in this group of islands. The plant species potentially effective from a pharmaceutical point of view can be targeted through the comparison of different databases. The present study also illustrates the importance of preventing the loss of traditional knowledge based on hundreds of years of observations.
Literature. The information in this paper originates from databases built by ethnobotanists as well as peer reviewed scientific articles. In addition, some information also come from work done by locals working with recognized organisms.
Conclusions. The scientific literature cites 207 different species that are used for traditional practices in the Comoros archipelago, among which 9 are endemic. These species were compared to the pharmacopoeias of other islands and surroundings from the Indian Ocean in terms of similarities and differences between targeted ailments. Only 3% of the cited species present similarities in use among the islands of the Indian Ocean and surroundings.
Keywords. Traditional medicines, ethnobotany, Indian Ocean, Comoros.

Les plantes utilisées en médecine traditionnelle dans l'archipel des Comores (synthèse bibliographique)
Introduction. Dans l'archipel des Comores, comme dans de nombreuses régions d'Afrique, le premier réflexe adopté par les populations quand il s'agit de se soigner est la médecine traditionnelle. Ce travail illustre la diversité des remèdes à base de plantes que l'on retrouve dans cette région du monde. C'est à l'aide de travaux similaires à celui-ci que des espèces potentiellement intéressantes pour le monde pharmaceutique et cosmétique peuvent être identifiées. De plus, ce type d'étude contribue à la préservation d'un savoir ancestral en voie de disparition.
Littérature. Les informations mentionnées dans ce travail sont issues de bases de données construites par des ethnobotanistes ainsi que d'articles scientifiques validés par les pairs. Une partie des données proviennent aussi de travaux réalisés par des locaux en collaboration avec des organismes reconnus.
Conclusions. La littérature scientifique concernant la pharmacopée traditionnelle de l'archipel des Comores cite 207 espèces différentes. Parmi ces espèces, 9 sont endémiques de l'archipel. La totalité des espèces a été comparée aux autres iles de l'océan Indien ainsi qu'aux régions avoisinantes du point de vue des usages respectifs. À l'issue de ce travail, il s'avère que seulement 3 % de ces espèces sont utilisées de manières similaires dans ces différentes régions.
Mots-clés. Médicament traditionnel, ethnobotanique, océan Indien, Comores.

1. INTRODUCTION

As long as humankind can remember, plants have been part of Human's development. In addition to the management of the carbon equilibrium, they can be a source of food, medicine, cosmetics, fabric, energy, as well as of construction materials (Cartier, 1994; Bouloc, 2006; Hoffman et al., 2007; Soidrou et al., 2013; Rakotoniaina et al., 2018). The earliest records of plant use for medicine, among other habits and beliefs, were found in ancient Egypt and are estimated to date from 2500 BCE (Kelly, 2009). Even though the way plants are used has been changing, their use is still a common practice nowadays. In the 19th century, as science and medicine progressed, traditional uses of plants in medicine provided an ever-growing source

of inspiration for the development of new drugs and treatments (Farnsworth, 1966; Heitzman et al., 2005; Katiyar et al., 2012), starting with the isolation of morphine from *Papaver somniferum* L. by Friedrich Sertüner in 1806 (Brownstein, 1993).

These discoveries were the early stages of what would become the birth of ethnopharmacology in 1967 (Heinrich, 2015). This field of study is defined as "the interdisciplinary scientific exploration of biologically active agents traditionally employed or observed by man, putting in relation plants, fungi, animals, microorganisms, minerals, the way people use them and the biological and pharmacological effects of those ingredients. It is a discipline tightly linked to ethnobotany and phytochemistry" (Holmstedt, 1991). The ethnobotanical part of this discipline led to the gathering of huge amounts of data. In order to simplify the access to that immense source of knowledge, ethnobotanists have been creating many very complete databases such as: NAPRALERT (United States of America); PHARMEL (Belgium); PRELUDE (Belgium); PROTA (The Netherlands); Kew MPNS (Great Britain); MNHN (France). These databases contain information that can prove very interesting for laboratory scientists in order to target the species on which detailed analyses should be implemented (Farnsworth, 1994).

Ethnobotany has proven to be effective for the discovery of important medicine: *e.g.* in Madagascar, *Catharanthus roseus* (L.) G.Don has been used traditionally to treat many pathologies, such as pancreatic pain, colitis, chest pain, heartburn and gastritis (Razafindraibe et al., 2013; Randriamiharisoa et al., 2015). Phytochemical studies were conducted on this species and led to the discovery of many alkaloids such as vindoline I, vindolidine II, vindolicine III, vindolinine IV as well as vinblastine and vincristine. Among these alkaloids some are used nowadays as anti-cancer drugs in modern medicine (Tiong et al., 2013; Dugé de Bernonville et al., 2015). Other plants, originating from different places have been subject to similar investigations and led to the discovery of interesting new compounds. As an example, in the Reunion Island, *Centella asiatica* (L.) Urb. is used traditionally to treat many benign and malignant ailments (*e.g.* aspergillosis, scabies, fungal infections). After a phytochemical study was undertaken, compounds such as asiaticoside, brahmoside, brahminoside or kaempferol were identified (Hashim et al., 2011). Thus, *C. asiatica* was proven to be useful against serious immune disorder diseases. Even though not all compounds and mechanisms have been investigated and studied in depth, this species is currently used as an ingredient in patented phytomedicines (Rangel, 2009).

The two species mentioned above come from places known for their wide biodiversity, which are called biodiversity hotspots. The Indian Ocean is home to many biodiversity hotspots as 25% of the world's biodiversity can be found there, as well as in subsaharan Africa (Gurib Fakim, 2011).

Among the large number of different species found in the western part of the Indian Ocean, many are endemic. Mauritius, Réunion, Rodrigues, Seychelles, the Comoros archipelago and Madagascar together are home to 11 endemic plant families, including at least 310 endemic genera, leading to a total of around 10,000 endemic species (Rasoanaivo, 2011).

While several studies on Madagascar, Reunion Island, Mauritius and Rodrigues review current knowledge in ethnobotany in these areas, it is surprising to note that despite the incredible potential of the Comoros archipelago, no study has been devoted to them.

People from the Comoros archipelago live in rural areas. Poverty and difficult access to a modern health care system have led them to develop their own health system based on natural products. The cultural background of these people, being a mix of African Bantu and Arab-Muslim, gave to this region of the world a diversified and rich knowledge when it comes to traditional medicine. The conservation of this knowledge is based on an oral transmission from one generation to the next (Kaou et al., 2008; Soidrou et al., 2013).

We thus focused on this part of the world in this work for the previously mentioned reasons, that are:
– it is known as a biodiversity hotspot and the birthplace for many different species (Tatayah, 2011);
– due to its location, it has had the cultural influences of many ethnicities (Kaou et al., 2008; Soidrou et al., 2013);
– lastly, only very little data compilation has been done on the botanicals used in traditional medicine in this part of the world.

Mainly peer reviewed documents were taken into account and most of the ethnobotanical information can be linked to one or several vouchers stored in herbaria. As some work was done by locals, in collaboration with a recognized botanic conservatory (CBNM – *Conservatoire botanique national de Mascarin*), these data were also taken into account.

In the end, this work has led to the creation of an exhaustive list of plant species and their traditional uses, based on all available and significant literature. The perspective of development, risks and limitations linked to the use of plants from the Comoros archipelago in traditional medicine are also discussed.

To find the information mentioned in this article, systematic bibliographic research was conducted in the PRELUDE database as well as in Google Scholar. As the first database already targets ethnobotanical

information the keyword used was Comores. The keywords used to do the research in Google Scholar were the following: Comoros archipelago, Moheli, Mwali, Mayotte, Maore, Anjouan, Ndzuwani, Grande Comore, Nagzidja linked to ethnobotany, traditional practices, traditional medicine, cosmetics. This process led to the identification of 100 bibliographic references.

2. CONTEXT AND STUDY AREA

In a context where exports equal a tenth of the imports (13,8 M $ *versus* 129,6 M $) in 2007 (UNCTAD, 2011), it is crucial to find new ways to finance the region. One way to reach that goal is to seek high added values in available goods. In this case, the rich and diverse flora of the archipelago has been targeted. As mentioned by El Hilaly et al. (2003) and Mhame (2004), folk medicine can be an asset helping the financial status of a region. Through the discovery of valuable plant species for the pharmaceutical and cosmetic business, the import and export balance could be influenced towards a healthier situation. It is vital for the exploitation of these goods to be carried out in a sustainable manner or else this type of work cannot guarantee solid change in the long term (Abdurazag et al., 2003).

