The Use of Medicinal Plants by the Cultural Descendants of African People in Brazil

Ulysses Paulino de ALBUQUERQUE

Laboratório de Etnobotânica e Botânica Aplicada, Departamento de Botânica,
Universidade Federal de Pernambuco-UFPE,
Av. Professor Nelson Chaves s/n, Cidade Universitária, Recife, PE,
Brasil. E-mail: upa@npd.ufpe.br

RESUMEN. Son presentados datos etnobotánicos sobre el uso de plantas por los herederos culturales de los africanos en Brasil. El trabajo de campo fue conducido en la ciudad de Recife, estado de Pernambuco. Se informan los nombres comunes y científicos y los usos de 60 especies. Esta nota también informa sobre la planta conocida por Jurema [Mimosa tenuiflora (Willd.) Poir.] y hace algunos comentarios sobre los usos de plantas alucinógenas.

SUMMARY. Ethnobotanical data on plants which are used by cultural descendants of african people in Brazil are reported. The work field was carried in the city of Recife, state of Pernambuco (Brazil). Common and scientific names and data on plant use are given for 60 species. This note also reports on the plant known as Jurema [Mimosa tenuiflora (Willd.) Poir.] and comments on some aspects on the use of hallucinogenic plants.

INTRODUCTION

Both african and afro-brazilian cultures show similarities in the use of several plants. The slave trade route and european colonization were responsible for the introduction and application of some species to the New World. The symbolic and therapeutic use of plants in Africa and Brazil are based generally on identical principles.

Many different authors have stressed the importance and significance of plants for the cultural descendants of african people in Brazil. In the traditional system of the afro-brazilian cults, a large number of species are used in medicine, rituals, and as food. Other uses of plants are essentially based on beliefs, values, symbols or signs. The symbolic use is a significative aspect of tradition in Africa as well as in Brazil. Several species are sacred with spiritual powers as, for example, certain Ficus species.

A detailed study of the use of medicinal plants by the cultural descendants of african people in Brazil remains to be carried out. Although many aspects of afro-brazilian culture have been addressed in detail, only a few reports exist on the plants currently in use. In this study an attempt was made to record the various medicinal plants currently in use by the cultural descendants of african people in the state of Pernambuco (Brazil).

MATERIAL AND METHODS

Collection of plant material

Plants were collected from different localities in the state of Pernambuco (Brazil), between 1992 and 1995. Voucher specimens were identified and deposited at the UFP herbarium, Universidade Federal de Pernambuco. With the exception of a few common cultivars, all species were collected and stored as permanent voucher specimens.

Ethnobotanical data collection

Ethnobotanical data were obtained by inter-
viewing the priests of afro-brazilian cults in the city of Recife, based on structured and unstructured interviews with 15 people. Informants know to be knowledgeable about uses of plants were selected, and information on the use(s), plant parts used, applications and properties of the plants were thus obtained. The informants interviewed were over 30 years of age. Reports of ethnobotanical uses were documented for each plant. The priests of afro-brazilian cults were asked to demonstrate the plants which they currently use. Personal observations were recorded in different situations and rituals.

**RESULTS AND DISCUSSION**

**General uses of the plants**

The data are presented in tabular form. The species are arranged in alphabetical order of scientific names with family name in parentheses, followed by vernacular name and brief notes on plant parts and utilization form (Table 1).

