A preliminary inventory of plants used for psychoactive purposes in southern African healing traditions

J.F. SOBIECKI

Department of Anthropology and Development Studies, Rand Afrikaans University, PO Box 524, Auckland Park, 2006, South Africa, e-mail: amagqirha@hotmail.com or scientists@webmail.co.za

This paper investigates the use of plants for psychoactive purposes in southern African healing traditions. Information on psychoactive plant use was gathered by screening the ethnobotanical literature and interviewing 15 traditional healers on their use and prescription of plants for psychoactive purposes in South Africa. This information was subsequently compiled into an inventory. The inventory lists 306 plants, representing 94 families, with psychoactive uses in southern Africa. The plants listed in the inventory were arranged alphabetically by family, followed by the botanical species name, ethnic names and corresponding ethnic groups utilising the plants for psychoactive purposes, and literature reports on psychoactive use. Where available, information on plant part used, preparation, dosage, route of administration, known and potentially active psychoactive ingredients and personal fieldwork notes were included. Particular families contain high numbers of species used for psychoactive purposes. The chemotaxonomic research cited indicates that the presence of compounds with potential psychoactivity may account for the higher number of species per family used.

Watt (1967) appears to have made the last comprehensive review investigating psychoactive plant use in southern Africa. Therefore, this inventory is a new and useful synthesis on the important, but thus far neglected, area of psychoactive plant use in southern Africa. The high number of species reported as having psychoactive uses from the literature supports the hypothesis that southern Africa has a flora that is rich in psychoactive chemicals that is substantially utilised by indigenous groups.

INTRODUCTION

Psychoactive or psychotropic substances are substances that when ingested affect the mind or mental processes. They can be defined as chemical substances that are used for the modification of the emotional, intellectual and behavioural function of humans (Werry & Aman, 1993). Many plants contain psychoactive chemicals that exert an array of psychoactive effects ranging from sedation, euphoria through to stimulation. Throughout history, humans have experimented with plants and come to recognise those with psychoactive properties using them in medicine and spirituality. Thus psychoactive plants have been important in sustaining the health and well-being of humankind. An array of conditions are treated and cured with psychoactive plants, particularly those with a central nervous system (CNS) origin. Examples of such conditions for which psychoactive plants are used include epilepsy, mental disorders, stress, depression, and fatigue. For example, Passiflora incarnata L., is used in Mexico to treat epilepsy and hysteria, and is a popular herbal sedative used in the West (Chevallier, 1996).

Psychoactive substances can be classified according to their action (e.g. stimulants) or by their therapeutic use (e.g. anti-psychotics) (Werry & Aman, 1993). In this paper, plants with psychoactive uses are categorised by both use (e.g. for epilepsy) and action (e.g. stimulant). It should be noted that a particular species can have a number of psychoactive effects depending on various factors, such as the dose used. Therefore a particular species can have numerous psychoactive uses, and may fall under one or more of the psychoactive categories.

Of all the psychotropes, few have captured the imagination more with their mysterious and powerful effects than hallucinogenic plants. Hallucinogenic plants contain powerful acting psychoactive chemicals that induce profound altered states of consciousness (ASC). Alterations and enhancement of perception and awareness, and feelings of altered time, often characterise these states. The term entheogen, which literally means "becoming divine within", is also used to describe the effect of these plants on consciousness.

In tribal, and particularly shamanic societies, hallucinogenic plants, and the ASC they induce, are often employed by the community spiritual practitioner, or shaman, in various religious and healing rituals. Shamanism involves practitioners who voluntarily (or with the aid of psychoactive substances or dance e.g.) enter ASC in which they experience themselves or their spirits travelling to other realms where they reportedly interact with other entities in order to acquire knowledge and power to help or heal people in their communities (Walsh, 1990). The shaman who is a magico-religious specialist uses techniques of ecstasy. e.g. trance induction, which enable the shaman to have his/her soul leave his/her body to ascend to the sky or descend to the underworld (Eliaide, 1987). Owing to the profound effects on human consciousness, psychoactive plants have come to be considered magical, sentient or sacred in many societies around the world, and have even been exalted as Gods or gifts from the Gods (Schultes & Hofmann, 1992). Therefore psychoactive plants have often featured in the religious practices of numerous cultures around the world. An example would be the use of Banisteriopsis caapi (Spruce ex Griseb.) Morton in the entheo-
genic brew Ayahuasca, which is used by shamans in Brazil, in divination, healing and sorcery. In shamanic societies, this and many other plants are believed to contain a spirit that is able to teach people knowledge (Luna, 1984).

In southern Africa there are two main types of traditional practitioners: the herbalist (Zulu iinyanga; Xhosa isxwele; Tsonga nyanga; Sotho ngaka) and the diviner (Zulu isangoma; Xhosa igirha; Tsonga mungome; Sotho seloadi). The diviner is considered to be the spiritual specialist.

South African traditional healers utilise numerous species of plants for psychoactive purposes. Their uses include treating medical conditions such as mental disorders, and producing ASC for spiritual purposes, e.g. ancestral spirit contact and dream induction.

Much of the research on psychoactive plants has focused on the New World (De Smet, 1996). Psychoactive plant use has been overlooked in southern Africa. A number of possible reasons for this include: researcher bias concerning substance use (Winkelman & Dobkin de Rios, 1989), lack of attention by researchers to the region’s psychoactive flora (De Smet, 1996), and loss of indigenous knowledge concerning plant use owing to culture change. However, some researchers stand out as having introduced or addressed the subject more thoroughly. Examples of such researchers include Laydevant (1932), Watt (1967), Johnston (1972), Broster (1981), Winkelman & Dobkin de Rios (1989), Hirst (1990), De Smet (1996) and Lambrecht (1998). These authors recognise the significance of these plants in traditional southern African healing practices, and their work serves as a stimulus for further research on this topic. As Lambrecht (1998: 179) mentions: “The induction of ancestor contact by means of mind altering substances (psychotropes) is common for South African shamans.” An analysis of Liengme’s (1983) survey of ethnobotanical research in South Africa shows that the majority of studies of indigenous plant use have focused on medicinal plants (16%) and food plants (20%), with only a few (7%) relating to the category “Magic, Ritual and Customs” (Dold et al., 1999). These statistics warrant research on psychoactive plant use in southern Africa, which are often used in magical or spiritual rituals. The aim of this inventory is to provide a framework for the investigation of psychoactively used plants in southern Africa, so as to begin to understand their cultural and medical significance in the region.

**MATERIALS AND METHODS**

The inventory is based on psychoactive plant-use information collected from a literature review and fieldwork interviews with South African traditional healers, researchers and citizens in the year 2000.

The literature review covered all sources of information: books, theses, journal articles and magazine articles. Literature searches involved accessing CD-ROM databases and other bibliographic search tools in university libraries, as well as reading review articles. The literature was widespread and multidisciplinary while old anthropological ethnographies, such as Laydevant (1932), provided valuable sources of plant-use information. Key sources of information included Watt (1967) and Hutchings et al. (1996). Some literature sources, such as Manana (1968), which provide only ethnic names and not botanical species names, were used only to support pre-existing literature reports.

The fieldwork involved semi-structured interviews with 15 practising healers (eight females and seven males, most of whom functioned as diviners and herbalists while six were exclusively herbalists), at their muti shops or houses in the Witwatersrand urban area in the province of Gauteng, South Africa. The healers were interviewed on their use and prescription of plants for psychoactive purposes. I traced these healers randomly through word of mouth or through telephone directories. Continual working relationships were established with four of these healers. Informal interviewing on psychoactive plant use in South Africa was also carried out with numerous laypersons, muti traders, academics and freelance researchers. In 2000 I also undertook a structured survey of a muti shop in Mai Mai bazaar, Johannesburg, which provided a number of leads on psychoactive plant use. All the informants I interviewed granted me permission to interview them. Most of the healers I encountered could communicate in English. Almost all of the healers, even Tsonga, Sotho and Indian, sold their muti plants using Zulu names, so there were few discrepancies when confirming plant names and uses. For species in the inventory with healer reports on psychoactive uses, botanical identifications were confirmed by showing color photographs or pictures of the plants to the healers, using ethnic names used by the research participants and plant-name lists, as well studying and comparing live specimens with identification information from the botanical literature.

**RESULTS AND DISCUSSION**

The inventory lists 306 species, representing 94 families, with psychoactive uses reported from the literature and fieldwork studies in southern Africa. Where possible, the literature on psychoactive plant use was backed by personal communications of healers and researchers. The plants are arranged alphabetically by family in the inventory. All botanical names and authorities of the species in the inventory have been checked in accordance with Arnold & De Wet (1993). Table 1 lists those families with 4 or more species recorded as having psychoactive uses. Table 2 lists the species for each psychoactive category are listed in Appendix 1.

### Table 1. Families with 4 or more species recorded as having psychoactive uses.

<table>
<thead>
<tr>
<th>Family</th>
<th>Species Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alliaceae</td>
<td>4</td>
</tr>
<tr>
<td>Anacardiaceae</td>
<td>5</td>
</tr>
<tr>
<td>Annonaceae</td>
<td>4</td>
</tr>
<tr>
<td>Apiaceae</td>
<td>6</td>
</tr>
<tr>
<td>Apocynaceae</td>
<td>5</td>
</tr>
<tr>
<td>Araliaceae</td>
<td>5</td>
</tr>
<tr>
<td>Asclepiadaceae</td>
<td>5</td>
</tr>
<tr>
<td>Asteraceae</td>
<td>28</td>
</tr>
<tr>
<td>Celastraceae</td>
<td>4</td>
</tr>
<tr>
<td>Combretaceae</td>
<td>4</td>
</tr>
<tr>
<td>Convolvulaceae</td>
<td>6</td>
</tr>
<tr>
<td>Crassulaceae</td>
<td>4</td>
</tr>
<tr>
<td>Ebenaceae</td>
<td>4</td>
</tr>
<tr>
<td>Euphorbiaceae</td>
<td>11</td>
</tr>
<tr>
<td>Fabaceae</td>
<td>37</td>
</tr>
<tr>
<td>Hyacinthaceae</td>
<td>4</td>
</tr>
<tr>
<td>Lamiaceae</td>
<td>11</td>
</tr>
<tr>
<td>Meliaceae</td>
<td>6</td>
</tr>
<tr>
<td>Menispermacae</td>
<td>4</td>
</tr>
<tr>
<td>Mesembryanthemaceae</td>
<td>7</td>
</tr>
<tr>
<td>Orchidaceae</td>
<td>4</td>
</tr>
<tr>
<td>Rubiaceae</td>
<td>11</td>
</tr>
<tr>
<td>Rutaceae</td>
<td>4</td>
</tr>
<tr>
<td>Scrophulariaceae</td>
<td>6</td>
</tr>
<tr>
<td>Solanaceae</td>
<td>5</td>
</tr>
<tr>
<td>Verbenaceae</td>
<td>5</td>
</tr>
</tbody>
</table>
Table 2. Categories of psychoactive plant use in southern Africa and the total number of species used in each category.

<table>
<thead>
<tr>
<th>Categories of psychoactive plant use</th>
<th>Number of species recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental disorders</td>
<td>120</td>
</tr>
<tr>
<td>Convulsive conditions</td>
<td>102</td>
</tr>
<tr>
<td>Sedatives</td>
<td>51</td>
</tr>
<tr>
<td>Visionary uses</td>
<td>48</td>
</tr>
<tr>
<td>Narcotics/seporicis</td>
<td>41</td>
</tr>
<tr>
<td>Miscellaneous intoxicants</td>
<td>23</td>
</tr>
<tr>
<td>Stimulants</td>
<td>22</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>5</td>
</tr>
<tr>
<td>Euphorants</td>
<td>3</td>
</tr>
<tr>
<td>Hypnotics</td>
<td>3</td>
</tr>
<tr>
<td>Mnemonics</td>
<td>3</td>
</tr>
</tbody>
</table>

A single record of use for an unidentified species of a known genus was counted as a single species for the total number of species used. With two or more records of use pertaining to unidentified species of the same genus, the species count was only one, eliminating a possible repeat count, since the records may relate to the same species. When two records exist, one pertaining to an identified genus and species and one pertaining to an unidentified species of the same genus, the latter record was not counted as a species on the basis of possibly being the former identified species.

Inventory list of plants used for psychoactive purposes in southern African healing traditions

Family/botanical species name/common English name/ethnic names and corresponding ethnic groups utilising the plants for psychoactive purposes

Indicated by enclosed ( )/literature reports on use/where available, information on plant part used, preparation, dosage, route of administration, known and potentially active psychoactive ingredients/fieldwork notes. An asterisk (*) denotes non-indigenous species.

Ethnic groups, and original location of group


ACANTHACEAE

Crabbea hirsuta Harv. [((S)Letsuijana/mereko]

Sotho diviners use unspecified parts in conjunction with divining dice in South Africa (Watt & Breyer-Brandwijk, 1962). Unspecified groups in Zimbabwe use the roots administered in porridge for madness (Gelfand et al., 1985).

ADIANTACEAE

Pellaea calomelanos (Swartz) Link [mumvuriwedombo (Sh)]

The whole plant is taken as an infusion or smoked for convulsions in Zimbabwe (Gelfand et al., 1985).

ALIACEAE

Agapanthus campanulatus Leighton [leta-la-phofu (S), ubani (Z)]

Unspecified parts are used by the Sotho in South Africa to treat people “who have the spirit”, which appears to be a type of mental disturbance (Laydevant, 1932).

The Zulu use unidentified species of Agapanthus for inducing visions (imibono) and dreams in South Africa (Nonkazimol Podile, pers. comm.).

Tulbaghia alliacea L. f. [wild garlic]

Unspecified groups administer rhizome infusions as enemas for fits in the Transkei, South Africa (Hutchings et al., 1996).