2.1. Geography and climate

The Comoros archipelago lies in the northern region of the Mozambique Channel. It is composed of four main islands, respectively Grande Comore (950 km^2), Anjouan (378 km^2), Mayotte (370 km^2) and Mohéli (216 km^2). In addition, around 60 islets are found in the surrounding seas, especially south of Mohéli and in the Mahoran lagoon. The archipelago is the result of the separation of the Malagasy and African plates, between the Miocene and the late Pleistocene, which led to the creation of this volcanic pack of islands (Nougier et al., 1986). Due to their volcanic origin, these islands present a hilly landscape with summits reaching 2,361 m (Mount Karthala) for Grande Comore, 1,595 m (Mount Ntringui) for Anjouan, 790 m (Mzé Koukoulé) for Moheli and 660 m (Mount Benara) for Mayotte (Quod et al., 2000). The climate is tropical, with a hot and rainy season from December to April, during which the monsoon prevails and is characterized by an average temperature reaching 27 °C during the day. The dry season starts in May and ends in November, with an average temperature reaching 23 °C during the day. The pluviometry of the different islands is strongly influenced by their relief as clouds tend to form and stay in places with high altitudes. On mount Karthala, rainfall can reach up to 5,000 mm per year, whereas the average yearly pluviometry of Moroni (located west of Anjouan Island, near the sea) only reaches 2,700 mm per year. The average pluviometry of Moheli, Grande Comore and Mayotte reach respectively 2,100 mm, 2,300 mm and 1,250 mm per year (OMM, 2018). Differences in pluviometry can also vary within the islands: *e.g.* in Mayotte, the south of the island measures rainfall below 1,300 mm per year and the north of the island regularly records rainfall reaching more than 2,000 mm per year (Boullet, 2016). All these characteristics within the archipelago and within the different islands are some of the reasons for the wide biodiversity (Rasoanaivo, 2011).

2.2. Flora

The flora of the Comoros archipelago has not been studied in depth, in opposition to other islands in the Indian Ocean (Morat & Lowry, 1997; Pascal et al., 2001; Pascal, 2002). Floristic studies of the Comoros archipelago began in the first part of the 20th century, when Voeltskow published "*Flora und Fauna der Komoren. Reise in Ostafrika in den Jahren 1902–1905*" (Vos, 2004) in which he identified 935 vascular plant species, including 416 endemic species. His work was completed by a more recent project aiming to identify the flora of the Comoros archipelago. The main studies made in Comoros were carried out by Moinjoin in 1981, Adjanohoun in 1982 and the PLARM (study of the characteristics and composition of aromatique and medicinal plants) project (Adjanohoun et al., 1982; Gurib Fakim & Guého, 1999). More recently, studies of Kaou et al. and Soidrou et al. were added to this list (Kaou et al., 2008; Soidrou et al., 2013). The latest botanical studies for the Comoros archipelago estimate the number of species as being over 2,000 (indigenous and introduced) (Adjanohoun et al., 1982; Pascal, 2002; Barthelat & Boullet, 2005; Barthelat & Viscardi, 2012).

3. METHODS

Targeting significant literature to provide valuable data for those who will use it afterwards is of paramount importance. Likewise, we must highlight that within the identified posology mentioned in the literature, some remedies are more strongly linked to rites than to biological material, which calls for a cautious review on how the species are used. The ideal criteria in the ethnobotanical literature are, according to Trotter & Logan (1986), as follows: the database should be significant, the scope should be comparable and complete, the plant specimens must be properly identified, vouchers need to be stored for further verification and, if possible, activity tests in

the field should have been carried out so as to prove the potency of the concerned remedy. Considering how little ethnobotanical work has been done in the Comoros archipelago, only a few articles meet the criteria mentioned above. Therefore, the selected data originate from peer reviewed articles or from work done by recognized organizations such as the *Conservatoire botanique national de Mascarin* (CBNM) in collaboration with local inhabitants.

In fine, the data collected consist of the family name, the scientific name, the endemism of the plant as well as the targeted ailment and the part of the plant used when available (**Table 1**). The collected data were then studied so as to identify any type of consensus on the way the species were used in the Comoros and in the surrounding islands.

Based on the work carried out on the collected information, it was observed that in the Comoros archipelago, as well as in the other islands of the Indian Ocean, the number of uses per species varies widely. As this phenomenon was observed worldwide by many ethnobotanists, several data reduction tools have been developed to enhance the significance of the work. First to develop these tools were Trotter & Logan in 1986, then Prance et al. (1987) mentioned the concept of quantitative ethnobotany. Following on from this, many researchers have used different approaches towards developing the significance of the data they have collected. Most indicators require information such as the number of informants, number of ailments per species, number of mentions for each species or treatment; this type of information is found when doing in field observations. As this work is a review, only the body system impacted and the number of health issues targeted per species were available, leading to the selection of the indicators as follows.

Considering these elements, the RII (Relative Importance Index) was established for each species using the work of Bennett & Prance (2000). This indicator reflects the versatility of a species based on the normalized number of pharmacological properties and the normalized number of body (BS) systems it affects, using the following formula:

$$RII = \frac{BS_T}{BS_S} + \frac{HI_S}{HI_M} \times 50$$

where BS_T = total number of body system as mentioned in the literature (12) (Bennett & Prance, 2000), BS_S = body system specifically targeted by the concerned species, HI_S = number of health issues claimed to be managed by a specific species, HI_M = maximal number of health issues claimed to be managed by a specific species within this data set.

In 2003, as explained by Tardío & Pardo de Santayana (2008), Pardo de Santayana developed a new indicator also called Relative Importance Index (RI). Similar to the RII mentioned previously, it is based on the relative number of use-categories (RNU); however, it does not take the body systems into account, rather it integrates the relative frequency of citation (RFC). In this present work, it is not possible to determine the RFC as there is no survey linked to the data in **table 1** (Tardío & Pardo de Santayana, 2008). On its own, the RNU can be considered as an indicator of the type of ailment that is more of a concern for the inhabitants of the archipelago. All the ailments mentioned in **table 1** were sorted into 86 uses (data not shown); then the following formula was applied to the data set:

$$RNU = \frac{NU_S}{NU_{\max}} \times 100$$

where NU_s = number of mentions of a specific use, NU_{max} = maximum number of specific uses mentioned within the whole data set.

4. DATA COLLECTION

All the collected data have been gathered in **table 1**. A total of 207 different species from 80 different families have been mentioned in the literature, when it comes to the traditional use of plants of the Comoros archipelago. Among these families, the most frequently found are Fabaceae (9%), Asteraceae (7%), Euphorbiaceae (5%), and Malvaceae (5%) (**Table 1**).

When applying the two different indicators on the data in **table 1**, the following information stand out. *Leptadenia madagascariensis* Decne. and *Ocimum canum* Sims. both affect 7 body systems, however, *L. madagascariensis* is claimed to treat 7 health issues, giving a RII of 41.67 where *O. canum* is claimed to treat 19 different health issues, leading to a RII of 63.10. *Ergo* the latter is more versatile and could be studied in many different contexts. For our data set, the highest value, the average and the lowest values are respectively: 100 for *Bidens pilosa* L., 18.9 for the average and 1.79 for *Canaga odorata* (Lam.) Hook.F. & Thomson, *Struchium sparganophorum* (L.) Kuntze, *Commelina africana* L., *Acacia farnesiana* (L.) Willd., *Chrysopogon zizanioides* (L.) Roberty and *Cestrum nocturnum* L. The common link between the 6 very low RII species resides in the fact that they are only used for cosmetics and therefore do not impact body systems. Based on this indicator, the plants to be targeted in further studies could be: *B. pilosa*, *Kalanchoe pinnata* (Lam.) Pers., *Adansonia digitata* L., *Cassia occidentalis* L. and all locally available *Aloe* species. These plants have in common the fact that they are used traditionally for many different ailments targeting many body systems, thereby enhancing the chances of having some significant biological activity.

Table 1. List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles.*

Family	Species	Use/symptoms (plant parts)	RII	References
Acanthaceae	*Asystasia gangetica* (L.) T.Anderson***	Colitis (L), abdominal syndrome (L), haemorrhoids (B) (L), pregnancy disorder (ND), menstrual flow disorder (ND)	21.43	Adjanohoun, 1989; Mchangama & Salaün, 2012
Alangiaceae	*Alangium salviifolium* (L.f.) Wangerin***	Fatigue (ND), purgative (ND), female fertility (ND), boils (WP) and asthma (L), menstruation disorder (F)	31.55	Mchangama & Salaün, 2012; Singh Tanwer & Vijayvergia, 2014; Panara et al., 2016; Saive et al., 2018
Amaranthaceae	*Aerva lanata* (L.) Juss. ex Schult.***	Stomach pain (L), diuretic (L), kidney stones (ND), liver disease (ND), gonorrhoea (L), pregnancy follow-up (B)	23.21	Mchangama & Salaün, 2012
Amaryllidaceae	*Allium cepa* L.***	Sexual incapacity (Bl), sexual asthenia (Bl), erectile dysfunction (Bl), impotency (Bl)	15.48	Adjanohoun, 1989
Anacardiaceae	*Anacardium occidentale* L.***	internal parasitism (oxiure, ascaris, tenia) (ND), amoebiasis (ND), colibacillus (ND), cysticercose (ND), cococsidiosis (ND), maggot (ND), giardiase (ND), gingivitis (ND), odontalgia (ND), toothaches (ND), tooth decay (ND)	27.98	Adjanohoun, 1989
Annonaceae	*Annona muricata* L.***	Benign positional vertigo (L), deworming (ND), febrifuge (ND), astringent (ND), diarrhoea (ND), dysentery (ND), lice (ND), sedative (ND), antispasmodic (ND), hypotensive (L), epilepsy (ND), cardiac pain (ND)	38.10	Sussman, 1980; Adjanohoun, 1989; Mchangama & Salaün, 2012
	Annona reticulata L.***	Contusion (ND), bruise (ND), sprain (ND), swelling (ND), lumbago (ND), sciatica (ND), epilepsy (ND) cardiac pain (ND)	25.00	Adjanohoun, 1989; Gurib Fakim & Brendler, 2004
	Annona senegalensis Pers.***	Lumbago (R), redness (L)	11.90	Mchangama & Salaün, 2012; Saive et al., 2018
	Annona squamosa L.***	Vertigo (ND), dizziness (B), syncope (ND), malaria (L)	23.81	Adjanohoun, 1989; Gurib Fakim & Brendler, 2004; Jain & Srivastava, 2005; Kaou et al., 2008
	Monanthotaxis glaucocarpa (Baill.) Verdc.*	Bad luck (L), impotence (R), rheumatism (R), orchitis (ND)	19.64	Mchangama & Salaün, 2012
	Cananga odorata (Lam.) Hook.f. & Thomson***	Cosmetic (Fl)	1.79	Saive et al., 2018
Aphloiaceae	*Aphloia theiformis* (Vahl) Benn.***	Dizziness (L), leucorrhoea (L), stomach pain (L) (S), diarrhoea (L), malaria (L), diabetes (L), intestinal parasites (L), stomach pain (L)	37.50	Gurib Fakim & Brendler, 2004; Poullain et al., 2004; Jonville et al., 2008; Kaou et al., 2008; Saive et al., 2018
Apiaceae	*Coriandrum sativum* L.***	Stomach pain (Sd)	5.95	Saive et al., 2018