<table>
<thead>
<tr>
<th>Scientific name / vernacular</th>
<th>Utilization form/ plant parts</th>
<th>Therapeutic indication</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Acanthospermum hispidum</em> DC.(Asteraceae)/ espinho-de-cigano</td>
<td>infusion, decoction/ whole plant</td>
<td>inflammations</td>
</tr>
<tr>
<td><em>Alpinia speciosa</em> Schum. (Zingiberaceae)/ colônia</td>
<td>infusion, bathing/ leaf and root</td>
<td>flu, heart disturbances</td>
</tr>
<tr>
<td><em>Anadenanthera</em> Schum. (Anacardiaceae)/ cajueiro</td>
<td>infusion, decoction/ bark of the stem</td>
<td>inflammations</td>
</tr>
<tr>
<td><em>Anacardium occidentale</em> L. (Anacardiaceae)/ maracá</td>
<td>infusion, decoction, dye/ bark of the stem</td>
<td>inflammations</td>
</tr>
<tr>
<td><em>Anadenanthera cauvriata</em> (Benth.) var. cebil (Grish.) Altschel. (Mimosaceae)/ angico</td>
<td>infusion/ leaf</td>
<td>induce weight loss</td>
</tr>
<tr>
<td><em>Bauhinia monandra</em> Kurz. (Caesalpinaceae)/ pata-de-vaca</td>
<td>infusion/ leaf</td>
<td>diabetes</td>
</tr>
<tr>
<td><em>B. purpurea</em> L. (Caesalpinaceae)/ pata-de-vaca</td>
<td>infusion/ leaf</td>
<td>diabetes</td>
</tr>
<tr>
<td><em>Boerhavia diffusa</em> L. (Nyctaginaceae)/ pega-pinto</td>
<td>infusion/ decoction/ root</td>
<td>renal disturbances</td>
</tr>
<tr>
<td><em>Borreria verticillata</em> (L.)G.F.W. Meyer (Rubiaceae)/ vassourinha-de-botão</td>
<td>infusion/ decoction/ root</td>
<td>hemorrhoids</td>
</tr>
<tr>
<td><em>Bumelia sartorum</em> Mart. (Sapotaceae)/ quiixaba</td>
<td>infusion/ decoction/ bark of the stem</td>
<td>inflammations, gastritis, ulcer</td>
</tr>
<tr>
<td><em>Cassia alata</em> L. (Caesalpinaceae)/ café-beirão</td>
<td>infusion/ flower</td>
<td>diabetes</td>
</tr>
<tr>
<td><em>C. occidentalis</em> L. (Caesalpinaceae)/ mangeriola</td>
<td>infusion/ fruit</td>
<td>anemia</td>
</tr>
<tr>
<td><em>Cereus jamacaru</em> DC. (Cactaceae)/ mandacaru</td>
<td>infusion/ stem</td>
<td>renal disturbances</td>
</tr>
<tr>
<td><em>Chenopodium ambrosioides</em> L. (Chenopodiaceae)/ maçaraz</td>
<td>juices, syrup/ leaf</td>
<td>coughs, vermiligne</td>
</tr>
<tr>
<td><em>Citrus aurantium</em> L. (Rutaceae)/ laranja</td>
<td>infusion/ leaf</td>
<td>nervous disturbances (sedative)</td>
</tr>
<tr>
<td><em>Cnidoscolus urens</em> L.(Arthur (Euphorbiaceae)/ urtiga</td>
<td>infusion, decoction/ root</td>
<td>inflammations</td>
</tr>
<tr>
<td><em>Costus spicatus</em> Sw.(Costaceae)/ cana-de-macaco</td>
<td>infusion/ leaf</td>
<td>renal disturbances</td>
</tr>
<tr>
<td><em>Cymbopogon citratus</em> (DC.) Stapf. (Poaceae)/ capim-santo</td>
<td>infusion/ leaf</td>
<td>intestinal disturbances</td>
</tr>
<tr>
<td><em>Dianthus caryophyllus</em> L. (Caryophyllaceae)/ cravo-branco</td>
<td>infusion/ flower</td>
<td>nervous disturbances (sedative)</td>
</tr>
<tr>
<td><em>Eucalyptus globulus</em> Labill. (Myrtaceae)/ eucalipto</td>
<td>infusion/ leaf</td>
<td>fever</td>
</tr>
<tr>
<td><em>Eugenia uniflora</em> L. (Myrtaceae)/ pitanga</td>
<td>infusion/ leaf</td>
<td>intestinal disturbances (diarrheas)</td>
</tr>
</tbody>
</table>
Helianthus annuus L. (Asteraceae)/ girassol  
infusion/ seed  
thrombosis

Heliotropium indicum L. (Boraginaceae)/ fedegoso  
infusion/ leaf  
cough

Hyptis pectinata (L.) Poit. (Lamiaceae)/ alfazema-de-caboclo  
infusion/ leaf  
inflammations