Tulbaghia capensis

A plant resembling this species is reported to be used in South Africa with Boophane disticha (L. f.) Herb. to induce visions (imibono: Zulu) (G. Mpai, pers. comm.).

Tulbaghia leucantha Bak. [false garlic, mhonyda (Sh)]

Unspecified parts are administered in powder form and eaten in porridge for madness in Zimbabwe (Gelfand et al., 1985).

AMARYLLIDACEAE

Boophane disticha (L. f.) Herb. [bushman poison bulb, leshoma (S), incwadi (X), incotho (Z)]

The Sotho and Xhosa use bulbs as narcotics (Watt & Breyer-Brandwijk, 1962). Unspecified groups use a weak decoction of the bulb scales which is commonly administered as a profound sedative to violent, psychotic patients (Van Wyk & Gericke, 2000). The plant is also given to newly circumcised Sotho initiates, producing a stupor (Jacot Guillarmod, 1971). The narcotic alkaloid heamanthine, distichine and buphanine and a water-soluble alkaloid have been isolated from the bulbs (Watt & Breyer-Brandwijk, 1962). Traditional healers and patients in South Africa drink bulb infusions to induce hallucinations for divinatory purposes, and also as a medicine to treat mental diseases. However, many injuries result from the toxic use of this plant (J.F. Sobiecki, pers. obs.).

Cirinum species [umduze (Z)]

An unidentified species is reported to be used in the same way as Boophane disticha (L. f.) Herb. for inducing hallucinations in South Africa (Ruvan Naidoo, pers. comm.).

Pancratium tenuifolium Hochst. ex A. Rich. [([San)]

It is claimed that the San in Botswana induce visual hallucinations by rubbing the bulb into incisions on the head (Dobkin de Rios, 1986). It is reported that this plant has, at present, no psychoactive uses by San groups in the Ghanzi district of Botswana, but Pancratium species are considered poisonous (Prof. T. Traill, pers. comm.).

ANACARDIACEAE

Lannea discolor (Sond.) Engl. [live-long, Luvalé (Lu), isanganganyane (Z)]

The Luvalé of Zambia use the leaves for fits (Watt & Breyer-Brandwijk, 1962). The Zulu use root infusions as a wash for convulsions in South Africa (Hutchings et al., 1996).
**Annonaceae**

*Annona senegalensis* Pers. subsp. *senegalensis* [wild custard apple]

Unspecified groups in South Africa use the roots to treat mental illness and to induce forgetfulness in small children (Palmer & Pitman, 1972). This could be the plant referred to by Bryant (1966) as *amaPhofu* which is reported to be used to treat hysteria. An *Annona* species is used in Ghana as an epilepsy remedy (Irvine, 1961).

**Artabotrys brachypetalus** Benth. [mukosvo (Sh)]

Root infusions are taken orally for convulsions in Malawi (Gelfand *et al.*, 1985). An *Artabotrys* species is used in Madagascar as a stimulant (Githens, 1949).

**Monanthotaxis caffra** (Sond.) Verdc. [dwahe berry, umgogi wezinhlanya (Z)]

The roots are smoked for hysteria in South Africa (Gerstner, 1941; Doke & Vilakazi, 1972). An unidentified plant called *umgogi wezinhlanya* is reported to be used in South Africa as a depressant psychoactive (Ms Violet Nhlengethwa, pers. comm.).

**Uvaria lucida** Benth. subsp. *sirens* (N.E. Br.) Verdc. [large cluster-pear, umavumba (Z)]

The Zulu use the leaves for bathing patients with mental disease in South Africa (Hutchings *et al.*, 1996). The roots are used in decoctions taken for mental disease in Tanzania (Hedberg *et al.*, 1982). *Uvaria* species are used in East Africa for epilepsy (Githens, 1949).

**APIACEAE**

**Alepidium amatymbica** Eckl. and Zeyh. var. *amatymbica* [ikathazo (Z)]

The dry rhizome and roots are smoked, or powdered and taken as a snuff by unspecified divers and healers in South Africa to assist in divination and communication with the ancestors (Van Wyk & Gericke, 2000). Zulu herbalists (*Izinyanga*) prescribe the plant to help prevent nervousness in South Africa (Pujol, 1990). Smoking the roots results in mild sedation and vivid dreams, and the activity of the medicine can most likely be attributed to the diterpenoids it contains (Van Wyk & Gericke, 2000).

**Arctopus echinatus** L. [E]

A decoction of the plant with potassium nitrate was used for treating epilepsy in South Africa (Watt, 1967). Decoctions of the roots are sedative (Van Wyk & Gericke, 2000).

**Centella asiatica** (L.) Urb. [pennywort]

Unspecified groups use the dry powdered leaf as a snuff, which produces a calming, sedative effect (Van Wyk & Gericke, 2000). Large doses of infusions are said to have narcotic effects (Martindale, 1958). Triterpenes from *Centella asiatica* have demonstrated mild tranquillising, anti-stress and anti-anxiety action (Van Wyk & Gericke, 2000).

**Heteromorpha trifoliata** (Wendl.) Eckl. & Zeyh. syn: *Heteromorpha arborescens* (Thunb.) Cham. & Schlecht. [mkatlala (S), umbangandlala (X)]

The Sotho administer leaf decoctions for mental and nervous diseases in South Africa (Watt & Breyer-Brandwijk, 1962). The Xhosas administer warm leaf infusions to patients suffering from mental disturbances, while root and seed decoctions are taken for heart palpitations in Transkei (Hutchings *et al.*, 1996). The activity of the plant may be linked to the presence of two antifungal compounds isolated from the plant, namely falcardinol and asaricin (Hutchings & Van Staden, 1994).

**Lichtensteinia interrupta** (Thunb.) Sond.

Roots are reported to have been used for making narcotic drinks in the cape of South Africa (Hutchings *et al.*, 1996).

**Steganotaenia araliacea** Hochst. [popgun tree, mugodoraputi (Sh)]

Root infusions are taken with porridge to treat epilepsy and convulsions in Zimbabwe (Gelfand *et al.*, 1985).

**APOCYNACEAE**

**Family note:** A member of this family, *Tabernanthe iboga* represents one of Africa’s most significant entheogenic, psychoactive plants. It contains at least a dozen indole alkaloids, the most active of which is ibogaine (Schultes & Hofmann, 1992).

**Acokanthera oppositifolia** (Lam.) Codd [common poisonbush, nthunguyembe (X)]

Leaf infusions are administered for fits in Transkei, South Africa, but are reported to be very poisonous if made too strong (Hutchings *et al.*, 1996).

**Carissa edulis** Vahl [simple-spined num num, mudzambara (Sh)]

The roots are mixed with roots of *Securidaca longipedunculata* Fresen, and used as a body wash to treat epilepsy in Malawi (Gelfand *et al.*, 1985).

**Pleiocarpa pycnantha** (K. Schum.) Stapf.

The roots are chewed as a stimulant (Coates Palgrave, 1977).

**Rauwolfia caffra** Sond. [quince tree, umhlambamase (X)]

The bark is used by traditional healers as a tranquilliser for patients believed to have been possessed by spirits in the Transkei (Broster, 1981). Unspecified groups use the bark in South Africa to treat insomnia and hysteria (Van Wyk *et al.*, 1997). An unidentified plant corresponding to the name *umhlambamase* is used by the Zulu to enable one to hear one’s ancestors in one’s dreams (Manana, 1968). Leaves are used in East Africa to help newly circumcised boys to sleep when wounds are fresh (Kokwaro, 1976). A large number of indole alkaloids occur in *R. caffra* (Hutchings *et al.*, 1996).

**Strophanthus gerrardii** Stapf [ubuhlungubendlovu (X), (Z)]

The psychoactive use of this plant in southern Africa is uncertain but it is suspected to have psychoactive uses. Unidentified species known as *ubuhlungubendlovu* are used for hysteria in...

**ARACEAE**

*Acorus calamus* L.* [sweet flag, ikalamuzi (Z)]
The Zulu use rhizomes for nervous disorders in South Africa (Pujol, 1990). Unspecified groups in South Africa use rhizome infusions and decoctions for their sedative activity (Van Wyk & Gericke, 2000). Central nervous system sedative effects of the main component of the Indian variety, B-asarone, have been demonstrated (Bruneton, 1995).

**ARALIACEAE**

*Cussonia arborea* A. Rich.
Unspecified groups in Malawi take leaf infusions orally, together with the leaves of *Ipomoea batatas* (L.) Lam. and *Musa* species, for treating madness (Gelfand *et al.*, 1985).

*Cussonia longissima* Hutch. & Dalz. [S]

*Cussonia paniculata* Eckl. & Zeyh. subsp. paniculata [S1]
The Sotho use the leaf for treating early nervous and mental diseases in South Africa (Watt & Breyer-Brandwijk, 1962).

*Cussonia spicata* Thunb. [cabbage tree, umsenge (Z)]
Bark is used for magical purposes in South Africa (Hutchings *et al.*, 1996). Rootbark decoctions are administered for mental illness in Tanzania (Chhabra *et al.*, 1984). Healers use it to treat a “mind that goes bad” in Tzaneen (B. Gardner, pers. comm.).

*Schefflera umbillfera* (Sond.) Baill.
Unspecified groups use the leaves to treat insanity (Van Wyk & Gericke, 2000).

**ASCLEPIADACEAE**

*Asclepias physocarpa* (E. Mey.) Schltr.
Unspecified groups use a snuff of the powdered leaves as a sedative (Van Wyk & Gericke, 2000).

*Asclepias fruticosa* L. [milkwheat]
Unspecified groups use a snuff of the powdered leaves as a sedative (Van Wyk & Gericke, 2000). *Asclepias lineolata* Schltr is used in Zambia, the root of which is used as a narcotic to catch wild birds (Gilges, 1953).

*Pachypucrus asperifolius* Meisn. [large red milkwort (X)]
A powdered snuff is used for hysteria in South Africa (Hutchings *et al.*, 1996). Cardiac glycosides are reported in the genus (Hutchings & Van Staden, 1994).

*Stepelia gigantea* N.E. Br. [giant carrion flower, ililo elikhulu/uzililo (Z)]
The Zulu administer hot stem infusions as emetics to treat hysteria in South Africa (Bryant, 1966). An unidentified plant called *uzililo* is used by the Zulu for mental disorders (Manana, 1968).

*Vernonia* species, for treating madness (Gelfand *et al.*, 1996).

**ASPARAGACEAE**

*Asparagus* species
Roots of an unidentified species are burned, powdered and placed in incisions for febrile convulsions in Zimbabwe (Chine-mana *et al.*, 1985). *Protauasparagus africanus* (Lam.) Oberm. is used for mental disturbances in East Africa (Kokwaro, 1976).

**ASPHODELACEAE**

*Bulbine latifolia* (L. f.) Roem. & Schult. syn. *Bulbine natalensis* Bak. [ibucu (X), ibhucu (Z)]
The Xhosa and Zulu use tuber decoctions for treating convulsions in children in South Africa (Broster, 1982; Pujol, 1990). Zulu men and adolescent boys use decoctions of unspecified parts of the plant, as emetics, in purification rites aimed at the prevention of antisocial behaviour (Hutchings *et al.*, 1996).

*Chlorophytum blepharophyllum* Bak. [Sh]
An ointment made from the root is applied to the face for the treatment of madness in Zimbabwe (Gelfand *et al.*, 1985).

*Gasteria croucheri* (Hook. f.) Bak. [impundu (Z)]
Unspecified parts are used for treating girls with hysteria in South Africa (Hulme, 1954).

**ASTERACEAE**

*Arctotheca calendula* (L.) Levyns
Unspecified groups in South Africa use the juice as an antidote to strychnine (Watt, 1967). Narcotic effects are observed in rabbits (Van der Walt & Steyn, 1940). It is said to be narcotic and mildly poisonous in Australia.

*Arctotis arctoides* (L. f.) O. Hoffm. syn. *Venidium arctoides* Less. [ubushwa (X)]
Leaf juice is a Xhosa remedy for epilepsy in South Africa (Watt & Breyer-Brandwijk, 1962).

*Aspilia pluriseta* Schweinf. subsp. pluriseta [yellow veld daisy, mukushamvura (Sh)]
The root is burned and the smoke inhaled to treat delirium in Zimbabwe (Gelfand *et al.*, 1985).

*Berkea disolor* (DC.) O. Hoffm. & Muschl. [seholo-se-seholo (S)]
A decoction is used to pacify nervous patients in Lesotho (Jacot Guillarmod, 1971).

*Blumea alata* (D. Don) DC. syn. *Laggera alata* (D. Don) Sch. Bip. ex Oliv. [teasel/bug catcher, rutapatsikidzi (Sh)]
Unspecified groups in Zimbabwe use the leaves for convulsions, headaches and pains in the legs (Gelfand *et al.*, 1985), while the Shona in Zimbabwe use leaf infusions, enemas and ointments to treat madness (Gelfand *et al.*, 1985). In Gabon the leaf is considered a narcotic and is smoked by the Babunu and Bavungu (Walker, 1953).

*Brachylaena elliptica* (Thunb.) DC. [bitter leaf, igqeba elimnyama/isiduli (selathi) (Z)]
The Zulu use the roots, as substitutes for those of *Vernonia neocorymbosa* Hilliard, to treat hysteria in South Africa (Gerstner, 1939).
Cenia sericea DC
Unspecified groups in the eastern cape of South Africa use this plant to produce restful sleep and to break a very high fever (Batten & Bokelmann, 1966).

Chrysanthemoides monilifera (L.) T. Norl. [brother berry, mollempo (S)]
In Lesotho, leafy branches are burned as a cure in the huts of mad men (Jacot Guillarmod, 1971).