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Table 1 (suite 1). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
Apocynaceae	*Carissa edulis* (Forssk.) Vahl***	Fever (W), chest pain (ND), heart pounding (ND), stomach pain (B), headache (ND), headache (W), acne (W)	29.17	Daruty, 1886; Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012; Saive et al., 2018
	Carissa spinarum L.***	Headache (W), acne (W), cosmetic (W)	13.69	Saive et al., 2018
	Leptadenia madagascariensis Decne.***	Fever (S), malaria (L) (W) (S), convulsion (ND), rheumatism (ND), colic (S), diabetes (ND), help expel the placenta after childbirth (ND)	41.67	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004; Kaou et al., 2008; Godara et al., 2015
	Petchia erythrocarpa (Vatke) Leeuwenb.***	Redness (L) (W), stomach pain (L) (W)	11.90	Saive et al., 2018
	Plumeria rubra L.***	Cosmetics (Fl)	1.79	Saive et al., 2018
	Secamone astephana Choux*	Tonic (W) (L), purgative (W) (L)	11.90	Saive et al., 2018
	Tylophora sp.***	Colitis (L), abdominal syndrome (L)	7.74	Mchangama & Salaün, 2012
Araceae	*Pothos scandens* L. *	Arthritis (R), low back pain (R), orchitis (ND), localized pain (R)	19.64	Mchangama & Salaün, 2012
Arecaceae	*Areca catechu* L.***	Aphrodisiac (Sd), anthelminthic (F)	11.90	Gurib Fakim & Brendler, 2004
	Cocos nucifera L.***	Fresh cut (L), fever (R), menstrual disorders (ND), diarrhoea (L), vomiting (S), dandruff, dysentery (L) , boils (F), asthma (L)	36.90	Mchangama & Salaün, 2012; Singh Tanwer & Vijayvergia, 2014; Rakotoarivelo et al., 2015; Panara et al., 2016
	Hyphaene coriacea Gaertn.***	Cervicalgia (L)	5.95	Mchangama & Salaün, 2012
Asphodelaceae	*Aloe* sp.***	Blepharitis (L), blindness (L), eye disease (L), trachoma (L), abscess (L), cyst (L), furuncle (L), pimple (L), skin lesion (L), skin diseases (L), lupus (L), abdominal pain (R), stomach pain (R), colic (R), gastritis (R), heartburn (R), gastralgia (R), arthritis (L), articular pain (L), cramps (L), kidney pain (R), myalgia (L), sciatica (L)	70.24	Adjanohoun, 1989; Gurib Fakim, 2002; Gurib Fakim, 2003; Rabearivony et al., 2015; Samoisy & Mahomoodally, 2015
	Aloe mayottensis A.Berger* (End)	Arthritis (L), joint pain (L), rheumatism (L), sciatica (L), redness (L), stomach pain (L)	27.38	Mchangama & Salaün, 2012; Saive et al., 2018
Asteraceae	*Acmella oleracea* (L.) R.K Jansen***	Joint pain (FB)	5.95	Mchangama & Salaün, 2012
	Ageratum conyzoides (L.) L.***	Ague (ND), fever (L), malaria (L), dizziness (ND), rheumatism (L), diarrhoea (L), skin (L, St), wounds (L), anthrax (L), eye (R), eczema (R), diarrhoea (L), amoebic disease (WP), dysentery (L), malaria (WP), typhoid (WP)	60.12	Sussman, 1980; Adjanohoun et al., 1982; Gurib Fakim, 1990; Jain & Srivastava, 2005; Kaou et al., 2008

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Table 1 (suite 2). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
	Ayapana triplinervis (Vahl) R.M. King & H.Rob.***	Diearrhoea (L), headache (L), hypertension (ND), epigastric pain (L), nausea (L), vomiting (L), stimulant (ND), astringent (ND), scurvy (ND), sudorific (ND), skin infections (ND)	40.48	Adjanohoun et al., 1982; Daruty, 1886; Gurib Fakim & Brendler, 2004; Pourchez, 2011
	Bidens pilosa L.***	Cuts (L), worms (WP), headache (ND), sore throat (L) (WP), water retention (WP), irritation (ND), poisoning (WP), dysentery (WP), jaundice (L) (WP), pharyngitis (WP), diabetes (WP), hypertension (WP), toothache (ND), urinary tract infections (ND), stomach pain (L), febrifuge (WP), nervous system problems (ND), haemorrhoids (ND), insect bites (ND), conjunctivitis (L) (WP), malaria (WP), dysmenorrhea (WP), convulsions (ND), parturition (ND) , cough (WP), nosebleed (WP) (L), intestinal illness (WP), diarrhoea (St) (L) (Fl)	100.00	Adjanohoun, 1989; Gurib Fakim & Brendler, 2004; Kaou et al., 2008; Mchangama & Salaün, 2012; Bartolome et al., 2013
	Crassocephalum bojeri (DC.) Robyns*	Antalgic (R), migraine (children) (R)	11.90	Adjanohoun et al., 1982
	Elephantopus mollis Kunth***	Diabetes (L)	5.95	Mchangama & Salaün, 2012
	Helichrysum fulvescens DC.* (not in INPN and MPNS)	Diarrhoea (WP)	5.95	Kaou et al., 2008
	Microglossa pyrifolia (Lam.) Kuntze***	Dysmenorrhoea (L), hypermenorrhoea (L), sterility (S) (L), infertility (S) (L), impotence (S) (L), bleeding (L), nosebleed (L)	20.83	Adjanohoun et al., 1982
	Crassocephalum bojeri (DC.) Robyns	Child severe headache (R)	5.95	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004
	Solanecio angulatus (Vahl) C.Jeffrey*	Headache (R)	5.95	Kaou et al., 2008
	Sphagneticola trilobata (L.) Pruski*	Dermal reaction linked to allergies and mycosis (Li)	5.95	Mchangama & Salaün, 2012
	Struchium sparganophorum (L.) Kuntze***	Cosmetics (Fl)	1.79	Saive et al., 2018
	Tithonia diversifolia (Hemsl.) A.Gray***	Diabetes (L)	5.95	Mchangama & Salaün, 2012
	Vernonia colorata subsp. *grandis* (DC.) C.Jeffrey*	Diarrhoea (WP)	5.95	Kaou et al., 2008
Balsaminaceae	*Impatiens auricoma* Baill.* (End)	Haemorrhoids (L)	5.95	Mchangama & Salaün, 2012

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Table 1 (suite 3). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
Boraginaceae	*Cordia myxa* var. *ixiocarpa* (F.Muell.) Domin*	Skin smoothing (B), cosmetics (B)	7.74	Saive et al., 2018
	Cordia subcordata Lam.*	Allergy (L) (S), dermal reaction (L) (S), mycoses (L) (S)	13.69	Mchangama & Salaün, 2012; Saive et al., 2018
	Trichodesma zeylanicum (Burm.f.) R.Br.***	Wound healing (L), analgesic (L)	11.90	Adjanohoun et al., 1982; Maregesi et al., 2013
Burseraceae	*Commiphora arafy* H. Perrier*	Sadness (L)	5.95	Mchangama & Salaün, 2012
Calophyllaceae	*Calophyllum inophyllum* L.***	Fresh cut (L), abscess (R) , facial neuralgia (ND), ulcers (R), eye infections (L) (R), orchitis, rheumatism (Re), psoriasis (Re), skin infection (Re), boils (Re)	38.69	Gurib Fakim & Brendler, 2004; Jain & Srivastava, 2005; Mchangama & Salaün, 2012; Abe & Ohtani, 2013
Cannabaceae	*Trema orientalis* (L.) Blume***	Oxytocic (L) (B)	5.95	Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012
Caricaceae	*Carica papaya* L.***	Internal parasitism (F), malaria (L)	11.90	Adjanohoun et al., 1982; Gurib Fakim, 1990; Kaou et al., 2008
Caryophyllaceae	*Drymaria cordata* (L.) Willd. ex Schult.**	Haemorrhoids (L) (B), psychomotor disability (children) (L), urogenital infection (S) (L), gingivitis (WP), dental pain (WP)	21.43	Adjanohoun et al., 1982; Mchangama & Salaün, 2012
Celastraceae	*Mystroxylon aethiopicum* (Thunb.) Loes.***	Chronic fatigue (ND), neuralgia (ND), tonic (ND)	9.52	Gurib Fakim et al., 1997a; Gurib Fakim & Brendler, 2004
Combretaceae	*Combretum coccineum* (Sonn.) Lam.***	Intestinal parasites (F), swollen spleen (Fl) (R)	11.90	Gurib Fakim & Brendler, 2004; Nicolas, 2012
	Terminalia catappa L.***	Fever (ND), epilepsy (ND)	11.90	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004
Commelinaceae	*Commelina africana* L.***	Anaemia (L), asthenia (L), Oxytocic (L)	13.69	Adjanohoun et al., 1982
Convolvulaceae	*Ipomoea batatas* (L.) Lam.***	Wound healing agent (ND), antiseptic (ND), disinfectant (ND), cicatrizing (ND), vulnerary (ND), burns (Pp), diffuse pain (ND), sores (ND)	26.79	Adjanohoun et al., 1982
	Ipomoea obscura (L.) Ker Gawl.*	Fever (Li), work overload (S), sinusitis (L), nasal congestion (L), gonorrhoea (L), asthma (WP)	27.38	Kaou et al., 2008; Mchangama & Salaün, 2012
	Ipomoea pes-caprae (L.) R. Br.***	Muscular pain (L), rheumatism (L), malaria (L), psychomotor disability (children) (L), malaria (WP)	25.60	Kaou et al., 2008; Mchangama & Salaün, 2012