Justicia gendarussa Burm. (Acanthaceae)/ erva-santa  
infusion/ leaf  
inflammation of the throat

Justicia pectoralis Jacq. (Acanthaceae)/ chambá  
infusion/ leaf  
bronchitis, pneumonia

Kalanchoe brasilensis Camb. (Crassulaceae)/ corona-branca  
infusion, syrup/ leaf  
fever, cough, headache

Lactuca sativa L. (Asteraceae)/ alface  
infusion/ leaf  
nervous disturbances (sedative)

Lippia alba (Mill.) Brow. (Verbenaceae)/ erva-cidreira  
infusion/ leaf  
testinal disturbances

Mangifera indica L. (Anacardiaceae)/ mangueira  
infusion/ leaf  
asthma, cough

Matricaria chamomilla L. (Asteraceae)/ camomila  
infusion/ flower  
nervous disturbances (sedative)

Mentha pulegium L. (Lamiaceae)/ poejo  
syrup/ leaf  
coughs

Mikania hirsutissima DC. (Asteraceae)/ cipó-cabeludo, guaco  
infusion/ leaf  
renal disturbances

Mimosa tenuiflora (Willd.) Poir. (Mimosaceae)/ jurema-preta  
Infusion/ bark  
aphrodisiac, stimulant

Ocimum americanum L. (Lamiaceae)/ manjerona  
infusion/ leaf  
ememagoge

Ocimum basilicum L. (Lamiaceae)/ manjerício  
juice, infusion/ leaf  
ophthalmic

Ocimum campechianum Mill. (Lamiaceae)/ alfavaca-branca  
juice, infusion/ leaf  
fever, flu, emenagogue

O. gratissimum L. (Lamiaceae)/ alfavaca-de-caboclo  
infusion/ leaf  
flu, sinusitis

Peperomia pellucida (L.) H.B.K. (Piperaceae)/ língua-de-sapo  
infusion/ leaf  
hypertension

Persea americana Mill. (Lauraceae)/ abacate  
infusion/ leaf  
rheumatism, arthritis

Petiveria alliacea L. (Phytolaccaceae)/ guiné  
dye/ leaf  
pains, rheumatism

Pimpinella anisum L. (Apiaceae)/ erva-doce  
infusion/ fruits, leaf  
intestinal disturbances

Peumus boldus Moll. (Monimiaceae)/ boldo  
infusion/ leaf  
liver disturbances

Pfaffia glomerata (Spreng.) Peders. (Amaranthaceae)/ acénito  
infusion/ leaf  
fever

Phalaris canariensis L. (Poaceae)/ alpiste  
infusion/ seed  
renal disturbances

Plectranthus barbatus Andr. (Lamiaceae)/ tapete-de-oxalá  
infusion, syrup/ leaf  
digestive, liver disturbances

Plectranthus ambonensis (Lour.) Spreng. (Lamiaceae)/ hortelâ-da-folha-graúda  
infusion, syrup/ leaf  
coughs, amebicide

Psidium guajava L. (Myrtaceae)/ goiabeira-vermelha  
infusion/ young leaf  
intestinal disturbances
The present study identified 60 plant species belonging to 33 families, used by afro-brazilian communities. For some of the considered species, viz. Boerhavia diffusa, Chenopodium ambrosioides, Cymbopogon citratus, Eucalyptus globulus, Solanum paniculatum, Tabebuia avellanedae, Ziziphus joazeiro, Alpinia spectosa, Anacardium occidentale, Plectranthus amboinicus, Ocimum gratissimum, Justicia pectoralis, Mentha pulegium, and Lippia alba, the therapeutic activity has been previously documented. Many plant species are used by afro-brazilian communities for different purposes. However, the amount of research on ethnobotany is very rudimentary. Medicinal plants are usually an important category of use for several communities, but for the descendants of african people their dependence on folk medicine is relative. The studied community seems to make greater use of the modern medicine. Many plants utilized are exotic (European origin), native or pantropical species, with a smaller part of african origin. The africans in Brazil incorporated many brazilian plants in their practices, substituting african plants for succedaneums of the New World. Voeks, studying the Candomblés of Bahia, reports that of the ninety-four identified species, 55 percent are New World taxa, 49 percent are Old World, and 6 percent are of uncertain origin, and that the Old world species were purposely introduced or arrived inadvertently. Today, in the studied community, their pharmacopoeia reveals a strong european influence. The current use of plants belonging the indigenous pharmacopoeia (Mimosa tenuiflora, Anadenanthera colubrina, etc.) is a good indication of the processes of cultural influence. The largest number of species were obtained for gastrointestinal disorders, nervous disturbances, illnesses associated with pain or fever and general inflammations. Many plant leaves are used to common illnesses such as flu, bronchitis and diarrhea. In some situations, diarrhea or other diseases may be interpreted by members of the studied community as diseases of spiritual origin. The, "alfavaca-de-caboclo" (Ocimum gratissimum), "horelã" (Plectranthus amboinicus) and "quixaba" (Bumelia sartorum), are highly valued medicinal species. The three species sometimes are prepared with other well-known medicinal species such as leaves of "manjericão" (Ocimum basilicum) or bark of "angico" (Anadenanthera colubrina).