Cineraria aspera Thunb. [moholu-oa-pela (S)]
The leaves can be smoked for respiratory problems and is said to be as intoxicating as Cannabis sativa L.* (Phillips, 1917; Jacot Guillarmod, 1971).

Conyza seabriva DC. [oven bush, uhlabo (Z)]
Ground leaf pastes are smeared on children who cry excessively, or who are hyperventilating, while leaf decoctions are administered to children suffering from convulsions in South Africa (Hutchings et al., 1996). Diterpenes, hautriwaic acid and 12 clerodane derivatives have been isolated (Hutchings & Van Staden, 1994).

Dicoma anomala Sond. [hloenya (S)]
Unspecified parts are used for treating hysteria in South Africa (Laydevant, 1932).

Dicoma schinzii O. Hoffm. [Kabo !Kabo (San)]
Unspecified parts are used to treat febrile convulsions in infants in the Kalahari (Van Wyk & Gericie, 2000).

Ethulia conyzoides L.f. [carter's curse, umsokosoko (Z)]
Unspecified parts are used for madness in South Africa (Bryant, 1966; Doke & Vilakazi, 1972).

Helichrysum decorum DC. [imphepho/impepo (Z)]
Smoke from burning plants is inhaled by the Zulu diviners (izangoma) to induce trances in South Africa (Hutchings et al., 1996). *Impepo* is also eaten as part of the initiation of a Zulu diviner (Callaway, 1991). In South Africa, various species are often burnt as part of spiritual rituals to invoke the ancestor spirits, and are also used as incense (J.F. Sobiecki, pers. obs.).

Launaea nana (Bak.) Chiov. [!Sh]
The root is used as a body wash and is applied into incisions made on the forehead to treat convulsions in Zimbabwe (Gelfand et al., 1985).

Lopholaena corifolia (Sond.) Phill. & C.A. Sm. [chigunguru (Sh)]
The roots are applied into incisions made on the forehead for treating convulsions in Zimbabwe (Gelfand et al., 1985).

Matricaria recutita Rauschert syn: Matricaria chamomilla L. [chamomile (E)]
Unspecified parts are made into an old household remedy among the Europeans in the cape of South Africa, for treating convulsions in children (Kling, 1923).

Oncosiphon piluliferum (L.f) Kallersjo [!(E)]
Unspecified parts were part of a European remedy for treating convulsions in the cape of South Africa (Watt, 1967).

Oncosiphon suffrutescens (L.) Kallersjo
Unspecified groups in South Africa use the fresh plant material, that is crushed with *Exomis microphylla* (Thunb.) or *Ruta graveolens* L.* to treat infantile convulsions (Van Wyk & Gericie, 2000).

Printzia pyrifolia Less. [uhlunguhlulungu (Z)]
The roots are used, as substitutes for those of *Vernonia neocorymbosa* Hilliard, to treat hysteric in South Africa (Gerstner, 1939).

Senecio discodregeanus Hilliard & Burtt. [sebilvanelehlonane (S)]
Unspecified parts are used to treat madmen in Lesotho (Phillips, 1917; Jacot Guillarmod, 1971).

Solaneo angulatus (Vahl) C. Jeffrey syn: Crossocephalum bojeri (DC.) Robyns [lobed-leaved canary creeper (Sh)]
The whole plant is cooked and the resultant infusion is taken orally to treat madness in Zimbabwe (Gelfand et al., 1985).

Tagetes minuta L.* [tall khaki bush, mushushathuri (V)]
The leaves used together with *Kalanchoe brachyloba* Welw. ex Britten and *Mentha aquatica* L. are burnt and the smoke inhaled for mental illness in Venda (Arnold & Gulumian, 1984).

Tarchonanthus camphoratus L.* [wild camphor tree (K), (San)]
The dried leaves were smoked by the Hottentot (Khoi) and the San, and are thought to be slightly narcotic (Watt, 1967). Smoking the dried leaves in a pipe is sedative (Van Wyk & Gericie, 1996).

Vernonia neocorymbosa Hilliard. [(Sw), uhlunguhlulungu (Z)]
The Zulu use the roots for hysteria (Gerstner, 1939). The Swazi use the macerated leaves for epilepsy (Watt & Breyer-Brandwijk, 1962).

Vernonia adoensis Sch. Bip. ex Walp. var. kotschyana (Sch. Bip. ex Walp.) G.V. Pope [shire vernonia, inyathelo (Nd)]
The root is chewed to treat madness in Zimbabwe (Gelfand et al., 1985).

Vernonia amygdalina Del.
In Malawi women who want their beer to be “strong” rub the insides of the pots with the leaves of this plant to make the brew more intoxicating (Williamson, 1974).

BALANITACEAE
Balanties maughamii Sprague [torchwood]
A bath taken in water in which the bark has been infused is both stimulating and exhilarating (Coates Palgrave, 1977). In addition it has magico-medicinal uses and is used by healers as an emetic to ward off evil spirits (Coates Palgrave, 1977).

BIGONIACEAE
Markhamia obtusifolia (Bak.) Sprague [mwanabewe (Ch)]
The roots are used for children with convulsions in East Africa and in Malawi (Williamson, 1974).

Tecomania capensis (Thunb.) Spach subsp. capensis [cape honeysuckle, lungana (Z)]
The Zulu take dried powdered bark infusions for sleeplessness in South Africa (Roberts, 1990). Unspecified groups are reported to use the plant to induce sleep and relieve pain (Hutchings et al., 1996).
BOMBACACEAE

Adansonia digitata L. [baobab, muuyu (Sh)]

Bark leaves and roots are infused with the whole plant of Myrothamnus flabellifolius Welw. and the preparation is taken orally for madness in Zimbabwe (Gelfand et al., 1985).

BORAGINACEAE

Lithospermum cinereum BORAGINACEAE

The Zulu use decoctions made from the plant to treat hysteria in South Africa (Watt & Breyer-Brandwijk, 1962). The plant is also used in the initiation of Sotho diviners and to treat “people with the spirit” that suggests a type of mental disturbance or spiritual calling (Laydevant, 1932). South African diviners use the plant to induce altered states of consciousness (ASC) for purposes of divining.

Trichodesma physaloides (Fenzi) A. DC. [bells of saint mary’s, wiramwaka (Sh)]

The tuber is boiled and the steam inhaled for madness in Zimbabwe (Gelfand et al., 1985).

BUXACEAE

Buxus macowanii Oliv. [umgalagala (X)]

Unspecified parts of this plant are used in a vapour bath to treat mental illness in southern Africa (Simon & Lamla, 1991).

CANNABACEAE

Cannabis sativa L.* [marijuana]

This plant is widely used in traditional African medicine (Hutchings et al., 1996). The tetrahydrocannabinols have powerful effects on the central nervous system, including euphoria, relaxation, loss of co-ordination, slowed speech, bronchodilation, inducing hypotension and decreasing intracapillary pressure (Bruneton, 1995). In South Africa, various ethnic groups use the plant for spiritual purposes (entheogenic use), as a medicine and as a recreational intoxicant (J.F. Sobiecki, pers. obs.).

CAPARACEAE

Boscia albitrunca (Burch.) Gilg & Ben. [shepherd’s tree, imwithi (Z)]

Unspecified groups use the unripe fruit as an epilepsy remedy known as fructus simulo in South Africa (Watt, 1967). In addition the plant is used for magical purposes (Pooley, 1993). The bark of the tree is used to communicate with the ancestors (M. Tau, pers. comm.).

Capparis tomentosa Lam. [woolly caper bush, imfihlo (X), umabusane (Z)]

Unidentified parts are used by the Zulu to treat madness in South Africa (Gersten, 1941). The Wemba administer infusions for madness (Hutchings et al., 1996). Pujol (1990) states that the Xhosa use the plant to treat madness. Oxindole compounds have been found in the plant (Van Wyk et al., 1997).

Maerua angolensis DC. [mutabanamme (V)]

In South Africa, leaves and bark are heated over a fire without water and the steam is inhaled to treat children with convulsions (Venter, 1996). The Venda steam with unspecified parts of the plant to treat children with convulsions (Mabogo, 1990). Maerua edulis (Gilg & Ben.) Dewolf is used as a stimulant in East Africa (Kokwaro, 1976).

CARYOPHYLLACEAE

Silene capensis Ott. ex DC. [X], (Si)

Unspecified parts are used as a medicine for treating delirium (Watt & Breyer-Brandwijk, 1962) and the root is used by Xhosa diviners for spiritual purposes and inducing dreams (Hirst, 1997b)

CELASTRACEAE

Catha edulis (Vahl) Forsk. ex Endl. [khat (A), igqwaka (X)]

The Xhosa use the leaves and twigs that are chewed or prepared as an infusion for their stimulating action on the central nervous system in South Africa (Hirst, 1997a). In East Africa and Arabia young leaves are chewed to inhibit the sensations of hunger and fatigue and for their stimulating effects on the central nervous system (Watt & Breyer-Brandwijk, 1962). The stimulating effect of the fresh leaves is due to several phenethylamines including cathinone which has amphetamine-like properties (Van Wyk & Gericke, 2000).

Hartogia schinoides (Spreng.) Codd syn: Hartogia capensis L. f. [spoonwood (E), (K), (X)]

The leaf appears to have stimulant activity similar to Catha edulis (Vahl.) Forsk. when chewed (Van Wyk & Gericke, 2000). The leaf is chewed as a thirst quencher, to prevent fatigue and to produce anorexia in South Africa (Watt & Breyer-Brandwijk, 1962).

Maytenus senegalensis (Lam.) Excell [red spike-thorn, musosawafa (Sh)]

An infusion of the root is taken by mouth and the leaves are rubbed on the face for treating epilepsy in Zimbabwe (Gelfand et al., 1985). The plant is also put into beer as an aphrodisiac (Coates Palgrave, 1977). A root decoction of Maytenus heterophylla (Ecckl. & Zeyh.) N.K.B. Robson is used in various areas of East Africa for epilepsy (Kokwaro, 1976).

Pleurostylia capensis (Turcz.) Loes. [coffee pear (X)]

This plant is used to encourage sleep to bring good dreams in the cape of South Africa (De Jager, 1963). It is reported also to have powerful sorcery uses in Venda (Mabogo, 1990).

CHENOPODIACEAE

Chenopodium ambrosiodes L.* [insukumbili (Z)]

Unspecified groups in Zimbabwe use the leaves in medicines to treat madness and convulsions (Gelfand et al., 1985). South African traditional healers use the plant as an intoxicating snuff to communicate with the ancestors (M. Tau, pers. comm.).

Exomis microphylla (Thunb.) Aell. var. axyrioides (Fenzi) Aell.

Europeans and Africans have used a milk decoction of the leaf in the treatment of epilepsy in South Africa (Smith, 1888; Watt, 1967), while unspecified groups have used the plant for treating convulsions in infants (Van Wyk & Gericke, 2000).

CHRYSOBalanaceae

Parinari capensis Harv [dwarf mobola plum, muchachapasi (Sh)]

Root infusions are taken by mouth and also used as a body wash to treat delirium (Gelfand et al., 1985).
CLUSIACEAE
Hypericum perforatum L. [saint john’s wort (E)]
This plant is famous in the West and in South Africa for treating mild depression, anxiety and sleep disorders. The clinical effects are likely to be due to a variety of active constituents including hypericin, pseudohypericin, hyperforin and some flavonoids (Van Wyk & Gericke, 2000).

COMBRETACEAE
Combretum microphyllum Kloztsch.
Unspecified groups in Zambia use unspecified parts of the plant for lunacy (Watt & Breyer-Brandwijk, 1962).

Combretum molle R. Br. ex G. Don [soft leaved combretum]
Unspecified groups in Zimbabwe use root infusions that are taken orally for convulsions (Gelfand et al., 1985).

Combretum ternifolium
Unspecified parts of the plant are used in Zimbabwe for convulsions in children (Gilges, 1955).

Terminalia stenostachya Engl. & Diels [umangwe wenduna (Nd)]
Root infusions are used in Zimbabwe to treat epilepsy (Gelfand et al., 1985).

COMMELINACEAE
Commelina africana L. [yellow wandering jew (X), lekxopswana (S)]
The Xhosa administer root decoctions orally for fits in the Transkei, South Africa (Bolofo & Johnson, 1988). The Sotho administer plant decoctions for nerval ailments in Lesotho, while cold infusions are used to bathe restless sleepers (Watt & Breyer-Brandwijk, 1962).

CONVOLVULACEAE
Astripomoea malvacea (Klotzsch) A. Meuse [noshana (Sh)]
The roots and leaves are burned and the smoke inhaled to treat madness in Zimbabwe (Gelfand et al., 1985).

Ipomoea alba L.*
Unspecified groups in South Africa crush two to four seeds in water and the resulting liquid is taken orally at night to induce vivid dreams, while the seeds of an unknown Convolvulaceae are used to induce dreams and communication with the ancestors (Van Wyk & Gericke, 2000). Species of Convolvulaceae are reportedly used as hallucinogens in divination and magical rituals in South Africa (D. Millard, pers. comm.).

Ipomoea batatas (L.) Lam.*
Unspecified groups in Zimbabwe use the plant in combination with Cassonia arborea A. Rich. in the treatment of madness (Gelfand et al., 1985).

Ipomoea omanneyi Rendle [(Sh)]
The root is used in Zimbabwe for convulsions (Gelfand et al., 1985).

Ipomoea tricolor Cav.
In Zimbabwe unspecified groups chew 200 to 500 seeds to induce hallucinations (Gelfand et al., 1985).

Turbinia oblongata (E. Mey. ex Choisy) A. Meuse [motchoko (S)]
The Sotho use the leaves as a snuff mixed with tobacco in Lesotho (Jacot Guillarmod, 1971). There are reports that this plant is used in South Africa to treat mental disorders.