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Table 1 (suite 4). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
	Jacquemontia tamnifolia (L.) Griseb.*	Headache (L), fever (L)	11.90	Saive et al., 2018
	Merremia peltata (L.) Merr.***	Postpartum treatment (L), fatigue during pregnancy (Li), vomiting (Li), vaginal infection (L) (Li), soreness (Sa), acne (Sa)	31.55	Mchangama & Salaün, 2012; Saive et al., 2018
Crassulaceae	*Kalanchoe pinnata* (Lam.) Pers.***	Earaches (L), sprains (L), fever (ND), headache (ND), heartburn (L), urinary inflammation (L), fungal infections (ND), inflammations (ND), bronchitis (ND), eye irritation (ND), abdominal irritation (L), cholera (ND), indigestion (L), flatulence (L), rheumatism (ND), muscle pain (L), varicose ulcer (ND), evolved diabetes (ND), psychomotor disability (children) (L), swollen feet (ND), wounds (ND), fractures (L), fatigue (L)	82.74	Adjanohoun, 1983; Gurib Fakim, 1990; Lartigau Roussin, 2002; Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012; Saive et al., 2018
Cucurbitaceae	*Kedrostis* sp.*	Scabies (Tu)	5.95	Mchangama & Salaün, 2012
	Momordica charantia L.***	Malformation (WP), diarrhoea (S) (L), lower back pain (WP), orchitis (WP), colitis (ND), fever (L), redness (L), allergy (L)	35.12	Adjanohoun et al., 1982; Kaou et al., 2008; Mchangama & Salaün, 2012; Saive et al., 2018
Dioscoraceae	*Dioscorea bulbifera* L.**	Foot fleas (WP) and burns (R)	7.74	Gurib Fakim & Brendler, 2004
Ebenaceae	*Euclea mayottensis* H.Perrier* (End)	Cosmetics (traditional tinctures) (ND), gonorrhoea (ND)	7.74	Gurib Fakim & Brendler, 2004
Erythroxylaceae	*Erythroxylum lanceum* Bojer* (End)	Pain (L), soreness (L)	7.74	Saive et al., 2018
Euphorbiaceae	*Acalypha lyallii* Baker**	Rheumatism (L)	5.95	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004; Seebaluck et al., 2015
	Aleurites moluccanus (L.) Willd.***	Orchitis (F)	5.95	Mchangama & Salaün, 2012
	Argomuellera trewioides (Baill.) Pax & K.Hoffm*	Inflammation (L)	5.95	Saive et al., 2018
	Euphorbia hirta L.***	Laxative (WP), diarrhoea (WP), urogenital infection (WP), abdominal pain (WP), gonorrhoea (WP)	21.43	Adjanohoun et al., 1982; Ekoumou, 2003; Gurib Fakim & Brendler, 2004; Kaou et al., 2008; Soule et al., 2014
	Euphorbia prostrata Aiton***	Spinal curvature (WP), back pain (WP)	11.90	Adjanohoun et al., 1982

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Table 1 (suite 5). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
	Flueggea virosa subsp. *virosa* G.L.Webster***	Malaria (S) (L) (W)	5.95	Kaou et al., 2008
	Jatropha curcas L.***	Fresh cut (La), muscle pain (F), gingivitis (La), abscesses (F), boils (F), vomiting (L), malaria (L), haemostatic (La), fractures (F), swelling (F), influenza (ND), acne (Sa)	42.26	Adjanohoun et al., 1982; Lartigau Roussin, 2002; Kaou et al., 2008; Mchangama & Salaün, 2012; Soule et al., 2014; Saive et al., 2018
	Manihot esculenta Crantz***	Inflammation (L), abscess (L)	11.90	Saive et al., 2018
	Ricinus communis L.***	Laxative (O), purgative (O), constipation (O), haemorrhoids (L), local analgesic (ND), malaria (WP)	19.05	Adjanohoun et al., 1982; Kaou et al., 2008
	Securinega virosa (Roxb. ex Willd.) Baill.*	Headache (R), migraine (R), antispasmodic (ND), hiccup (ND), abdominal pain (R), stomachache (R), gastric ulcer (R)	25.00	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004
	Tragia furialis Bojer***	Redness (L)	5.95	Saive et al., 2018
Fabaceae	*Abrus precatorius* L.***	Sadness (L), cough (B), bronchitis (ND), dysentery (ND), lupus (ND), tuberculosis (ND) gonorrhoea (ND), syphilis (ND), ulcers (ND), conjunctivitis (ND)	38.69	Gurib Fakim, 2011; Mchangama & Salaün, 2012; Rabearivony et al., 2015; Saive et al., 2018
	Caesalpinia bonduc (L.) Roxb.***	Orchitis (B), malaria (L), diarrhoea (S) (L)	17.86	Kaou et al., 2008; Mchangama & Salaün, 2012
	Cajanus cajan (L.) Millsp.***	Anaemia (Sd), oral inflammation (L), scabies (ND), tensions (ND), influenza (L), inflammation blepharitis (L), blindness (L), cataract (L), conjunctivitis (L), glaucoma (L), trachoma (L), malaria (L), abscess (Sd)	44.05	Terrac, 1947; Adjanohoun et al., 1982; Kaou et al., 2008; Mchangama & Salaün, 2012
	Cassia alata L.***	Blisters (L), brucellosis (Fl), depurative (ND), dermatomycosis (L), eczema (L), erysipelas (L), herpes (Sd) (L), impetigo (Sd) (L), itch (Sd) (L), mange (Sd) (L), nettle-rash (Sd) (L), pelada (Sd) (L), purpura (Sd) (L), tinea capitis (Sd) (L), vitiligo (Sd) (L), whitlow (Sd) (L), dandruff (ND), hypertension (L)	44.64	Adjanohoun et al., 1982; Gurib Fakim, 1990; Fortin et al., 2002
	Cassia occidentalis L.***	Depurative (L), diuretic (L), oxytocic (L), dystocia (L), antispasmodic (ND), hiccup (ND), diarrhoea (L), stomachaches (L), constipation (L) (R), headache (ND), malaria (WP) , inflammation (ND), diabetes (ND), fever (L) (Sd), bleeding (L) (W), allergy (L) (W), acne (L) (W), rheumatism (R), gonorrhoea (R), asthma (R), conjunctivitis (WP)	70.83	Terrac, 1947; Adjanohoun et al., 1982; Kaou et al., 2008; Soule et al., 2014; Saive et al., 2018

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Table 1 (suite 6). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
	Cassia singueana Delile***	Dermatomycosis (L), eczema (L), herpes (L), impetigo (L), itch (L), mange (L), purpura (L), tinea capitis (L), vitiligo (L), whitlow (L), dandruff (L), paronychia (L), diarrhoea (WP), back pain (L)	37.50	Adjanohoun et al., 1982; Kaou et al., 2008
	Cassia tora L.***	Eye diseases (L), pain (ND), Hyperactivity (children) (Fl)	9.52	Adjanohoun et al., 1982; Mchangama & Salaün, 2012
	Dalbergia arbutifolia Baker*	Rheumatism (R), orchitis (ND), localized pain (R)	17.86	Mchangama & Salaün, 2012
	Desmodium ramosissimum G.Don*	Impotence (Li)	5.95	Mchangama & Salaün, 2012
	Entada rheedei Spreng***	Orchitis (Co) (Sd)	5.95	Mchangama & Salaün, 2012
	Hymenaea verrucosa Gaertn.**	Allergy (R) (S) (L), dermal reaction (R) (S), mycoses (R) (S)	13.69	Mchangama & Salaün, 2012; Saive et al., 2018
	Lonchocarpus madagascariensis (Vatke) Polhill*	Pain of the limbs inside the bone (arms and shins) (L)	5.95	Mchangama & Salaün, 2012
	Pterocarpus indicus Willd.*	Acne (W)	5.95	Saive et al., 2018
	Rhynchosia viscosa (Roth) DC.*	Stomach pain (L)	5.95	Saive et al., 2018
	Senna singueana (Delile) Lock*	Bleeding (L) (W), ache (L) (W), allergies (L) (W), acne (L) (W), diarrhoea (WP)	23.21	Kaou et al., 2008; Saive et al., 2018
	Tamarindus indica L.***	Blisters (F), cough (B) (L), toothache (B), fracture (R), contusions (L), loss of appetite (Sd), backache (R), redness (B) (L) (W), acne (B) (L) (W)	32.74	Adjanohoun et al., 1982; Mchangama & Salaün, 2012; Saive et al., 2018
	Tephrosia vogelii Hook.f.***	Toothache (L)	5.95	Adjanohoun et al., 1982
	Vigna adenantha (G.Mey.) Marechal & al.*	Abscess or furuncle (Sd), panaris (Sd)	7.74	Mchangama & Salaün, 2012
Flacourtiaceae	*Flacourtia indica* (Burm.f.) Merr.***	Malaria (S) (L)	5.95	Kaou et al., 2008
Flagellariaceae	*Flagellaria indica* L.***	Infected throat (S), pharyngitis (S)	7.74	Mchangama & Salaün, 2012
Icacinaceae	*Apodytes dimidiata* E.Mey. ex Arn.*	Redness (L)	5.95	Saive et al., 2018
Lamiaceae	*Leucas grandis* Vatke*	Rhinorrhoea (L), rhinitis (allergic) (L)	11.90	Mchangama & Salaün, 2012
	Ocimum americanum L.***	Parturition (L), diarrhoea (WP), vaginal infection (L), malaria (S), dismenorrhoea (WP), leucorrhoea (WP)	23.21	Kaou et al., 2008; Mchangama & Salaün, 2012