Knowledge of medicinal plant utility may either have been passed to the present generation by their african ancestors or be based on experience of the native people of Brazil (rural, urban or indigenous people). The knowledge and application of medicinal plants are sometimes as-

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Part Used</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punica granatum L.</td>
<td>infusion/ fruit</td>
<td>wounds (healing)</td>
</tr>
<tr>
<td>Ricinus communis L.</td>
<td>infusion/ leaf</td>
<td>hemorrhoids</td>
</tr>
<tr>
<td>Rosmarinus officinalis L.</td>
<td>infusion/ leaf</td>
<td>heart stimulant</td>
</tr>
<tr>
<td>Ruta graveolens L.</td>
<td>menta/ leaf</td>
<td>emenagogue</td>
</tr>
<tr>
<td>Sambucus nigra L.</td>
<td>infusion/ flower</td>
<td>flu, measles</td>
</tr>
<tr>
<td>Schinus terebinthifolius Radd.</td>
<td>infusion, dye/ bark of the stem</td>
<td>inflammations</td>
</tr>
<tr>
<td>Solanum paniculatum L.</td>
<td>infusion, syrup/ leaf</td>
<td>anemia</td>
</tr>
<tr>
<td>Syzygium aromaticum (L.) Merr.</td>
<td>infusion/ bark of the stem</td>
<td>inflammations</td>
</tr>
<tr>
<td>Tabebuia avellanedae Lor.</td>
<td>infusion/ bark of the stem</td>
<td>back pain</td>
</tr>
<tr>
<td>Ziziphus joazeiro Mart.</td>
<td>infusion, decoction/ bark of the stem</td>
<td>flu, cold, dandruff</td>
</tr>
</tbody>
</table>

Table 1. Medicinal plants used in afro-brazilian communities in Recife-Pernambuco.
associated with rituals and some diseases are attributed to evil spirits or to the violation of laws of traditional gods. Illness according to people in afro-brazilian communities may be classified as "material" or "spiritual". This classification system is very important to administering the plants. When a person is treated, ritual and empirical plant use are strictly connected.

People employ several methods of administering plants. Drinking an infusion or tea from either the whole plant or some part of it is perhaps the most common. The posology varies according to the problem. Even when bathing is frequently indicated, however, this practice is commonly associated with diseases of mystic origin. The phytotherapeutic treatment is commonly used in conjunction with ritual practices.

Many of the plants in use are collected around the house of worship. Few are collected in the forests, in spite of the clear preference for that locality. Others are obtained in popular markets, which offer plants and religious objects used in afro-brazilian practices. However, plants to be used in certain practices are picked directly by the priest and handled for him, obeying certain precepts.

The informants pointed out several especially interesting plants. The species of the genus Ocimum are frequently used for different purposes, with coincidence of uses between Africa and Brazil. In fact, most of the aromatic plants, especially of the families Lamiaceae and Verbenaceae, are used considerably. The use of those plants is not restricted to traditional medical practices, but also occurs, and perhaps more frequently, in ritual situations.