CRASSULACEAE
Cotyledon orbiculata L.
Unspecified groups in the Cape of South Africa use the fresh leaf juice in the treatment of epilepsy (Hutchings et al., 1996). The toxic principle, cotyledontoxin, has local anaesthetic effects, and acts as a central nervous system depressant (Van Wyk & Gericke, 2000).

Crassula alba Forssk. var. alba [isidwe (Z)]
Infusions or decoctions of the plant are used as emetics for heartburn and hysteria in South Africa (Gerstner, 1939).

Crassula arborescens (Mil.) Willd. subsp. arborescens
Unspecified parts are used in South Africa for the treatment of epilepsy (Pappe, 1857).

Kalancheo brachyloba Welw. ex Britten [shinyanyu (V)]
The leaves are used together with the leaves of Tagetes minuta L. in the treatment of mental illness in Venda (Arnold & Gulumian, 1984). The Ndebele use the leaves of an unidentified species for treating madness whereby the patient is forcibly immersed in the leaf infusion (Gelfand et al., 1985).

CUCURBITACEAE
Cucumis hirsutus Sond. [(Sh)]
Roots are used for convulsions in Zimbabwe, but several cases of suspected poisoning from roots have been reported (Gelfand et al., 1985).

Momordica balsamina L. [balsam apple, onyati (Kw)]
The Kwanyama, who speak a dialect of Ovambo, feed unspecified parts to boys so they will be brave; girls never eat it, or they will get vicious (Rodin, 1985).

DIOSCOREACEAE
Dioscorea diversifolia Griseb. [udakwa (Z)]
Tubers are used to treat hysterical fits in South Africa (Watt & Breyer-Brandwijk, 1962).

Dioscorea dregeana (Kunth.) Dur. & Schinz. [wild yam, isidakwa/latbatheka (Z)]
The Zulu use tubers for hysterical fits and to cure insanity (Gerstner, 1941; Watt & Breyer-Brandwijk, 1962), while cold infusions from the tubers are used as soporifics (Hutchings et al., 1996). Two teaspoonsfuls of fresh macerate from the tuber are reputed to make a person drunk (Gerstner, 1939). It is a profound sedative, and is used by unspecified groups in South Africa to treat various other conditions such as epilepsy, hysteria, insomnia, pain and acute psychosis (Van Wyk & Gericke, 2000). It is often mixed with Boophane disticha (L. f.) Herb. to synergise the visionary (hallucinatory) experience and is a popular psychoactive plant sold on the muti markets in Johannesburg (J.F. Sobiecki, pers. obs.).

EBENACEAE
Euclea divinorum Hiern. [magic guarri, mushangura (Sh) ]
An ointment is made with the roots to treat convulsions in Zimbabwe (Gelfand et al., 1985). It is also used for psychiatric purposes elsewhere in Africa (Iwu, 1993). The plant is said to be used for divination in Africa, hence the name E. divinorum.

Euclea natalensis A. DC. [mutangulethavha (V)]
A root decoction is used for epilepsy in Venda (Arnold & Gulumian, 1984), while unspecified groups burn the root and
inhibit the smoke as a hypnic (Van Wyk & Gericke, 2000).

_Euclidean crispa_ (Thunb.) Guerke subsp. crispa [madziyire (Sh)]
Root infusions are taken for epilepsy in Zimbabwe (Gelfand _et al._, 1985).

_Diospyros lycioides_ Desf. [bluebush, mushumadombo (Sh), muthala (V)]

**ERYTHROXYLACEAE**

_Erythroxylon coca_ Lam. [coca]
Historically, it has been used as a stimulant and tonic in South Africa. This plant is reported to be used in South Africa for its stimulating properties.

**EUPHORBIACEAE**

_Anitodesma venosum_ E. Mey. ex Tul. [chridiapummbwa (Ch)]
An infusion of the roots is used as a cure for epilepsy, while the toxic roots are used in magical rituals in Malawi (Williamson, 1974).

_Bridelia cathartica_ Bertol. f. [mupambare (Sh)]
The root is burned and the smoke inhaled for epilepsy in Zimbabwe (Gelfand _et al._, 1985).

_Euphorbia decussata_ E. Mey. ex Boiss.
This plant is reported to have been a fermenting agent in beer making (Engelbrecht, 1936).

_Euphorbia helioscopia_ L.*
Reports of narcotic effects in South Africa are on record (Watt, 1967).

_Euphorbia pubescens_ Vahl.
Reports of narcotic effects in South Africa are on record (Watt, 1967).

_Euphorbia tirucalli_ L.*
Reports of narcotic effects in South Africa are on record (Watt, 1967).

_Flueggea virosa_ (Roxb. ex Willd.) Voigt [white berry bush]
Leaf sap is used for epilepsy and mental illness in Africa (Haerdi, 1964). The alkaloid securinine, which has a central nervous system stimulatory action, has been isolated from the plant (Oliver-Bever, 1986). A plant described as this plant has been reported as having psychoactive use in southern Africa, but these claims need confirmation.

_Monadenium lugardae_ N.E. Br.
Divinners swallow roots in the Piet Retief area of South Africa to obtain clear vision before important meetings, while roots are reported to induce hallucinations and delirium if taken in sufficient quantities (Watt & Breyer-Brandwijk, 1962).

_Phylanthus disoideus_ (Baillon) Muell. Arg.
Unspecified groups burn the plant and use the ashes to rub over the body as a stimulant and tonic (Coates Palgrave, 1977).

_Ricinus communis_ L.* [castor oil plant, mupfuta (Sh)]
An infusion made from the leaves is taken orally for madness in Zimbabwe (Gelfand _et al._, 1985). The plant is used for nervous disorders in north Africa (Boulos, 1983).

_Trugia species [imbabazane (Z)]
The roots of an unidentified species are used for their stimulating and tonic principles in South Africa (Pujol, 1990).

**FABACEAE**

_Abrus precatorius_ L. subsp. africanus Verde. [lucky bean climber, umkoka (Z)]
Roots are used as sedatives, restoratives and anti-convulsants in Amerindian and African medicine (Hutchings _et al._, 1996). Extracts from the roots have moderate sedative and depressant effects (Desai & Rupawala, 1996). Other known compounds produced by the plant include indole derivatives, N-methyltryptamine, N-methyltryptophan, and choline (Desai & Rupawala, 1996).

_Acacia Mill. [Mimosaceae]_

_Genus note:_ Alkaloids known in the genus include tyramine and tryptamine, one of which, N,N dimethyl-tryptamine, is an established hallucinogen.

_Acacia amythethophylla_ Steud. ex A. Rich. [chitasunga (Sh)]
Root infusions are taken for convulsions in Zimbabwe (Gelfand _et al._, 1985).

_Acacia karroo_ Hayne [mubayamhondoro, muunga (Sh)]
Root infusions are taken for convulsions and dizziness in Zimbabwe (Gelfand _et al._, 1985).

_Acacia nigrescens_ Oliv. [munanga (Sh)]
The root is applied as an ointment to the body for convulsions (Gelfand _et al._, 1985).

_Acacia nilotica_ (L.) Willld. ex Del. subsp. kraussiana (Benth.) Brenan
Bark and root decoctions are drunk by Masai youths to acquire strength and courage (Williamson, 1974), and are reported to have intoxicating effects (Watt & Breyer-Brandwijk, 1962). Bark decoctions are also used as a nerve stimulant by the Masai (Watt & Breyer-Brandwijk, 1962), N,N dimethyl-tryptamine, and tetrahydroharmane have been found in the leaves (Hutchings _et al._, 1996).

_Adenopodia spicata_ (E. Mey.) Presl [ibobo (Z)]
Zulu izangoma (diviners) use root infusions as emetics to increase their divining power in South Africa (Hutchings _et al._, 1996).

_Albizia adianthifolia_ (Schumach.) W.F. Wight [flat crown, muvhadangoma (V)]
The roots are used for improving memory, and inducing dreams about medicinal plants in Venda (Mabogo, 1996).

_Bauhinia candicans_ Benth.* syn: _Bauhinia fassoglensis_ Schwein. [mutukutupasi (Sh)]
The powdered root is taken with porridge for convulsions in Zimbabwe (Gelfand _et al._, 1985).

_Bauhinia thoningii_ Schumach [monkey bread, mutukutu (Sh)]
Root powder is taken orally in porridge for convulsions (Gelfand _et al._, 1985).
Bolusanthus speciosus (H. Bol.) Harms [nkamba (Ts)]
There is a substance in the roots that is reputed to have a sleep-inducing effect in Gazankulu (Liemgme, 1981).

Burkea africana Hook. [seringa tree, omutundungu (Kw)]
Bark or leaves were put into beer to make it stronger, but this practice is now forbidden by the government (Rodin, 1985).

Caesalpinia bonduc (L.) Roxb. [hnagvene (Cho)]

Cassia petersiana Bolle [munenbenembe (V)]
A decoction of the root together with Diospyros lycioides Desf. and Euclea natalensis A. DC., is taken for epilepsy in Venda (Arnold & Gulumian, 1984).

Cassia didymobotrya Fresen. [munwahuku (Sh)]
The root is burned and the smoke inhaled for madness, while a decoction of the root is taken orally for convulsions in Zimbabwe (Gelfand et al., 1985).

It is interesting to note that Cassia abbreviata Oliver, subsp. beareana (Holmes) is believed to be magical by the Shangaan and they cook their meat with it to ensure success in hunting (Coates Palgrave, 1977).

Cullen obtusifolia (DC.) C.H. Stirton ![honab (N)]
The leaves and stems are smoked in parts of the Kalahari as a tobacco and dagga (Cannabis) substitute and have a sedative activity (Van Wyk & Gericke, 2000).

Desmodium barbatum (L.) Benth. [chinzungunzungu (Sh)]
An infusion made together with the root of Faurea saligna Harv. is taken orally by the Shona for epilepsy in Zimbabwe (Gelfand et al., 1985). Desmodium gangeticum (L.) DC. is used in Liberia to bathe children with convulsions, and it contains psychoactive chemicals including 3-Carbolines (Oliver-Bever, 1986). A species is also used in West Africa for convulsions (Ayensu, 1978).

Dichrostachys cinerea (L.) Wight & Arn. subsp. africana Breinan & Brumm. [sickle bush, namphangale (Ch)]
The plant is used to treat and cure epilepsy, by drinking an infusion of the leaves with various other roots in Malawi (Williamson, 1974), and is used for epilepsy by unspecified groups in South Africa (Van Wyk & Gericke, 2000).

Entada rheedi Spreng. [seabean, umbbone/intindili (Z)]
Tobacco smoked in a pipe made from the seed has been reported to cause vivid dreaming in South Africa (Van Wyk & Gericke, 2000). This plant which is easily identifiable by its large characteristic seed-pods was also reported by Manana (1968) to be used to remember dreams.

Erythrina L.
Genus note: Many of the species in this genus contain curare-like alkaloids, and narcotic effects are reported to be produced by species containing indoles and isoquinolines (Hutchings et al., 1996).

Erythrina abyssinica Lam.* [common coral tree, mutiti (Sh), muale (Ch)]
Root, bark and leaves are prepared as a powder and taken in food for madness in Zimbabwe (Gelfand et al., 1985). An infusion of the bark is taken orally to treat those who suffer from the affliction termed “calling out in the night” in Malawi (Williamson, 1974).

Erythrina latissima E. Mey. [muphapha (Lob)]
The Lobedu, a Northern Sotho group, use unspecified parts to cure madness (Krige, 1940).

Erythrophleum lasianthum Corbishley [Swazi ordeal tree, umkhwangu/umbenhise (Z)]
The Zulu administer a snuff for hysteria (Hutchings et al., 1996). Bark is used to increase the potency of palm wine in unspecified parts of Africa (Palmer & Pitman, 1972). Seeds and bark contain erythrophleine that has analgesic and powerful vasoconstriction properties (Hutchings et al., 1996). The bark is used in South Africa for treating mental disorders (M. Maponya, pers. comm.). Snuff made from the bark can have a mild intoxicating action (M. Tau, pers. comm.).

Indigofera
Genus note: The Sotho use roots of an unidentified species as a sedative, and for neuralgia in Lesotho (Jacot Guillarmod, 1971) while an unidentified Indigofera species is used to induce sleep and calm down mental patients in Botswana (Hedberg & Staugard, 1989).

Indigofera arrecta Hochst. ex A. Rich. [mukatapeta (Sh)]
The roots are applied on nyora (cuts) below the eyes to treat convulsions in Zimbabwe (Gelfand et al., 1985).

Indigofera flaviscans Bak. [naiego (San)]
This plant is believed to be used by the !Kung “Bushmen” in the Kalahari for trance induction (Winkelman & Dobkin de Rios, 1989).

Lonchocarpus capassa Rolfe [raintree, mbhandu (Lob), (Ts)]
Tsonga “witchdoctors” make a drink for “trial by ordeal” from the pounded root or leaves of this tree together with the leaf of Datura stramonium L.* This plant may have psychoactive properties as do the other “trial by ordeal” plants such as Erythrophleum lasianthum Corbishley and Securidaca longipedunculata Fresen. that are used in southern Africa. The divin- ing dice of the Lobedu, a Northern Sotho group, were reportedly left overnight in an infusion made from this plant so that divination could occur (Krige, 1940). Lonchocarpus species are used in West Africa for convulsions (Ayensu, 1978).

Melolobium alpinum Eckl. & Zeyh. ![mbo-busa-pelo/motsoehla (Si)]
Unspecified parts are used as a sedative to comfort those who sorrow or in any case of depression in Lesotho (Phillips, 1917; Jacot Guillarmod, 1971).