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Table 1 (suite 7). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
	Ocimum canum Sims***	abdominal pain (WP), stomach pain (WP), gastric ulcer (WP), stomach ulcer (WP), colic (WP), antispasmodic (ND), migraine (WP), fever (WP), malaria (WP), shortness of breath (WP), body aches (WP), ear washings (WP), mumps (WP), angina (WP), stomach cramps (WP), diarrhoea (WP), dysmenorrhea (WP), insomnia (WP), anxiety (WP)	63.10	Adjanohoun et al., 1982; Hassane et al., 2011
	Ocimum gratissimum L.***	Gingivitis (L), aphthous stomatitis (L), diarrhoea (L), epilepsy (ND), cough (WP), whooping cough (ND), hypertension (ND), nose bleeding (ND), headache (ND), vaginal infection (L), malaria (S), fever (L), haemorrhoids (L), dysmenorrhoea (WP), leucorrhoea (WP), abortive (WP)	61.90	Gurib Fakim et al., 1997b; Kaou et al., 2008; Mchangama & Salaün, 2012
	Ocimum suave Willd.***	Vaginal prolapsed (L), uterine prolapses (L), uterus disease (L), vertigo (L), dizziness (L), faint (L), syncope (L), giddiness (L), fever (S) (L), malaria (S) (L), abdominal pain (ND), stomach pain (ND), pelvic pain (L), antispasmodic (ND)	45.83	Adjanohoun et al., 1982
	Plectranthus amboinicus (Lour.) Spreng.***	Cough (L), colic (ND), flatulence (ND), rheumatism (ND), furuncle (ND), sprain (ND), painful swelling (ND), constipation (ND), vaginal infection (ND), malaria (R) , influenza (ND) stomachaches (WP), diarrhoea (ND), intestinal worms (ND), vaginal infection (L), abdominal gripes (WP), dysuria (WP), laxative (WP), hiccup (ND)	65.48	Lartigau Roussin, 2002; Gurib Fakim & Brendler, 2004; Kaou et al., 2008; Hassani et al., 2012; Mchangama & Salaün, 2012; Soule et al., 2014
	Plectranthus madagascariensis (Pers.) Benth.***	Redness (L), stomach pain (L), headache (L)	17.86	Saive et al., 2018
	Premna serratifolia L.***	Furuncle (ND), injuries (ND), insomnia (L), cough (ND), influenza (ND)	25.60	Gurib Fakim et al., 1997a; Mchangama & Salaün, 2012
	Vitex trifolia L.***	Insomnia (L), nightmares (L)	7.74	Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012
Lauraceae	*Cassytha filiformis* L.***	Dermatomycosis (L), eczema (L), herpes (L), impetigo (L), itch (L), mange (L), purpura (L), tinea capitis (L), vitiligo (L), whitlow (L), dandruff (L), paronychia (L)	29.76	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004; Soidrou et al., 2014
	Cinnamomum zeylanicum Blume***	Malaria (L)	5.95	Kaou et al., 2008
	Laurus nobilis L.*	Urogenital infection (L)	5.95	Adjanohoun et al., 1982

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Table 1 (suite 8). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
	Litsea glutinosa (Lour.) C.B.Rob.***	Varicose ulcer (W), skin disease (W), antiseptic (B), painful menstruation (F), diarrhoea (B), emollient for sprains (B), diabetes (W), redness (Sa)	39.29	Vos, 2004; Mchangama & Salaün, 2012; Saive et al., 2018
	Ocotea comoriensis Kosterm.* (End)	Child's eczema (W), headache (ND), urinary disorder (ND), stomach disease (ND)	23.81	Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012
	Persea americana Mill.***	Acne (Sd)	5.95	Saive et al., 2018
Lecythidaceae	*Barringtonia asiatica* (L.) Kurz***	Epigastric (B), rheumatism (WP) (L)	11.90	Gurib Fakim & Brendler, 2004; Jain & Srivastava, 2005; Mchangama & Salaün, 2012; Abe & Ohtani, 2013
	Barringtonia racemosa (L.) Spreng.***	Sciatica (B)	5.95	Mchangama & Salaün, 2012
Liliaceae	*Lomatophyllum purpureum* (Lam.) T.Durand & Schinz***	Conjunctivitis (ND), wounds and burns (ND), weaning (Sa)	17.86	Gurib Fakim et al., 1997a; Lartigau Roussin, 2002
Loganiaceae	*Strychnos spinosa* Lam.***	Scabies (R), fever (ND), beauty mask (ND)	13.69	Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012
Lythraceae	*Ammannia multiflora* Roxb.*	Psychomotor development delay (L)	5.95	Mchangama & Salaün, 2012
	Lawsonia inermis L.***	Panaris (L), paronychia (L), dysmenorrhoea (L), hypermenorrhoea (L), anxiety (ND), stress (ND), nervous disorder (ND), abortive (ND), headache (L) (Fl)	32.74	Adjanohoun et al., 1982; Mchangama & Salaün, 2012; Durasnel et al., 2014; Saive et al., 2018
	Woodfordia fruticosa (L.) Kurz***	Impotence (R), constipation (R), diarrhoea (WP)	13.69	Kaou et al., 2008; Mchangama & Salaün, 2012
Malvaceae	*Adansonia digitata* L.***	Fever (F), cough (ND), diarrhoea (F), renal inflammation (ND), cystitis (ND), depurative (ND), asthma (ND), malaria (ND), dysentery (B), wounds (ND), urinary problems (ND), herpes (ND), fatigue (ND), diffuse pains (ND), eye disease (ND), mumps (ND), deworming (F), redness (F), skin infection (F)	71.43	Gurib Fakim & Brendler, 2004; Jain & Srivastava, 2005; Mchangama & Salaün, 2012; Saive et al., 2018
	Carpodiptera africana Mast.*	Cosmetics (W)	1.79	Saive et al., 2018
	Grewia cuneifolia Juss.*	Allergy (L)	5.95	Saive et al., 2018
	Heritiera littoralis Aiton***	Painful periods (B), heavy periods (B), stomach pain (B) (L)	13.69	Mchangama & Salaün, 2012; Saive et al., 2018
	Hibiscus surattensis L.*	Throat illness (WP), urinary tract infection (WP)	11.90	Adjanohoun et al., 1982; Mchangama & Salaün, 2012

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Table 1 (suite 9). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
	Hibiscus tiliaceus L.***	Allergy (R) (S), dermal reaction (R) (S), mycoses (R) (S), acne (L)	15.48	Mchangama & Salaün, 2012; Saive et al., 2018
	Sida rhombifolia L.***	Abscess (L), boils (L), furuncle (L), herpes (L), skin lesion (L), skin disease (L), lupus (L), erysipelas (L), arthritis (ND), articular pain (ND), muscular inflammation (ND), spinal curvature (ND), backache (ND), redness (Fl)	41.67	Adjanohoun et al., 1982; DaSilva et al., 2009; Saive et al., 2018
	Sida stipulata Cav.***	Panaris (L) (R)	5.95	Mchangama & Salaün, 2012
	Sida urens L.*	Redness (L)	5.95	Saive et al., 2018
	Thespesia populneoides (Roxb.) Kostel.***	Dermal reaction linked to allergies and mycosis (S) (Fl)	5.95	Mchangama & Salaün, 2012
	Triumfetta rhomboidea Jacq.***	Abscess (R)	5.95	Mchangama & Salaün, 2012
Melastomataceae	*Clidemia hirta* (L.) D.Don.***	Rheumatism (ND), abdominal pain (L), hypotensive (ND), depurative (ND)	23.81	Gurib Fakim & Brendler, 2004
	Tristemma mauritianum J.F.Gmel.***	Wounds (ND), cough (ND), premenstrual tension (ND)	17.86	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004
Meliaceae	*Turraea sericea* Sm.***	Haemorrhoids (ND), vertigo (L), orchitis (B), hydrocele (B)	19.64	Mchangama & Salaün, 2012
	Xylocarpus moluccensis (Lam.) M.Roem.*	Orchitis (Sd)	5.95	Mchangama & Salaün, 2012
Menispermaceae	*Cissampelos pareira* L.***	Sadness (L), heartburn (W), childhood eczema (R)	17.86	Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012
	Triclisia capitata Diels* (End)	Impotence (R), orchitis (ND), pain in the lower body (R)	13.69	Mchangama & Salaün, 2012
Mimosaceae	*Acacia farnesiana* (L.) Willd.***	Cosmetic (Fl)	1.79	Saive et al., 2018
Molluginaceae	*Mollugo nudicaulis* Lam.***	Cough (WP)	5.95	Kaou et al., 2008
Monimiaceae	*Tambourissa leptophylla* (Tul.) A. DC.***	Aborting agent (L), dermatitis (L), antifungal (F), antimicrobial (F), healing wounds (F), malaria (F), diarrhoea (F)	29.17	Adjanohoun et al., 1982; Gallori et al., 2001; Gurib Fakim & Brendler, 2004; Kaou et al., 2008
Moraceae	*Ficus cocculifolia* Baker***	Warts (ND), skin infection (ND)	7.74	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004
	Ficus hispida L.f.***	Abortive (ND), abdominal pain (ND)	11.90	Gurib Fakim & Brendler, 2004
	Trophis montana (Leandri) C.C. Berg.*	Fever (L)	5.95	Saive et al., 2018