"Jurema": a very special medicinal and magic plant

The hallucinogenic plant known "jurema" is very important for medical or spiritual purposes. Several researchers focused the use of hallucinogenic plants by indigenous groups. Such use is frequently interpreted in a symbolic vision, as part of the ideology of the people that use psychoactive plants, at times transforming them into guides, divinities or masters. In those specific cases, the term entheogen seems more appropriate, given to the sacred aspect that involves its use as well as for its special meaning.

The jurema (Mimosa tenuiflora [Wild.] Poir. = M. hostilis Benth.) is used by indigenous groups of the Northeast Brazil and in some afro-brazilian communities. This plant is distributed throughout Northeastern Brazil, especially in semi-arid regions, such as the Caatinga (amerindian word meaning, "white forest"). N,N-dimethyltripamine was the alkaloid isolated from the roots of M. tenuiflora, but the tripamines are not active when taken orally. The visions are said to vary greatly, with the subject experiencing great suggestibility; this conforms to my personal observations in fieldwork. Some questions on the hallucinations described remain unclear; perhaps in some situations it is possible that the beverage is not hallucinogenic per se. Further investigations with qualitative and quantitative analysis of the beverage are required, specially chemical and psychopharmacological studies. In the country I often heard the plant to be sung in texts that evoked its power to give "science" (knowledge) and to unmask mysteries. The drink is also used to narrow the liaisons with the spirits and ancestors entities, and is usually prepared with the roots being just soaked in water. Sometimes it is prepared with other parts of the plant and any alcoholic drink, alcohol or wine (as in many afro-brazilian communities). The leaves of the plants are also used to combat inflammations. The plant is also reported to be astringent and to cure fatigue.

The beverage, sometimes called "vinho da jurema" (wine of jurema), can integrate specific rituals, such as the "toré". In that ritual, the members of the tribe sing and dance, reinforcing cultural patterns and insuring their perpetuation, seeking the balance and invigoration of the group as an ethnic minority. The dances of the "toré" are accomplished with the Indians dancing in circle, which represents, to my vision, the denial of the lineal time (the historical, the concrete).

Different researchers concluded that the use of the jurema links traditions and ethnic identity. The jurema illustrates the role of a psychoactive plant in the invigoration of an ethos and ethnic identity. Its collective use works, then, as an opportunity to transmit and to reinforce beliefs as a need of cultural survival of the group.

Many scientific (primordially ethnographic) and non-scientific (based on reports of individual experiences) reports relate experiences with hallucinogens, often from geographically distant areas, with the same visionary elements. Those elements are generally composed of animals or plants of the specific environment of the members of the tribe. Some of those reports make clear that the hallucinogenic experience, guided by an expert member of the tribe, works
as learning key on the behavior and habit of the species of interest for the material survival of the group or of the individual. In the report of Lamb 25, for example, during the hallucinogenic experience the shaman directed the visions, teaching participants to recognize the peculiar characteristics of each one of the species of animals and plants. In such cases it is possible to suggest that the experiences with psychoactive plants can have played important role in the adaptation of the indigenous groups in theirs respective environments. I call here this hypothesis of “psychotropic hypothesis of the adaptation”.

Although involving different interpretative situations, the symbolic or materialistic interpretations are the two aspects of the same phenomenon. However, the symbolic interpretations largely ignore the fact that many of the activities and behaviors have a narrow relationship with biological phenomena and material needs of the people. The psychotic hypothesis, as a materialistic point of view, suggests that many practices, rituals and myths can have been containing originally or it contains expressions of functional content induced in the hallucinogenic experiences.

**Final Remarks**

Most of the species recorded in this study have been reported as medicinal in other afro-brazilian communities 26. Comparison of these use reports yields relevant data on the importance and differences in the use of the plants in the afro-brazilian medical systems. Additionally, the selection of plants and their significant uses can contribute to pharmacological, toxicological and phytochemical studies evaluating the physiological efficacy of traditional indications.

**Acknowledgements.** The author would like to thank Dr. William Sanders, Departamento de Botânica of the Universidade Federal de Pernambuco, for the english text correction. He is also indebted to all informants from afro-brazilian cults.

**REFERENCES**

22. Frikel, P. (1976) 'Mori - a festa do rapé', In: *Os alucinógenos e o mundo real*. Edusp, São Paulo