Milletta grandis (E. Mey.) Skeels [ironwood]
Unspecified groups use a mixture of roots ground with those of a Croton species that is burned in the hut as a tranquilliser to dispel worries (Palmer & Pitman, 1972). In unspecified parts of southern Africa, residue from evaporated ground roasted roots mixed in water is licked from the fingers to induce sleep (Palmer & Pitman, 1972). The plant is used as a tranquilliser and soporific in southern Africa (Coates Palgrave, 1977). Milletta species are used in the Congo for epilepsy (Githens, 1949).

Mimosas pigra L. [sensitive plant]
The roots have a calming effect on people (Watt & Breyer-Brandwijk, 1962). Other species such as Mimosa pudica L. var. hispida Brenan* which have psychoactive uses for convulsions
in Madagascar (Jenkins, 1987), and are used for insomnia and nervousness in Mauritius (Gurib-Fakim et al., 1993) may well have psychoactive uses in South Africa, which need investigation.

**Mundulea sericea** (Willd.) A. Chev. [cork bush, mosilatlhou (Kg), mukundandou (V)]

The Kgatl, a Tswana group, use unspecified parts as a divine medicine (Watt & Breyer-Brandwijk, 1962). Considered to be a very powerful magical plant by the Vhavenda (Mabogo, 1990).

**Parkia filicoides** Welw. ex Oliv. [mkundi tree]

An infusion of the bark is used to cure madness in Malawi (Williamson, 1974).

**Pelophorum africanum** Sond. [false black wattle, muzeze (Sh)]

The whole plant is used as a body wash for madness in Zimbabwe (Gelfand et al., 1985).

**Psoralea pinnata** L. [fountain tree, umhlongani (Z)]

Cold water infusions from the roots are taken as emetics for forms of hysteria in South Africa (Bryant, 1966).

**Schotia brachypetala** Sond. [weeping boer bean, ihuze (Z)]

Unspecified groups use the bark to treat hangovers and nervous conditions (Van Wyk & Gericke, 2000).

**Sutherlandia frutescens** (L.) R. Br. [cancer bush]

The seeds and leaves have been smoked by labourers and teenagers as a dagga substitute in Namaqualand, and some farmers have removed it from their land as a result (Van Wyk & Gericke, 1990; Hutchings et al., 1996).

**Sutherlandia microphylla**

The leaves are sedative when smoked (Van Wyk & Gericke, 2000). The presence of GABA, an inhibitory neurotransmitter, would account for anti-anxiety/stress effects (Van Wyk & Gericke, 2000).

**Swartzia madagascariensis** Desv. [snake bean, mukosho (Sh)]

The root and pod are taken orally as an infusion or applied to incisions made on the forehead for convulsions in Zimbabwe (Gelfand et al., 1985). The roots taken raw or as a hot infusion act as a sexual stimulant (Gilges, 1955).

**Tephrosia capensis** (Jacq.) Pers. [pelo-di-maroba (S), isidambvulu (Z)]

The Sotho use cooked roots for palpitations and decoctions of the plant together with Commelina africana L. for weak hearts and nervousness in South Africa (Watt & Breyer-Brandwijk, 1962). Dried powdered roots are also used as a snuff for headaches (Hutchings et al., 1996).

**Vigna unguiculata** (L.) Walp. subsp. unguiculata [cowpea, nyemba (Sh)]

An infusion of the roots is prepared with porridge, that is taken orally for epilepsy in Zimbabwe (Gelfand et al., 1985).

**FLACOURTIACEAE**

**Casearia gladiiformis** Mast. [sword-leaf, psekamafura (Ts), umjuluka (Z)]

The Tsonga used this plant to treat “possessed” people (Junod, 1962: 489 v2). This possessed condition appears to be some form of mental disturbance/disorder. The Zulu use an unidentified plant with the name of umnjuluka, for treating mental disorders (Manana 1968).

**Oncoba spinosa** Forssk. [snuff-box tree, mtsche (Ch)]

Root infusions mixed with those of Antidesma venosum E. Mey. ex Tul. and the leaves of Dichrostachys cinerea (L.) Wight & Arn. subsp. africana Brenan & Brumm. are taken orally as a cure for epilepsy (Williamson, 1974).

**FUMARIACEAE**

**Cysticapsnos pruinosa** (Bernh.) Liden syn: Phacocapsnos pruinosisus (E. Mey.) Bernh. [musa-pelo-ao-noka (S)]

Unspecified parts of this plant are used to comfort and drug sorrowing people in Lesotho (Jacot Guillarmod, 1971).

**HYACINTHACEAE**

**Eucomis autumnalis** (Mill.) Chitt. subsp. autumnalis.

Bulb decoctions are said to produce sleepiness (Watt & Breyer-Brandwijk, 1962), while an unidentified species is used by Africans in the Ventersdorp area in South Africa for mental disease (Watt & Breyer-Brandwijk, 1962).

**Ledebouria cooperi** (Hook. f.) Jessop syn: Scilla cairensis v.d. Merwe [icubudwana (Z)]

Bulbs are used to inebriate Sotho boys during circumcision rituals (Watt & Breyer-Brandwijk, 1962). Medicines made with the plant and Phygelius capensis E. Mey. ex Benth. are used to inebriate boys in initiation ceremonies usually causing them to appear stunned and stupefied and to go to sleep (Hutchings et al., 1996).

**Scilla nervosa** (Burch.) Jessop [wild squill, ingcino/ingcolo (Z)]

Ground bulbs administered in the form of milk enemas are used to relieve nervous conditions in children in the northern Transvaal (Watt & Breyer-Brandwijk, 1962). A plant called ingcolo is mixed with an unidentified plant called iswadi by the Xhosa for mental illness (Simon & Lamla, 1991). Bulbs resembling those of *S. nervosa* are administered in enemas to children who cry a lot (Hutchings et al., 1996).

**Scilla natalensis** Planch. [inguduza (Z)]

A plant identified by the author as *S. natalensis*, by examining live specimens and confirming identification with the healers using colour photographs, was described as being able to induce visions and hallucinations, by methods of administration that were not described (M. Tau, pers. comm.).

**HYPOXIDACEAE**

**Hypoix colchicifolia** Bak. [ilabatheka (X), ilabatheka-elimnyama (Z)]

The Zulu use corm infusions that are administered for hysteria in South Africa (Gerstner, 1939). Reported to be able to cause delirium and to treat it (Watt & Breyer-Brandwijk, 1962). The Xhosa use unspecified parts to treat insanity in South Africa (Simon & Lamla, 1991).

**Hypoix hemerocalleida** Fisch. & C.A. Mey. [ikomfe (Z)]

Corm infusions are used to treat insanity in South Africa (Pujol, 1990; Hutchings et al., 1996).

**IRIDACEAE**

**Belamcanda chinensis** (L.) DC.* [tiger lily, indawoluthi emnyama (Z)]

The Zulu use roots to allay hysterical crying (Bryant, 1966).
Mayr (1907) also reports on the use of a plant known as *inda-woluti* as an emetic to treat hysteries.

*Eleutherine bulbosa* (Miller.) Urban* [ababomvu (Z)]
Believed to have magical and hallucinatory properties (Hutchings et al., 1996). Reported to be an ingredient of a psychoactive mixture used to induce visions in South Africa (Mrs J. Kwhela, pers. comm.).

*Ferraria glutinosa* (Bak.) Rendle [gaise noru noru (San)]
This plant was reported by Lee (1979) and Katz (1982) as having psychoactive properties to aid the novice to enter *kia* or the trance state (Winkelman & Dobkin de Rios, 1989). At present, no psychoactive uses are said to occur by the San groups in the Ghanzi district of Botswana (Prof T. Traill, pers. comm.).

*LAMIACEAE*

*Ballota africana* (L.) Benth. [kattekruid (Af)]
Infusions or brandy tinctures are used, in the western cape of South Africa, for the treatment of hysteria, heart trouble and insomnia (Van Wyk & Gericie, 2000).

*Hemizygia bracteosa* (Benth.) Briq. [purple top (San), jetama kurwe (Sh)]
The leaves are smoked or chewed by the San in Botswana to give energy for dancing (Van Wyk & Gericie, 2000). The Shona in Zimbabwe take the powdered leaves orally for fits (Gelfand et al., 1985).

*Hoslundia opposita* Vahl [hwahwahweshiri (Sh)]
Root infusions are used to treat fits and epilepsy in Zimbabwe (Gelfand et al., 1985). *Hoslundia* species are used in West Africa for epilepsy and mental disease (Ayensu, 1978).

*Leonotis leonurus* (L.) R. Br. [wild dagga, imunyamunya (Z)]
Unspecified groups smoke the leaves for partial paralysis and epilepsy in South Africa (Watt, 1967; Hutchings et al., 1996). The plant is mildly narcotic (Watt & Breyer-Brandwijk, 1962), but its use as a *Cannabis* substitute is doubtful. Plants are reported to induce intoxication and delirium among the Zulu (Bryant, 1966). The plant contains volatile oils and unusual diterpenoids such as marubriin (Van Wyk et al., 1997).

*Mentha aquatica* L. [water mint, mpuyuyu (V)]
The leaves are burned together with those of *Tagetes minuta* L., and the smoke inhaled for treating mental illnesses in Venda (Arnold & Gulumian, 1984). The plant is used as a stimulant (Williamson & Evans, 1988).

*Ocimum canum* Sims [amakha (Nd)]
The Ndebele use the whole plant mixed with the seeds of *Ricinus communis* L.* and *Chenopodium ambrosioides* L. as a snuff for madness (Gelfand et al., 1985). Unspecified groups in Zimbabwe and Malawi burn the leaves and inhale the smoke, and also use the leaves as a body wash, for convulsions (Gelfand et al., 1985). In the Congo, *Cymbopogon densiflorus* Stapf.* and *Ocimum canum* Sims. are macerated together and used as a remedy for epilepsy (Watt, 1967). *Ocimum* species are used in West Africa to treat delirium (Ayensu, 1978).

*Pycnostachys urticifolia* Hook. [prickly salvia, zinyamhunga (Sh)]
The root is eaten in porridge, applied to the face, and used as a wash, for madness and convulsions in Zimbabwe (Gelfand et al., 1985).

*Salvia chamelaegnea Berg.*
Unspecified groups in the cape of South Africa, use an infusion of the dry leaf as an Eurafican remedy for convulsions (Watt & Breyer-Brandwijk, 1962).

*Stachys aethiopica* L. [bolao ba litaola/bokhatha (S)]

*Stachys thunbergii* Bentham.
Unspecified groups use the plant in combination with *Valeriana capensis* Thunb. to treat hysteria and insomnia in South Africa (Van Wyk & Gericie, 2000).

*Tinnea zambesiaca* Bak. [Sh]
Roots and leaves are used as a body wash for convulsions in Zimbabwe (Gelfand et al., 1985).

*LAURACEAE*

*Cinnamomum camphora* (L.) J. Presl* [camphor tree, uro-selina (Z)]
An infusion of the dried leaves is used as a Zulu ritual emetic (Van Wyk et al., 1997). Camphor has been used to treat a variety of ailments including hysteria (Watt & Breyer-Brandwijk, 1962; Griev, 1967). Camphor also has stimulant properties (Merck, 1989).

*Octeoa bullata* (Burch.) Baill. [black stinkwood, unukani (Z)]
Unspecified parts are used as an emetic for emotional and nervous disorders in South Africa (Pujol, 1990).

*LOBELIACEAE*

*lobelia L.*
Genus note: Lobeline is found in a number of species and is the active principle in *L. tupa* L. which is reported to produce narcotic effects and to induce hallucinogenic stupors (Emboden, 1972).

* Lobelia pinifolia* L.
The resinous root is stimulant and diaphoretic (Pappe, 1847). The alkaloid lobeline is the active principle (Hutchings et al., 1996).

* Lobelia decurrentifolia* (Kuntze) K. Schum. [napiane (S)]
The Sotho consider this plant to have powerful spiritual uses and it is believed to have the power to stop wolves and the spirits of the ancestors (Laydevant, 1939). This plant is reported to have psychoactive properties that are used for spiritual purposes in South Africa.

*LOGANIACEAE*

*Buddleja* species [IS]
An unidentified species is used together with *Heteromorpha trifoliata* (Wendl.) Eckl. & Zeyh. and *Cussonia paniculata* Eckl. & Zeyh. subsp. *paniculata*.in the treatment of early nervous and mental disease (Watt & Breyer-Brandwijk, 1927.)

*Strychnos henningsii* Gilg [red bitterberry, umnono (Z)]
This species contains alkaloids structurally closely related to strychnine which is a powerful central nervous system stimulant (Van Wyk & Gericie, 2000). The plant identified by the author is used to induce visionary dreams associated with the ancestors (M. Maponya, pers. comm.). An unidentified *Strychons* species is used in the initiation rites of the people of Setta Cama in Central Africa during which the initiates are given a decoction from the bark that causes a loss of consciousness (Laydevant, 1932).
Narcotic effects are reported from *Strychnos spinosa* Lam. from Mauritius (Watt & Breyer-Brandwijk, 1962).

**LORANTHACEAE**

*Loranthus oleifolius* (Wendl.) Cham. & Schlecht.

This plant is suspected as being used by the !Kung San to facilitate *kia*, a trance state (Winkelman & Dobkin de Rios, 1989). According to Duke (1985) the genus *Loranthus* contains scopolamine which has psychoactive properties, and related *Loranthus* species have been reported to have narcotic properties which are used as a substitute for *Areca catechu* L.* (betel nut). An unidentified species is used by the Shona to treat epilepsy, madness and convulsions (Gelfand et al., 1985).

**LYTHRACEAE**

*Lagerstroemia indica* L.*

In South Africa seed is said to contain a narcotic principle (Pammel, 1911).