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Table 1 (suite 10). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
Moringaceae	*Moringa oleifera* Lam.***	Sting of centipede (Sd), better lactation (ND), deworming (ND), constipation (ND), wounds (ND), ulcers (ND), stress (ND), bruising (ND), arthritis (ND), asthma (ND), hiccups (ND), nodes (ND), fresh cut (ND), choleretic (ND), liver disease (L), antispasmodic (ND), eye disease (Sa), redness (L)	61.31	Pernet, 1957; Adjanohoun et al., 1982; Lartigau Roussin, 2002; Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012; Saive et al., 2018
Musaceae	*Musa* sp.***	Orchitis (L), stomach ulcer (ND), stomach pain (ND), bloody diarrhoea (ND), dysentery (ND), fresh cut (ND), fortifying (ND), malformation (ND), malaria (L)	41.07	Adjanohoun et al., 1982; Kaou et al., 2008; Mchangama & Salaün, 2012
Myristicaceae	*Myristica fragrans* Houtt.***	Redness (F), headache (F), stomach pain (F), malaria (F)	19.64	Kaou et al., 2008; Saive et al., 2018
Myrtaceae	*Eucalyptus* sp.***	Headache (L), women sterility (L), diffuse pain (L)	13.69	Adjanohoun et al., 1982; Blanchy et al., 1993
	Psidium guajava L.***	Digestive (L), antispasmodic (ND), antiseptic (L), astringent (ND), diarrhoea (L), stomach disorders (L), dizziness (ND), colitis (L), diabetes (ND), dysmenorrhoea (ND), toothache (B), gingivitis (B), infected wound (ND), malaria (ND), intestinal worm (L), inflammation (ND), cholera (ND)	55.36	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012; Soule et al., 2014
	Syzygium aromaticum (L.) Merr. & L.M. Perry***	Articular pain in the lower part of the body (FB), fatigue (L), articular pain (R), cough (F) (FB), purgative (Fl), redness (Fl), headache (Fl), toothache (F)	30.95	Kaou et al., 2008; Mchangama & Salaün, 2012; Saive et al., 2018
Nyctaginaceae	*Boerhavia diffusa* L.*	Pelvic pain (L)	5.95	Adjanohoun, 1989
	Mirabilis jalapa L.***	Furuncle (L), abscess (L), loss of appetite (Li), purgative (Li)	15.48	Mchangama & Salaün, 2012
Oleaceae	*Jasminum nummularifolium* Baker*	Acne (Fl)	5.95	Saive et al., 2018
	Noronhia comorensis S.Moore* (End)	Tonic (L)	5.95	Saive et al., 2018
Ophioglossaceae	*Ophioglossum reticulatum* L.***	Astringent (ND), childhood eczema (ND)	7.74	Gurib Fakim et al., 1997a
Orchidaceae	*Vanilla planifolia* Jacks. ex Andrews***	Haemostatic (L)	5.95	Kaou et al., 2008
Oxalidaceae	*Averrhoa bilimbi* L.**	Febrifuge (L), scurvy (F), caterpillar sting (F)	17.86	Daruty, 1886; Mchangama & Salaün, 2012; Abe & Ohtani, 2013
	Oxalis corniculata L.***	Diarrhoea (WP), caterpillar sting (L), diarrhoea (WP), dysmenorrhoea (WP), cough (L), urogenital infection (ND), haemorrhoids (L)	27.38	Adjanohoun et al., 1982; Kaou et al., 2008; Mchangama & Salaün, 2012

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Table 1 (suite 11). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
Pandanaceae	*Pandanus mayotteensis* H.St. John* (End)	Impotence (R)	5.95	Pascal et al., 2001; Mchangama & Salaün, 2012; Saive et al., 2018
Pedaliaceae	*Sesamum indicum* L.*	Redness (S), acne (S)	7.74	Saive et al., 2018
Phyllanthaceae	*Phyllanthus amarus* Schumach. & Thonn.***	Antiemetic (ND), stomach pain (ND), gastric ulcer (ND), stomach ulcer (ND), colitis (ND), gastritis (ND), heartburn (ND),	20.83	Adjanohoun et al., 1982
	Phyllanthus casticum P.Willemet.***	Abcesses (ND), furuncles (ND)	7.74	Pernet, 1957; Gurib Fakim & Brendler, 2004
	Phyllanthus nummulariifolius Poir.***	Blisters (WP), oedema (WP), brucellosis (WP), hypertension (WP)	19.64	Adjanohoun et al., 1982
	Phyllanthus tenellus Roxb.*	Diarrhoea (L) (S) (W), cough (L) (S) (W)	11.90	Kaou et al., 2008
Piperaceae	*Piper* sp.***	Impotence (R), malaria (L), diarrhoea (L) (S) (W), malaria (ND), gynaecological diseases (ND), diabetes (L), hypertension (L), intestinal parasites (L), tooth diseases (S), influenza (ND), redness (L)	34.52	Kaou et al., 2008; Mchangama & Salaün, 2012; Soidrou et al., 2014; Soule et al., 2014; Saive et al., 2018
Plantaginaceae	*Scoparia dulcis* L.***	Allergy (W)	5.95	Saive et al., 2018
Poaceae	*Chrysopogon zizanioides* (L.) Roberty***	Cosmetics (R)	1.79	Saive et al., 2018
	Cynodon dactylon (L.) Pers.***	Injury (S) (L), cut (S) (L), wound (S) (L), chap (S) (L), scars (S) (L), bleeding (S) (L), epistaxis (S) (L), nosebleed (S) (L)	22.62	Adjanohoun et al., 1982
	Eleusine indica (L.) Gaertn.***	Allergy (L), dermal reaction (L), mycoses (L)	13.69	Mchangama & Salaün, 2012
	Zea mays L.***	Bleeding (ND) umbilical wound (F), liver disease (St) (Sg), gonorrhoea (Sg)	19.64	Adjanohoun et al., 1982; Kaou et al., 2008; Mchangama & Salaün, 2012
Polypodiaceae	*Phymatosorus scolopendria* (Burm. f.) Pic. Serm.***	Oxytocic (ND), prevent miscarriage (ND)	11.90	Mchangama & Salaün, 2012
Portulacaceae	*Portulaca oleracea* L.***	Urinary infection (ND), night incontinence (L), tonic (L)	13.69	Adjanohoun et al., 1982; Mchangama & Salaün, 2012
	Portulaca quadrifida L.***	Migraine (WP), headache (WP)	7.74	Adjanohoun et al., 1982
Ranunculaceae	*Clematis simensis* Fresen.*	Antalgic (S), migraine (S), anxiety (ND), stress (ND), nervous disorder (ND)	17.26	Adjanohoun et al., 1982

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Table 1 (suite 12). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
Rhizophoraceae	*Bruguiera gymnorhiza* (L.) Lam.***	Haemorrhages (ND)	5.95	Gurib Fakim & Brendler, 2004
Rosaceae	*Rosa chinensis* Jacq.*	Fever (Fl) (L)	5.95	Saive et al., 2018
Rubiaceae	*Canthium bibracteatum* (Baker) Hiern*	Fortifying gum and teeth (ND), colic (ND), constipation (ND), painful periods (ND)	15.48	Gurib Fakim & Brendler, 2004
	Guettarda speciosa L.***	Allergy (R) (S), dermal reaction (R) (S), mycoses (R) (S), acne (W) (Fl) (L), malaria (Fl)	21.43	Kaou et al., 2008; Mchangama & Salaün, 2012; Saive et al., 2018
	Paederia foetida L.***	Bladder problem (ND), gastric pains (ND)	11.90	Gurib Fakim et al., 1997a; Gurib Fakim & Brendler, 2004
	Pentas lanceolata (Forssk.) Deflers***	Oxytocic (R), sterility (S) (L), impotence (S) (L), diffuse pain (S) (L)	19.64	Adjanohoun et al., 1982
	Vangueria madagascariensis J.F.Gmel***	Skin infection (ND), abscesses (ND)	7.74	Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004
Rutaceae	*Citrus aurantium* L.***	Sexual asthenia (ND), impotency (ND) Fever (L), fatigue (L), backache (L), haemorrhoids (L)	31.55	Adjanohoun et al., 1982; Mchangama & Salaün, 2012
	Citrus aurantiifolia (Christm.) Swingle***	Inflammatory fever (L), jaundice (F), typhoid fever (L), panaris (F), asthma (F), indigestion (L), hiccups (L), chronic constipation (L), cephalalgia (L), stomach ache (L), nosebleed (ND), poisons (ND), colitis (L) diarrhoea (L), malaria (L), influenza (L), dysmenorrhoea (F), hypermenorrhoea (F)	57.14	Pernet, 1957; Adjanohoun et al., 1982; Gurib Fakim & Guého, 1994; Kaou et al., 2008; Mchangama & Salaün, 2012; Soule et al., 2014
	Citrus medica L.***	Vaginal infection (L)	5.95	Mchangama & Salaün, 2012
	Citrus nobilis Lour.*	Malaria (L)	5.95	Kaou et al., 2008
	Vepris boiviniana (Baill.) Mziray***	Redness (L) (W)	5.95	Saive et al., 2018
Santalaceae	*Santalum album* L.*	Acne (W)	5.95	Saive et al., 2018
Sapindaceae	*Cardiospermum halicacabum* L.***	Hyperactivity in children (Fl), child fever (L) (Sd) (R), upset stomach (L), painful ear (L), skin infection (L), deworming (children) (L) (R), oxytocic (WP), arthritis (L) (R) (Sd), cramp (R) (Sd), muscular inflammation (WP), myalgia (WP), sciatic (WP), sprained joint (WP), aching joints (WP)	54.17	Sussman, 1980; Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004; Jain & Srivastava, 2005; Mchangama & Salaün, 2012; Abe et al., 2013; Sreekeesoon & Mahomoodally, 2014
	Dodonaea viscosa (L.) Jacq.***	Vertigo (L), headache (ND)	11.90	Gurib Fakim & Brendler, 2004; Jain & Srivastava, 2005

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Table 1 (suite 13). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
	Litchi chinensis Sonn.***	Redness (W) (R), skin smoothing (W) (R)	11.90	Saive et al., 2018
	Paullinia pinnata L.***	Arthritis (ND), rheumatism (ND), back pain (R), tonic (Li), diffuse pain (R), orchitis (ND), loss of appetite (Li), stomach pain (F), redness (F)	32.74	Mchangama & Salaün, 2012; Saive et al., 2018
	Sapindus saponaria L.*	Mycoses (F), irritations due to continuous rubbing (F)	7.74	Mchangama & Salaün, 2012
Sapotaceae	*Mimusops comorensis* Engl.* (End)	Haemorrhoids (B), hydrocele (B), orchitis (B), localized pain (B).	19.64	Mchangama & Salaün, 2012
Simaroubaceae	*Quassia indica* (Gaertn.) Noot.*	Prevents miscarriage (B)	5.95	Mchangama & Salaün, 2012
Smilacaceae	*Smilax anceps* Willd.***	Lower back pain (R)	5.95	Mchangama & Salaün, 2012
Solanaceae	*Cestrum nocturnum* L.*	Cosmetics (Fl)	1.79	Saive et al., 2018
	Datura metel L.***	Ear pain (F), suppurative otitis (F), cough (Fl) (L), asthma (Fl) (L), respiratory disease (Fl) (L), emphysema (Fl) (L), phlegm (Fl) (L), diarrhoea (WP), gonorrhoea (WP), urethral flow (WP)	38.69	Adjanohoun et al., 1982; Kaou et al., 2008; Mchangama & Salaün, 2012
	Solanum mauritianum Scop.***	Children's oral mycoses (L)	5.95	Adjanohoun et al., 1982
	Solanum nigrum L.***	Abdominal pain (L), stomach ache (L), gastric ulcer (L), stomach ulcer (L), colitis (L), arthritis (ND), articular pain (ND), rheumatism (ND), muscular inflammation (ND), sciatic (ND), joint pain (ND), antispasmodic (ND), diarrhoea (WP), cough (WP)	45.83	Adjanohoun et al., 1982; Kaou et al., 2008
Strelitziaceae	*Ravenala madagascariensis* Sonn.***	joint pain linked to childbirth (FB)	5.95	Mchangama & Salaün, 2012
Verbenaceae	*Lantana camara* L.***	Hypermenorrhoea (R), fatigue (L), stomachache (L), postpartum pain (L), blisters (L), oedema (L), depurative (ND), diuretic (ND), hypertension (L)	41.07	Adjanohoun et al., 1982; Mchangama & Salaün, 2012; Saive et al., 2018
	Lantana trifolia L.*	Vaginal infection (L)	5.95	Mchangama & Salaün, 2012
	Stachytarpheta jamaicensis (L.) Vahl***	Redness (Fl)	5.95	Saive et al., 2018
Vitaceae	*Cissus quadrangularis* L.***	Malformations (S)	5.95	Adjanohoun et al., 1982
	Leea guineensis G.Don.***	Acne (W), allergy (W)	11.90	Saive et al., 2018
	Leea spinea Desc.*	Allergy (R) (S), dermal reaction (R) (S), mycoses (R) (S)	13.69	Mchangama & Salaün, 2012
	Rhoicissus revoilii Planch.*	Vulvar pruritus (L), leucorrhea (L)	7.74	Adjanohoun et al., 1982

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Table 1 (suite 14). List of plants mentioned in the literature linked to traditional practices — *Liste des plantes mentionnées dans la littérature liées aux pratiques traditionnelles*.

Family	Species	Use/symptoms (plant parts)	RII	References
Zingiberaceae	*Curcuma longa* L.***	Injuries (Rz), dermatosis (ND), bruising (Rz), cough (L), paronychia (Rz)	21.43	Mchangama & Salaün, 2012; Saive et al., 2018
	Zingiber officinale Roscoe***	Constipation (Rz), fever (Rz), backache (Rz), pharyngitis (Rz), abscess (L), boils (L), furuncle (L), pustules (L), skin disease (L), snake bites (Rz), vaginal prolapsed (Rz), uterine prolapses (Rz), uterus diseases (Rz), urogenital infection (ND), choleretic (ND), pelvic pain (Rz)	53.57	Adjanohoun et al., 1982; Mchangama & Salaün, 2012
	Zingiber zerumbet (L.) Roscoe ex Sm.***	Redness (L)	5.95	Saive et al., 2018

The different species were verified using the MPNS database ("Medicinal Plant Names Services," March-25-2019) and the INPN database ("INPN - Inventaire National du Patrimoine Naturel," March-31-2019) — *les différentes espèces ont été vérifiées avec les bases de données MPNS* (« Medicinal Plant Names Services », *25/03/2019) et INPN (« Inventaire National du Patrimoine Naturel », 31/03/2019)*; End: the species is endemic to one or several islands of the archipelago — *l'espèce est endémique à une ou plusieurs îles de l'archipel*; ***: different uses in different regions of the Indian Ocean and surroundings — *différents usages dans différentes régions de l'océan Indien et ses environs*; **: same use in different regions of the Indian Ocean and surroundings — *mêmes usages dans différentes régions de l'océan Indien et ses environs*; *: used only in the Comoros — *utilisé seulement dans les Comores*; plant parts abbreviations — *abréviations des parties des plantes:* (B) bark — *écorce*, (Bl) bulb — *bulbe*, (Co) cotyledon — *cotylédon*, (F) fruits — *fruits*, (FB) flower buds — *bouton floral*, (Fl) flower — *fleur*, (Fu) fungi — *champignon*, (L) leaves — *feuilles*, (La) latex — *latex*, (Li) liana — *liane*, (O) oil — *huile*, (Pp) pulp — *pulpe*, (Re) resin — *résine*, (Rz) rhizome — *rhizome*, (S) stem — *tige*, (Sa) sap — *sève*, (Sd) seed — *graine*, (Sg) stigmas — *stigmate*, (St) styles — *styles*, (Tu) tuber — *tubercule*, (WP) whole plant — *plante entière*, (ND) no data — *pas de données*; RII: Relative Importance Index — *indice d'importance relative*.

When it comes to the RNU, it seems that the main concern of the inhabitants of the Comoros archipelago are ailments linked with the following symptoms: diarrhoea (RNU = 100), eczema and skin conditions (RNU = 100), abdominal pain (RNU = 86.84) and rheumatism (RNU = 81.58). This information is interesting for further research in ethnopharmacology when focusing on diseases linked to these symptoms.

5. TENDENCIES AND CULTURAL CONSENSUS

Based on **table 1**, information on the consensus was also collated, leading to the following noteworthy points:

– 56 species with one or more specific uses are known to be used only in the Comoros archipelago. Among these the one most mentioned is: *Pandanus mayotteensis* H.St.John. The dried roots of this species are ground together with the roots of *Woodia fruticose* (L.) Kurz, *Desmodium ramosissimum* G.Don., *Triclisia capitate* Baillon and *Monanthotaxis glaucocarpa* (Baill.) Verdc. The powder obtained is used as a decoction and drunk two times a day for seven days. This preparation is used to treat impotence (Pascal et al., 2001; Mchangama & Salaün, 2012; Saive et al., 2018);

– Only 6 species are used for the same purpose in several islands of the Indian Ocean, thus showing an agreement on use between traditional healers. Among these, the ones most mentioned are: *Averrhoa bilimbi* L. and *Acalypha lyallii* Baker. In the Comoros archipelago, the fruits of *A. bilimbi* are used to treat itching; they are crushed with water and ashes to make a paste that is applied to the affected area (Daruty, 1886; Mchangama & Salaün, 2012; Abe & Ohtani, 2013). *Acalypha lyallii* is used as a leaf decoction to massage the body to treat rheumatism (Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004; Seebaluck et al., 2015).