**MALPIGHIACEAE**

**Family note:** A member of this family, *Banisteriopsis caapi* (Spruce ex Griseb.) Morton, is an important South American entheogenic, psychoactive plant. The species contains indole and harmine alkaloids (Schultes & Hofmann, 1992).

*Sphedamnocarpus galphimiifolius* (A. Juss.) Szyszyl. subsp. *galphimiifolius* (tsiamabe (V))

A root decoction is taken orally for mental illness in Venda (Arnold & Gulumian, 1992).

*Sphedamnocarpus pruriens* (Juss.) Szyszyl. subsp. *pruriens* [pupuma (Cho), tsiamabe (V)]

Unspecified plants are used by the Chopi with *Securidaca longepedunculata* Fresen. for people believed to be possessed by evil spirits (Watt & Breyer-Brandwijk, 1962). Roots are used for mental disorders by the Venda (Mabogo, 1990).

**MALVACEAE**

*Azanza garcckena* (F. Hoffm.) Exell & Hille. [snot apple, mutohwe (Sh)]

A root decoction is taken orally for madness in Zimbabwe (Gelfand et al., 1985).

*Malva parviflora* L.* (E), mosala-suping (S)

Leaf infusions are used by the Europeans as a nerve tonic (Watt & Breyer-Brandwijk, 1962). The Sotho give root decoctions to persons who have lost near relatives (Watt & Breyer-Brandwijk, 1962). This may be the species Ashton (1945) reports as *mosala-suping*, that is used by the Sotho as a sedative.

**MELIANTHACEAE**

*Banisteriopsis caapi* Sprarm. [cape ash, umnyamathi (Z)]

The leaves are pounded in cold water and the solution is extracted and introduced into the nostrils to treat mental problems including madness among the Zulu in South Africa (Pujol, 1996). Other species are used for epilepsy in East Africa as sedatives, and isooquinoline and aporphine alkaloids have been shown to have narcotic properties (Oliver-Bever, 1986).

*Entandrophragma spicatum* (C. DC.) Sprague [mahogany, omatakia (Kw)]

The pods are burnt and the ashes are mixed with tobacco to make a narcotic snuff (Rodin, 1985).

*Melia azedarach* L.* (syringa, umsilinga (Z)]

Leaf decoctions are administered as emetics to epileptic patients after a fit (Hutchings et al., 1996). Fruit are applied externally for convulsions, spasms and nervous pains (Hutchings et al., 1996). Reported to have central nervous system depressant activity (Watt, 1967). Considered to be toxic (Shone & Drummond, 1955).

**Turracea floribunda** Hochst. [wild honeysuckle tree, umadlozana (Z)]

Roots are used by diviners to enter the “neurotic” state needed for divining dances (Hutchings et al., 1996).

**Turracea nilotica** Kotschy & Peyr. [Chipindura (Sh)]

Root infusions are used for epilepsy, while the leaves are burnt and the smoke inhaled for madness in Zimbabwe (Gelfand et al., 1985).

**Nymania capensis** (Thunb.) Lindh. [(Af), (E), (K)]

Used by the Europeans in the cape of South Africa for convulsions (Watt, 1967) and also by the Hottentots (Khoi) of Namqualand for convulsions (Laidler, 1928).

**Bersama lycocens** Hochst. [glossy white ash, isindiyienda/undiyaza (Z)]

The Zulu use a tincture of the bark as an emetic to calm nervous disorders (Hutchings & Van Staden, 1994), while they also use an unidentified plant called *undiyaza* for treating mental disorders, which may be the same species (Manana, 1968).

**Bersama tsoniana** Oliv. [(X)]

Bark is used by the Xhosa and Sotho to treat hysteria (Hutchings et al., 1996). This plant, identified by showing a healer colour photographs, was mentioned as having central nervous system depressing psychoactive properties (Ms Nhlengthhwa, pers. comm.).

**MENISPERMACEAE**

*Cissampelos capensis* L.*

Unspecified groups in South Africa chew small portions of rhizome that have a sedative action, and the rhizomes are rich in alkaloids of the bisbenzylisoquinoline type (Van Wyk & Gerick, 2000).

*Cissampelos mucronata* A. Rich. [umbombo (Z)]

The bitter-tasting roots are reputed to have tonic and narcotic properties (Hutchings et al., 1996).

*Cissampelos torulosa* E. Mey. ex Harv. [umayisake (X)]

Leaf decoctions are traditionally administered as enemas for hallucinations in the Transkei (Hutchings et al., 1996).

**Stephania species**

An unidentified species is used by Sotho diviners “to discover” things and is used with the divining bones (Phillips, 1917). *Stephania abyssinica* (Dill. & Rich.) Walp. is known to have psychoactive properties and tranquilising effects but its psychoactive use in southern Africa is unknown (Hutchings et al., 1996). Other species are used in East Africa as sedatives, and isooquinoline and aporphine alkaloids have been shown to have narcotic properties (Oliver-Bever, 1986).

**MESEMBRYANTHEMACEAE**

*Conophytum* species

In South Africa the genus is reported to have narcotic properties (Watt, 1967). These plants are thought to have sedative properties, possibly on the basis of mesembrine-type alkaloids (Van Wyk & Gerick, 2000).
Khadi acutipetala (N.E. Br.) N.E. Br. [khadi root]
Unspecified groups use the rootstock as a fermentation agent in beer brewing (Van Wyk & Gericke, 2000). Mesembrine-type alkaloids may contribute to the intoxicating properties (Van Wyk & Gericke, 2000).

Pleiospilos bolusii (Hook. f.) N.E. Br.
Unspecified groups dry and powder it to be used as a snuff (Van Wyk & Gericke, 2000). Approximately 50 milligrams of dried plant chewed, produced a feeling of euphoria that lasted for about 20 minutes, followed by sedation (Van Wyk & Gericke, 2000).

Rabiea albinota (Haw) N.E. Br. var. albinota [s’keng-keng (G)]
The pulverised plant is reported to be a hallucinogenic additive to tobacco to be smoked or taken as snuff (Van Wyk & Gericke, 2000).

Scelotium tortuosum (L.) N.E. Br. [kougoed (Af), kann (K)]
This plant was likely to have been used by pastorals and hunter-gatherers as a mood-altering substance from prehistoric times (Van Wyk & Gericke, 2000). The traditionally prepared dried plant material is chewed, smoked, or powdered and inhaled as a snuff (Van Wyk & Gericke, 2000). It is used as a sedative, and elevates mood and decreases anxiety, stress and tension (Van Wyk & Gericke, 2000). The active constituents are alkaloids, including mesembrine, mesembrenone, mesembrenol and tortuosamine (Van Wyk & Gericke, 2000).

Trichodiadia intonsum (Haw.) Schwant.
iQilika beer is made in the eastern cape of South Africa using this fermenter which is called imula (Dold et al., 1999).

Trichodiadia stellaratum (Mill.) Schwant
This plant has been used as a yeast substitute for brewing beer, and is reported to contain the psychoactive alkaloid mesembrine (Watt & Breyer-Brandwijk, 1962). Laidler (1928) also states that this plant known as kareemoer is “one of the beer making plants, a deliriant and intoxicant with an earlier stimulant action”.

MUSACEAE
Musa species
Unidentified species are used together with Ipomoea batatas (L.) Lam to treat madness in Zimbabwe (Gelfand et al., 1985).

MYROTHAMNACEAE
Myrothamnus flabellifolius Welw. [resurrection bush, mufandichimuka (Sh)]
Healers administer medicines from the plant for epilepsy and madness in Zimbabwe (Gelfand et al., 1985).

MYRSINACEAE
Maesa lanceolata Forssk. [false assegai, umaguqu (Z)]
Bark is used by the Masai to make a stimulating beverage (Hutchings et al., 1996). Reported by a healer to have spiritual uses associated with the amadlozi (ancestor spirits) (Edwin Mhlongo, pers. comm.). I suspect this plant has psychoactive properties that allow for the induction of altered states of consciousness (ASC), which are used in spiritual rituals among the Zulu.

Rapanea melanophloeos (L.) Mez [cape beech, isiqalati/umaphipha (X)]
Root and bark are used for palpitations in various parts of Transkei (Hutchings et al., 1996), while a ground bark infusion is taken three times a day by a person who feels like crying (Hutchings et al., 1996), suggesting antidepressant or sedative effects.

NYMPHACEAE
Nymphaea nouchali Burm. f. [blue water lily, izibu (Z)]
Flowers are used by South African diviners, and tinctures of flowers are stimulant, aphrodisiac and euphoriant in low doses (Van Wyk & Gericke, 2000). Flowers are sold on the muti markets in Johannesburg for divinatory purposes (J.F. Sobiecki, pers. obs.).

OCHNACEAE
Brackenridgea zanguebarica Oliver. [mutavhatsindi (V)]
The powdered root is rubbed on the body to treat mental illness in Venda (Arnold & Gulmanian, 1984). The bark is reported to be smoked to induce visions and is also used as a protection against evil and bad omens in South Africa (Joseph, pers. comm.).

OLEACEAE
Jasminum multiflorum Hochst. [white jasmine]
For stress, an infusion is said to be relaxing (Ashwell, 1994). Is also used as a love charm emetic (Hutchings et al., 1996).

Olea europea L. subsp. africana (Mill)
The leaves are thought to be possibly narcotic (Watt, 1967).

Olea woodiana Knobl. [forest olive, umnqumo (Z)]
The bark is used in South Africa as a nerve tonic and is said to have stimulating properties that induce a “good feeling” (Pujol, 1990).

ORCHIDACEAE
Ansellia africana Lindl. [tiger orchid]
Unspecified groups use leaf and stem infusions as a remedy for madness in the Mpika district of Zambia (Hutchings et al., 1996).

Brachycorythis ovata Lindl. [(X)]
Root decoctions, together with those of Ceratandra grandiflora Eckl. ex Bauer, are used for the treatment of madness in the eastern cape of South Africa (Batten & Bokelmann, 1966).

Ceratandra grandiflora Eckl. ex Bauer [(X)]
Root decoctions, together with those of Brachycorythis ovata Lindl., are used in the treatment of madness in the eastern cape of South Africa (Batten & Bokelmann, 1966).

Eulophia species [umahayiza (Z)]
A Eulophia species known as umahayiza is used as an emetic to treat hysterical fits (Gerstner, 1941).

PALMAE
Areca catechu L.* [betel nut, supari (H)]
Betel nuts are wrapped with the leaves of the Betel vine Piper betel L.* and chewed for their stimulatory effects in South Africa (Van Wyk & Gericke, 2000). The stimulant effects are ascribed to pyridine alkaloids such as arecoline (Van Wyk & Gericke, 2000).

PAPAVERACEAE
Argemone mexicana L.* [mexican poppy (Ts)]
The seeds are narcotic and are used to make beer more intoxicating in Malawi (Williamson, 1974).

Corydalis pruinosa E. Mey.* [musa pelo oa noka (S)]
Used by Sotho doctors in drug preparations for comforting
people in sorrow, especially in cases of bereavement (Phillips, 1917). Corydalis xyphilus W.T. Wang is used as a sedative and hypnotic in traditional Chinese medicine (Yeung, 1983).

**PASSIFLORACEAE**

*Adenia gummifera* (Harv.) Harms var. gummifera [wore (Sh), impinda (Z)]

The leaves are rubbed on the face, and also burned, with the smoke inhaled for convulsions in Zimbabwe (Gelfand et al., 1985).

**PERIPLOCACEAE**

*Mondia whitei* (Hook. f.) Skeels [ubombo (Sha)]

The leaves are rubbed on the face, and also burned, with the smoke inhaled for convulsions in Zimbabwe (Gelfand et al., 1985).

**PHYLLOLACCAACEAE**

*Phytolacca heptandra* Retz.

Unspecified groups use this plant in emetics for delirium (Hutchings et al., 1996) while it has also been used “to frenzy or madden warriors” in addition to *Cannabis sativa* L.* (Dornan, 1924).

*Phytolacca octandra* L. [vowa (V)]

The shoots are used as a stimulant snuff in Venda (Mabogo, 1990). The roots of *Phytolacca americana* L.* have a slightly narcotic effect (Martindale, 1967) but its psychoactive use in southern Africa is uncertain.

**PIPERACEAE**

*Piper betel* L.* [pan (H)]

The betel vine is a climber with heart-shaped leaves, and is used in wrapping betel nut (*Areca catechu* L.*). It is not cultivated in South Africa but is imported (Van Wyk & Gericke, 2000).

*Piper capense* L. f.

Unspecified groups in South Africa use the root as a sexual stimulant, and it is reported to cause sleepiness (Van Wyk & Gericke, 2000). It is likely to have a similar composition to kava kava, *Piper methysticum* Forst (Van Wyk & Gericke, 2000).

**PITTOSPORACEAE**

*Pittosporum viridiflorum* Sims [cheesewood, kgalagangwe (S)]

Unspecified groups use root decoctions that are reported to ease pain and produce restfulness, while the bark is reported to produce a powerful action if taken in excess (Watt & Breyer-Brandwijk, 1962). Root infusions are used for accuracy in divining by the Sotho (Hutchings et al., 1996). The pharmacology of this plant is possibly due to terpenoids or saponins (Van Wyk et al., 1997).

**PLUMBAGINACEAE**

*Plumbago zeylanica* L. [[San]

Suspected to be used by the San to induce a trance state, and the genus contains substances that have a stimulant and narcotic action on the central nervous system (Winkelman & Dobkin de Rios, 1989). Reported to be used as a narcotic in West Africa (Ayensu, 1978).