– 145 species are used widely in the Indian Ocean and surroundings, including the Comoros archipelago islands, for many different ailments. Among these the one most mentioned is: *Cardiospermum halicacabum* L. Leaf decoctions are used to treat eczema, anasarca, ear diseases and wounds. Roots are used to treat dizziness, eye diseases, rheumatism and stiffness. Stems are used to manage fever in India. In the islands of the Indian Ocean, stems and roots are used as laxative and emetic as well as to treat cysts, bladder catharsis and gonorrhoea. The leaves

are used to treat boils, rheumatisms, eczema and impetigo (Sussman, 1980; Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004; Jain & Srivastava, 2005; Mchangama & Salaün, 2012; Abe & Ohtani., 2013; Sreekeesoon & Mahomoodally, 2014).

Throughout the classification in **table 1**, these 145 species are found the most frequently.

Even though *C. halicacabum* is the most often mentioned (7 sources), it does not have the widest variety of uses (RII = 54.17), *ergo* there is a certain consensus for the specific uses of this plant.

On the other hand, *Plectranthus amboinicus* (Lour.) Spreng. has fewer sources (6) but has many different uses (RII = 65.48), therefore pointing towards a higher versatility; *e.g.* a total of 21 traditional uses for this plant have been mentioned in the literature. In the Comoros archipelago, it is used as a cure for ailments ranging from a simple cough to colitis and flatulence, as well as rheumatism, malaria and furuncles. In Madagascar, leaves are added in meals as a food complement and are also used in decoctions or in fumigation to treat colds (Nicolas, 2012). In the Reunion Island, leaves of *P. amboinicus* are used in baths, infusions and for massage, to treat the symptoms caused by the chikungunya virus (fever, sore muscles and articulations) (Minker, 2007).

When it comes to similarities between different regions, the species *Moringa oleifera* Lam. (RII = 61.31) is used in the Comoros archipelago to treat asthma, hiccups and spasms among other uses (**Table 1**) (Adjanohoun et al., 1982; Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012; Saive et al., 2018). In Mauritius and Seychelles, this species is linked to the treatment of throat related infections. For the anti-spasmodic effect of *M. oleifera*, people from Madagascar, Mauritius, Seychelles, as well as peoples from the Comoros archipelago tend to agree. As for the other uses mentioned in the Comoros archipelago, other places have their own use versatility: only inhabitants of Rodrigues and Seychelles use this species to treat high blood pressure, coughs and as an abortifacient, whereas in Madagascar, Mauritius and Rodrigues it is used to treat helminthiasis; in Mauritius, this plant is also used to treat nervous disorder, ear infections and fever and in Seychelles, this species is consumed as a refreshing drink (Pernet, 1957; Adjanohoun, 1983; Gurib Fakim & Brendler, 2004).

In some cases, some plants are used in other islands of the Indian Ocean and surroundings and are part of the flora of the Comoros archipelago, but are not known to be part of the Comorian pharmacopoeia. Therefore, these species are not mentioned in **table 1**. *E.g.*: *Cabucala erythrocarpa* (Vatke) Markgr. is endemic to Madagascar and the Comoros archipelago. In Madagascar, a bark decoction is drunk to treat viral hepatitis, malaria, stomach pain and diarrhoea. The bark is also used as a bitter ingredient in some alcoholic beverages, which are considered as strongly aphrodisiac. Leaves are used to treat skin infections and are consumed as decoctions to treat hypertension (Schmelzer & Gurib Fakim, 2008). In the Reunion Island, an infusion of *Hypercum lanceolatum* Lam. yellow flowers is considered as refreshing, meaning that it helps manage fever as well as heartburn caused by the ingestion of hot and spicy food. This infusion is also considered helpful against urinary tract inflammation and will often be used as a depurative and to regulate menstruations (Lavergne, 1989). These plants are found in the Comoros archipelago; however, no use reports are mentioned there.

As expected, plants with fewer mentioned medicinal uses are more likely to be used the same way in different places, in comparison to plants with multiple medicinal uses. *Acalypha lyallii* is only used for rheumatism in the Indian Ocean, whereas *B. pilosa* is known for many uses in the Comoros archipelago but has even more uses in the surrounding islands. Out of the 207 different species mentioned in the present work, only 27% are used exclusively in the Comoros archipelago for a variety of purposes, 3% are used in the Comoros archipelago and in several islands and surroundings of the Indian Ocean for the same purposes and 70% are used in the Comoros archipelago and in other islands and surroundings of the Indian Ocean for comparable or different purposes. For the latter category, its size can be explained by the fact that many non-endemic species have been transported through the years and have diverse origins. Therefore, they might be used very differently in the different areas of the world where they are found.

When looking at different ethnobotanical studies carried out in the Maurice archipelago, Mauritius Island and Rodrigues Island are studied separately. On the other hand, most of the studies that were performed in the Comoros archipelago did not separate the different islands; in the present work however, separating the islands is important as some species are endemic to only one or two islands of the archipelago: *e.g. Syzygium humblotii* Labat & Schatz and *Eugenia choungiensis* Byng & N.Snow have been reported to be endemic to Mayotte. *Syzygium tringiense* Byng & N.Snow is known to be endemic to the island of Anjouan (Byng et al., 2016) and *Gyrostipula comorensis* J.-F. Leroy was only endemic to Grande Comore and Mohéli but its endemicity has been widened to include Anjouan (Mouly, 2009). As these species are not found in all the Comorian islands, the archipelago should therefore not be studied as a whole but rather be investigated in its separate parts. When a clear separation between the geographic regions is made, the collected data have

a higher impact when integrated into ethnobotanical indicators such as the informant agreement ratio.

Identification of species of interest for modern medicine is not the only reason to study the relationship the local people have with the flora that surrounds them. Other factors such as biodiversity management and protection (Nazarea, 1999), as well as the preservation of ancestral knowledge are two important objectives for ethnobotany studies, especially as traditional knowledge is mostly shared through oral tradition. Due to the growing access to modern medicine, the interest for traditional medicine tends to disappear; therefore, the number of traditional healers and their knowledge plummet. Ethnobotanists store plant specimens in herbaria, gather information on the uses of species and thereby preserve ancestral knowledge from extinction (Kaido et al., 1997).

The fact that plants have been used for centuries as medicines does not mean they are harmless. Their presumed innocuousness is based on hundreds of years of empirical observations (Fennell et al., 2004). Just as for modern medicines, there can be some deleterious effects. Due to the way traditional knowledge is transmitted, adverse effects are not always fully understood and serious poisoning due to traditional medicines is not uncommon. In South Africa, the estimated mortality due to traditional medicines ranges between 10,000 and 20,000 cases per year. This huge variability is due to a lack of precise data. Indeed, many cases of poisoning which are not recorded could possibly be linked to traditional medicine (Thomson, 2000; Popat et al., 2001).

As mentioned previously, some species are traditionally used for numerous diseases, which means that these species are under a strong anthropic pressure due to their biological value (Adjanohoun, 1983; Gurib Fakim, 1990; Lartigau Roussin, 2002; Gurib Fakim & Brendler, 2004; Mchangama & Salaün, 2012). If there is no management of these plants, there are chances that they will become extinct (Rasoanaivo, 2011).

When focusing on the case of the Comoros archipelago, it is important to remember that it came to exist through volcanic activity and therefore it has a very hilly landscape (Nougier et al., 1986), which is not ideal for crop production, even though the soil is rich and fertile (Clement et al., 2016). The discovery of medicinal values in plants in such places is an important opportunity to promote the development of these regions through the sustainable exploitation of interesting species. The high added value compensates for the lack of infrastructure for more traditional crops. Needless to say, the knowledge gathered from the traditional healers should be returned in one way or another to the population from which it originated (McManis, 2003; Rasoanaivo, 2011).

6. CONCLUSIONS

This review is an attempt to gather and examine numerous species used in the traditional pharmacopoeia of the Comoros Islands. Since the 19th century, ethnobotany and ethnopharmacology have been an important part of the drug and cosmetic industry. Based on that affirmation, the study of biodiversity hotspots, especially the ones found on islands seems essential as they present a high concentration of different species in a defined area. In addition, the ethnobotanical work done in these places on Earth will allow us to maintain the knowledge developed by the people who have been working with these species for centuries and who have had the time to test the effectiveness of the remedies empirically. In the present work, 207 species were identified as part of the traditional pharmacopoeia of the Comoros archipelago. Some species are already known worldwide for their properties. However, many are still to be studied in order to validate their biological activities.

The specific uses for the different species mentioned herein can be compared to other databases and then using the previously mentioned tools, species that are more likely to be really effective and interesting for medicinal and cosmetic purposes can be identified and integrated into more hands-on studies. These differences and similarities will probably be of interest when this database is compared to data from around the world, giving more clues as to which species are likely to produce new cures.

Acknowledgements

The authors are grateful to the University of Liège (Belgium) for allowing us to gain access to all the information required for an exhaustive study of the subject.

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