**POACEAE**

*Cymbopogon validus* (Stapf.) Stapf. ex Burtt. Davy [isicunge (Z)]

The Zulu use the roots together with the above-ground shoots to strengthen the nervous system and to stimulate the body (Pujol, 1990). It is used to revitalise the nerves of muddy people (Hutchings et al., 1996). It is also used as a stimulant in India (Watt & Breyer-Brandwijk, 1962). *Cymbopogon densiflorus* Stapf.* and *Ocimum canum* Sims. are macerated together and used in the Congo as a remedy for epilepsy (Watt, 1967). The flowers of *Cymbopogon densiflorus* Stapf.* cause foretelling dreams when smoked alone or with tobacco by Tanganyikan witch doctors (De Smet, 1996).

**POLYGALACEAE**

*Nylandia spinosa* (L.) Dumort. syn: *Mundia spinosa* (L.) DC.

In the Cape of South Africa it is regarded as a narcotic (Kling, 1923). Unspecified parts are used for hysteria and sleeplessness in the Cape of South Africa (Batten & Bokelmann, 1966).

*Securidaca longipedunculata* Fresen. [mdla-ndlopfu (Ts)]

A Chopi remedy used with *Sphedanmocarpus pruriens* (Juss.) Szyszyl. subsp. pruriens for people believed to be possessed by evil spirits (Watt & Breyer-Brandwijk, 1962). Unspecified groups use the powdered root that is mixed in porridge and eaten for treating epilepsy and convulsions in Zimbabwe, Malawi and Mozambique (Gelfand et al., 1985). The plant contains the toxic indole alkaloid securinine and some ergot alkaloids (Van Wyk et al., 1997).

**POLYGONACEAE**

*Oxygonum species* [(Kw), (Sh)]

A root infusion of an unidentified *Oxygonum* species is used for convulsions in Zimbabwe (Gelfand et al., 1985). The Kwanyama Ovambos use an infusion of an unidentified species as an enema for epileptic children (Loeb et al., 1956).

**PORTULACACEAE**

*Anacamptos rhodesica* N.E. Br. [tirika (Sh)]

The plant is a beer additive, and is reported to have hallucinogenic and narcotic activity (Gelfand et al., 1985; Van Wyk & Gericke, 2000).

**Talinum caffrum** (Thunb.) Eckl. & Zeyh. [impunyu (Z)]

Root infusions are taken for nervousness in South Africa (Gerstner, 1941).

**Talinum crispatum** Dinter ex V. Poelln.

Unspecified groups use tuber decoctions for heart palpitations in Botswana (Hedberg & Staugard, 1989).
PROTEACEAE
*Faurea saligna* Harv. [umdwadwa (Nd)]
Infused with *Desmodium barbatum* (L.) Benth., it is taken orally once a day for five days for epilepsy (Gelfand *et al.*, 1985).

PTAEROXYLACEAE
*Ptaeroxylon obliquum* (Thunb.) Radlk. [sneezewood, umthathi (X)]
Unspecified groups use alcoholic extracts of the wood in the treatment of patients suffering from fits (Hutchings *et al.*, 1996). The Xhosa use powdered bark traditionally as a snuff for recreational purposes (Watt & Breyer-Brandwijk, 1962).

RANUNCULACEAE
*Anemone caffra* Eckl. & Zeyh. [wind flower, iyezaelinn-myama (X)]
The plant mixed with *Athrixia heterophylla* (Thunb.) Less. is used for the treatment of mental diseases (Watt & Breyer-Brandwijk, 1962). Felix (1931) reported on the use of the roots of an *Anemone* species in South Africa to treat insanity. Triterpene saponins are characteristic of the genus (Hutchings & Van Staden, 1994).

*Clematopsis scabiosifolia* (DC.) Hutch. subsp. *stanleyi* (Hook.) Brummitt [bandamusoro (Sh)]
The root is burned and the smoke inhaled to treat madness in Zimbabwe (Gelfand *et al.*, 1985).

RHAMNACEAE
*Helinus integrifolius* (Lam.) Kuntze. [soap plant, pelotheri (S), ubhubhubhu (Z)]
The Zulu use an emetic made from the roots for hysteria in South Africa (Bryant, 1966). Monnig (1967: 96) describes how the Sotho (Pedi) use this plant in the initiation of diviners to “strengthen his memory and give the initiate keen powers of observation”. This plant has important spiritual uses among the Zulu and Xhosa in Johannesburg (J.F. Sobiecki, pers. obs.).

*Rhamnus prinoides* L’Herit. [dogwood, ischibamba (Cha)]
Unspecified groups use ground bark that is administered as snuff for mental disorders in the Transkei (Hutchings *et al.*, 1996). The Chagga use roots to enhance the narcotic effects of beer (Watt & Breyer-Brandwijk, 1962).

ROSACEAE
*Rubus ludwigii* Eckl. & Zeyh. [blackberry, iqunube (X)]
Roots are used for fits in Transkei (Hutchings *et al.*, 1996).

*Rubus pinnatus* Willd. [South African blackberry/bramble (E)]
White settlers in the cape of South Africa used the roots for convulsions (Watt & Breyer-Brandwijk, 1962).

RUBIACEAE
*Canthium inerme* (L. f.) Kuntze [munyingahonye (Sh)]
The root is burned and the smoke inhaled for convulsions in Zimbabwe (Gelfand *et al.*, 1985). The plant has been used as fish poison in various parts of Africa, India and other parts of Asia (Watt & Breyer-Brandwijk, 1962).

*Crossopteryx febrifuga* (Afzel. ex G. Don) Benth. [dangwe (Ch)]
Chewa diviners are said to use the bark in ordeal trials in Malawi (Williamson, 1974).

*Fadogia anclyantha* Hiern [makoni tea, musvisvinwa (Sh)]
The powdered root is taken in porridge to treat madness in Zimbabwe (Gelfand *et al.*, 1985).

*Galium capense* Thunb. subsp. *garipense* (Sond.) Puff. var. *witbergense* (Sond.) Puff. [seharane (S)]
Used to treat those “people with the spirit” (Laydevant, 1932) that appears to be a type of mental disturbance or spiritual calling.

*Gardenia ternifolia* Schumach. & Thonn. subsp. *jovis-tonantis* (Welw.) Verdc. var. *goetzii* (Stapf & Hutch.) Verdc. [large leaved common gardenia, *mataria* (Sh)]
Roots are used for madness in Malawi, while bark is used as an ointment for convulsions in Zimbabwe (Gelfand *et al.*, 1985).

Unspecified parts are used in South Africa to treat epilepsy by taking a decoction orally (Venter, 1996).

*Nenax microphylla* (Sond.) Salter
The seeds of this Karoo shrublet are used by people of the Karoo as a dagga (*Cannabis*) substitute (Van Wyk & Gericke, 2000).

*Pachystigma pygmaeum* (Schltr) Robyns [munzvirupasi (Sh)]
The root is burned and the smoke inhaled for convulsions in Zimbabwe (Gelfand *et al.*, 1985).

*Pygmaotheamnus zeyheri* (Sond.) Robyns var. *zeyheri* (Sh)
An infusion made from the roots is taken orally and washed with to treat delirium in Zimbabwe (Gelfand *et al.*, 1985).

*Vangueriopsis lanciflora* (Hiern) Robyns [crooked false medlar]
A root infusion is dropped into the nose to treat madness in Malawi (Gelfand *et al.*, 1985).

RUTACEAE
*Agathosma tabularis* Sond. syn: *Barosma pulchella* (L.) Bartl. & Wendl. var. *tabularis* Dummer
In South Africa there is field evidence for the leaf and volatile oil being narcotic (Schimmel & Co., 1909).

*Clausena anisata* (Willd.) Hook. f. ex Benth. [horsewood, umnkumbile (X)]
Unspecified parts are used by the Xhosa to treat mental diseases such as schizophrenia (Pujol, 1990). Aqueous extracts from the rootbark depress the central nervous system in mice and also show mild to moderate anticonvulsant activity (Makunju, 1983).

*Ruta graveolens* L.* [wynruit (Af)]
Unspecified groups use the leaf juice for convulsions and fits in infants and children (Watt, 1967) while the herb and oil of rue have both been used to treat hysteria in South Africa (Watt & Breyer-Brandwijk, 1962). The plant is traditionally used in Europe for hysteria (Van Wyk *et al.*, 1997). Infusions and wine
tinctures of the leaves are said to be hypnotic (Watt & Breyer-Brandwijk, 1962).

**Zanthoxylum capense** (Thunb.) Harv. syn: *Fagaria capensis* Thunb. [small knobwood (E)]
Used as an epilepsy remedy among the Europeans (Watt & Breyer-Brandwijk, 1962). A species is used in Gabon as a remedy for mental disease (Walker, 1953).

**SANTALACEAE**

*Osyridicarpos schimperianus* (Hochst. ex A. Rich.) A. DC. [umalala (Z)]
Leaves and stems are used to make babies sleep (Hutchings et al., 1996), indicating likely narcotic principles. This is supported by Manana (1968) who reports on an unidentified plant called *umalala* that is used by the Zulu to induce sleep in infants.

*Osyris lanceolata* Hochst. & Steud. [katiya (Sh)]
Bark infusions are to treat madness in Zimbabwe (Gelfand et al., 1985).

**SAPINDACEAE**

*Cardiospermum halicacabum* L. [balkan vine]
Unspecified groups use the roots for nervous diseases, while roots and leaves are used for nervous complaints in the East Indies and Antilles (Hutchings et al., 1996).

**SAPOTACEAE**

*Englerophytum magalismontanum* Krause syn: *Bequaertiodendron magalismontanum* (Sond.) Heine & J.H. Hemsley [Transvaal milkplum (Si)]
Fruit and roots are used by the Sotho (Kgatla) for epilepsy (Watt & Breyer-Brandwijk, 1962). Unspecified groups use an infusion made from stamping the roots and fruit to treat epilepsy in South Africa (Coates Palgrave, 1977).

*Vitellariopsis marginata* (N.E. Br.) Aubrev. [Natal bush milkwood, amasethole (Z)]
Psychoactive medicines are made from the roots to cure moody people rendered neurotic by way of witchcraft (Pujol, 1990). The Zulu also use root and leaf decoctions as sexual stimulants (Hutchings et al., 1996). The Zulu use an unidentified plant called *amasethole* for treating madness (Manana, 1968).

**SCROPHULARIACEAE**

*Aptosimum decumbens* Schinz [odimbulufi (Kw)]
An infusion of the plant or chewing the leaves is reported to improve the memory (Rodin, 1985). Other unidentified species are made as an infusion and used as an enema for epileptic children (Loeb et al., 1956).

*Harveya speciosa* Bernh. ex Krauss [inkblom, mokunyi (Si)]
Used by the Sotho for mental disturbances (Watt & Breyer-Brandwijk, 1962) and as remedy for mental disease in Lesotho (Phillips, 1917).

*Harveya huttonii* Hiern.
Unspecified groups chew the roots as a sedative for nervous tension in the eastern cape of South Africa (Batten & Bokelmann, 1966).

*Phygelius capensis* E. Mey. ex Benth. [mafizi matso (Si)]
Medicines using this plant and that of *Ledebouria cooperi* (Hook. f.) Jessop are used to inebriate Sotho boys in initiation ceremonies and usually cause them to appear stunned and stupified and to go to sleep (Hutchings et al., 1996).

*Sutera atropurpurea* (Benth.) Hiern syn: *Lyperia atropurpureae* Benth.
The flowers were formerly used in the Cape region of South Africa by unspecified groups to treat convulsions in children (Pappe, 1857). The plant is reported to have stimulant and anodyne properties and to be used for children’s convulsions (Pappe, 1847). The plant is also used for headache and anxiety (Dalziel, 1937; Watt & Breyer-Brandwijk, 1962). Smoke from an unidentified *Sutera* species is used by the Sotho as an inhalant in the treatment of mental patients (Watt & Breyer-Brandwijk, 1962).

*Sutera burkeana* Hiern. [muchenura (Sh)]
The whole plant is burnt and the smoke inhaled for madness in Zimbabwe (Gelfand et al., 1985).

**SIMAROUBACEAE**

*Ailanthus altissima* (Mill.) Swingle*
Root-bark has been used for epilepsy in South Africa (Potter, 1932).

**SOLANACEAE**

*Datura metel* L.* [iloi (Z), mondzo (Ts)]
The Zulu use unspecified parts that are utilised with an unidentified *Dioscorea* species as hypnotic drugs against hysterical fits in girls (Gerstner, 1941). The plant is ingested and used as a hallucinogen or entheogen in the 'Tsonga girls’ initiation schools in Mozambique and the Northern province of South Africa (Johnston, 1972).

*Datura stramonium* L.* [thorn apple, zavhazavha (V), iloi (Z)]
Unspecified parts are used with unidentified *Dioscorea* species as hypnotic drugs against hysterical fits in Zulu girls (Gerstner, 1941). The Venda use the leaves for insanity (Mabogo, 1990). Powdered roots and leaves are inhaled as snuff to aid healers in divining in South Africa (Hutchings et al., 1996). In South Africa there is the occasional use of the seeds for recreational intoxication, but the unpleasant side effects of tropane alkaloids warrant limited use thereof (J.F. Sobiecki, pers. obs.).

*Lycopersicon esculentum* Mill. [tomato, mudomasi (Sh)]
In Malawi the leaves are used as a body wash to treat epilepsy (Gelfand et al., 1985).

*Nicotiana tabacum* L.* [tobacco, fodyayechikwarimba (Sh)]
It is widely cultivated on a commercial scale in southern Africa, and is taken as a snuff by southern African diviners at the start of divination, and is also made as a traditional offering to the ancestors (Van Wyk & Gericek, 2000).

*Withania somnifera* (L.) Dun [winter cherry, ubuvimbha (Z)]
Unspecified groups in southern Africa take the plant as a sedative and hypnotic (Van Wyk & Gericek, 2000). In East Africa, roots are considered to have narcotic and anti-epileptic effects (Oliver-Bever, 1986). An unidentified plant with the name *abuvimbha* is taken to induce clear dreams (Manana, 1968). The plant is chemically very complex and more than 80 compounds including withanolides are known, with sedative and hypnotic effects having been described (Van Wyk & Gericek, 2000).

**STERCULIACEAE**

*Dombeya rotundifolia* (Hochst.) Planch. var. *rotundifolia* [wild plum, unhliziyonkulu (Z)]
Bark is used in Zulu and Botswanan medicines for palpitations (Teichler, 1971; Pujol, 1990). Flowers are believed to have
magico-religious properties according to the Tsonga (Lengme, 1981). Also known as *silukuluku* in Zulu, and is used to treat specific types of madness (M. Tau, pers. comm.).

**Hermannia hyssopifolia** L. [E]
Root decoctions are used among the Europeans as an old cape remedy for fits (Watt & Breyer-Brandwijk, 1962).

**THYMELAEACEAE**
*Gnidia kraussiana* Meisn. var. kraussiana [yellow heads, chitupatupa (Sh), imfuzane (Z)]
The Shona use the powdered tuber taken in porridge for madness in Zimbabwe (Gelfand et al., 1985). The Zulu use an unidentified plant by the name of *imfuzane* for mental disorders (Manana, 1968). Considered to be poisonous (Shone & Drummond, 1955), and contains toxic diterpenoid esters (Van Wyk et al., 1997).

*Synaptolepis kirkii* Oliv. [mutsuri (Ka), uvuma-omhlophe (Z)]
The Karanga use the roots for epilepsy (Watt & Breyer-Brandwijk, 1962). Root infusions have been used as purifying ritual emetics and face and body washes to assist South African diviners to “see” in a metaphysical sense (Van Wyk & Gericke, 2000).

**TILIACEAE**
*Corchorus asplenifolius* Burch. [ubangalala (Z)]
The roots are used together with *Eriosema* species as aphrodisiacs and for nervous debility (Gerstner, 1939; Pujol, 1990).

**VALERIANACEAE**
*Valeriana capensis* Thunb. [cape valerian]
The roots have been used for epilepsy in the cape of South Africa (Pappe, 1857; Greshoff, 1913). Unspecified parts have been used in South Africa in combination with *Ballota africana* (L.) Benth. and *Stachys thunbergii* Benth. to treat hysteria and insomnia (Van Wyk & Gericke, 2000).

**VERBENACEAE**
*Clerodendrum glabrum* E. Mey. var. *glabrum* [(S), mang-kangkani (Lob)]
Weak teas are taken at night by the Sotho (Tswana) to aid sleep (Roberts, 1990). Pounded leaves, placed in the armpit and neck, are used by the Lobedu, a Northern Sotho group, to induce sleep and to provide a remedy for convulsions in children (Watt & Breyer-Brandwijk, 1962).

*Clerodendrum myricoides* (Hochst.) Vatke [blue cat’s whiskers (Nd)]
Leaf decoctions are used for bathing patients with convulsions in Zimbabwe (Gelfand et al., 1985).

*Clerodendrum ternatum* Schinz [(Sh)]
Roots are taken orally in sweet beer to treat epilepsy in Zimbabwe (Gelfand et al., 1985).

*Lippia javanica* (Burm. f.) Spreng. [fever tree]
Unspecified species use the leaves for convulsions in Zimbabwe (Gelfand et al., 1985). The plant is used as a cure for madness in Malawi (Williamson, 1974). *Lippia* species are used in Europe in preparations for the treatment of nervous disorders, hyperactivity and pain (Martindale, 1993).

*Vitex rehmannii* Guerke. [umluthu (Z)]
Unspecified species are used for hysterical fits in South Africa (Gerstner, 1941).

**VISCACEAE**
*Viscum capense* L.f.
Unspecified parts were used in the early days in the cape of South Africa for epilepsy (Watt & Breyer-Brandwijk, 1962). Unidentified species are administered internally for hysteria in Transkei, and overdosing is reported to cause drowsiness (Hutchings et al., 1996).

**VITACEAE**
*Rhicioissus tridentata* (L.f.) Wild & Drum. subsp. *cuneifolia* (Eckl. & Zeyh.) N.R. Urton. [wild grape (Lob), (Sh), isinwazi (Z)]
The Zulu use tubers for epilepsy (Hutchings et al., 1996). Unspecified parts are used by the Lobedu, a Northern Sotho group, for epilepsy and by the Masai as nerve stimulants (Watt & Breyer-Brandwijk, 1962). Medicinal use among the Zulu and the Sotho suggests analgesic effects (Watt & Breyer-Brandwijk, 1962). The Shona take a root infusion orally for madness (Gelfand et al., 1985).

This plant has traditional spiritual uses among local groups in South Africa (M. Maponya, pers. comm.).

**ZINGIBERACEAE**
*Siphonochilus aethiopicus* (Schweinf.) B.L. Burtt. syn: *Kaempferia aethiopica* (Schweinf.) Benth. [wild ginger, isiphephetho (Z)]
The Zulu use the roots for treating hysteria (Gerstner, 1938). Unspecified groups in South Africa use infusions of the rhizome and roots to treat epilepsy and hysteria (Van Wyk & Gericke, 2000). An unidentified *Kaempferia* species is chewed by the Lobedu (a Northern Sotho group) traditional healers before divining (Krige, 1940). There are reports that *Kaempferia galanga* L. *is* used as a hallucinogen and medicine in New Guinea (Schultes & Hoffmann, 1992).

**Family trends and chemistries**
A number of families contain higher numbers of psychoactively used species than others. The Fabaceae (comprising the subfamilies Mimosoideae, Caesalpinioideae and Papilionoideae) (37), Asteraceae (28), Euphorbiaceae (11), Lamiaceae (11), and Rubiaceae (11) have the highest number of species reported to have psychoactive uses. Other families with more than 4 species recorded as having psychoactive uses include the Anacardiaceae, Apocynaceae, Araliaceae, Asclepiadaceae, Convolvulaceae, Meliaceae, Mesembryanthemaceae, Scrophulariaceae, Solanaceae and Verbenaceae. The chemotaxonomic research cited indicates that the presence of compounds with potential psychoactivity may account for the higher number of species per family used, but this enquiry is largely beyond the scope of this paper.

Members of the Apiaceae such as *Centella asiatica* (L.) Urb. and *Arctopus echinatus* L. contain diterpenoids of the kaurene type (Hutchings et al., 1996). The psychoactivity of these species can most likely be attributed to the diterpenoids they contain (Van Wyk & Gericke, 2000).

Members of the Apocynaceae often produce a vast range of indolic and harman type alkaloids that are psychoactive (Trease & Evans, 1983). Diverse sorts of iridoid compounds and cardiotonic glycosides are also produced (Cronquist, 1981).

Members of the Araliaceae accumulate triterpenoid sapnonins and other triterpenoid compounds (Cronquist, 1981).

The Asclepiadaceae are also known to concentrate cardiac glycosides (Hutchings et al., 1996). Species from the inventory containing cardiac glycosides include *Asclepias fruticosa* L.
The relative importance of each psychoactive plant-use category is based on the total number of species reportedly used for that category. Thus, the most important categories, with the highest number of reportedly used species, were those for treating mental disorders and convulsive conditions. A particular plant can be and is often listed under different categories since one plant can have multiple psychoactive uses. *Boophane disticha* (L. f.) Herb., for example, is used as a narcotic, hallucinogen, sedative, and is used for divining and treating insanity. Psychoactive plant use involves the use of various preparation forms such as infusions, lotions, snuffs, etc. Similarly the methods of administration vary considerably, with rectal and oral methods being popular in southern Africa. The method of vomiting with herbal infusions is particularly important in South African traditional healing practices. Other methods include smoking, body washes and inhalations. When compiling an inventory based mostly on the literature, data such as the part of the plant used, preparation details and routes of administration are not always available because they have not been specified in the literature.

The most significantly utilised category of psychoactive plants in southern Africa is that for treating mental disorders, with 120 species having been reported from the literature and fieldwork study. Examples of conditions treated include schizophrenia, insanity, hysteria, delirium and psychosis. Species used to treat such conditions include *Cussonia* species, *Capparis tomentosa* Lam., *Hypoxis colchicifolia* Bak., *Dioscorea dreg-eana* (Kunth.) Dur. & Schinz. and *Senecio discodregeanus* Hilliard & Burtt.

A large number of plants are used to treat convulsive conditions such as epilepsy. Potentially important species include various *Acacia* and *Clerodendrum* species.

A number of plants have sedative properties that are used for nervous conditions. These plants cause relaxation, and can be used as neurotonics for acute and chronic nervous conditions. Species include *Cymbopogon validus* ( Stapl) Stapf ex Burtt. *Davy, Alepidea amatyambica* Eckl. and *Zeyh. and Olea woodiana* Knobl. For the purposes of this paper, visionary plants will be defined as those plants with psychoactive properties that are used to facilitate the induction of transpersonal states or similar altered states of consciousness (ASC). These states could include hallucinations, synaesthesia, temporal distortions, mystical experiences, enhanced intuition, and “clairvoyance”. These plants are often used in tribal societies for spiritual purposes including trance and dream induction, divination and in other magical rituals. Many of these plants are considered to be sacred and have an important role in the worldview of shamanic societies. Examples in southern Africa include *Ipmoea species, Boophane disticha* (L. f) Herb. and *Datura stramonium* L.* At present, I am undertaking research investigating other such visionary plants used in South African traditional healing practices.

The narcotic plants are used primarily to induce sleep ( sop-orific) in cases of insomnia. Examples include *Tecomaria capensis* (Thunb.) Spach subs. *capensis* and *Millettia grandis* (E. Mey.) Skeels. A number of plants from the literature have unspecified intoxicant uses. Intoxicants were traditionally used in initiation ceremonies to “drug” or inebriate the initiates. Species include *Cannabis sativa* L.*, and Phylgeilus capensis* E. Mey. ex Benth.

The stimulants are used to reduce fatigue, increase endurance and improve mental powers of concentration. An important species is *Catha edulis* (Vahl) Forsk. ex Endl. that has significant cultural and economic value in East and South Africa.

A few plants are reported as having antidepressant uses. Examples include *Melolobium alpinum* Eckl. & Zeyh., *Corydalis pruniosa* E. Mey.* and *Adenia gummifera* (Harv.) Harms

The various categories of psychoactive plant use (p. 3, Table 2).

The relative importance of each psychoactive plant-use category
var. gummifera. The latter species is a very popular muti in South Africa and is used for various psychoactive purposes including depression. It was one of the top-selling herbs in Natal in 1988 (Cunningham, 1988).

Some plants are reported as producing characteristically euphoriant effects. Examples include Nymphaea nouchali Burn. f. and Pleiospilos bolusii (Hook. E.) N.E. Br.

Other plants are reported as having hypnotic effects, examples being Ruta graveolens L.* and Withania somnifera (L.) Dun.

A few plants are reported as having mnemonic uses (aiding the memory), with Helinus integrifolius (Lam.) Kunze appearing to be an important species for this purpose based on literature and fieldwork accounts.

Some ethnic groups were insufficiently covered owing to a lack of literature or research on these groups. However, from the research conducted it appears that many of the nations in southern African cultures have considerable knowledge of psychoactive plant use, especially the Zulu, Sesotho and Tsonga. It may be worthwhile investigating the Swazi pharmacopoeia in light of their divinatory practices being trance orientated. In this inventory, the individual language groups of the Northern Sotho, South Sotho and Tsswana were collectively grouped as the Sotho. This was performed to achieve a standard because occasionally authors did not specify the individual groups but only the major language group/s, e.g. Sotho, instead of specifying Tswana.

CONCLUDING REMARKS

This inventory lists over 300 species that are reported as having psychoactive uses in traditional southern African healing practices. This supports the hypothesis that southern Africa has flora that is rich in psychoactive substances which is significantly utilised by indigenous groups. However, neuro-chemical studies are needed to validate these traditional claims. Numerous cultural groups such as the Swazi and Tsonga appear to have scant literature regarding psychoactive plant use. The most significantly utilised categories of psychoactive plants were those used for mental disorders (39%) and those for convulsive conditions (33.2%). Therefore, further ethnobotanical research is required so as record these and other cultural groups’ psychoactive plant use in southern Africa. The need for new psychiatric medicines and the urgency to document dwindling indigenous plant knowledge, as a result of acculturation, warrant research on psychoactive plant use in southern Africa. It is hoped that this review will stimulate research and form the basis of future work across many disciplines.

ACKNOWLEDGEMENTS

I wish to thank Professor B-E. van Wyk, Department of Botany, RAU, for his guidance, advice and support in the project, and all the informants who shared with me their plant-use knowledge. Special thanks go to Mama Maponya, Joyce Khwela, Gladise and her daughter Mpai for their important contributions, Anne Hutchings for her invaluable advice and assistance with the inventory, and her patience with me, Professor Braam van Wyk for his kind advice, Professor Thea de Wet for her enduring assistance with the project, Rand Afrikaans University, Professor Lionel Posthumus for his assistance with linguistic issues, Seth Seroka and Solomon Mahlaba for their expert advice concerning plant use and ethical research considerations, Professor Kevin Balkwill and the staff of Moss Herbarium for their support and botanical assistance, University of the Witwatersrand, Priscilla Swartz for her encouragement, Dr Ingo Lambrech for his guidance, Dale Millard for his insight and enthusiasm concerning the topic, Dr Manton Hirst, Mr Clifford Mudumo, Dr Nigel Gercke, Dr P.G. Olivier from RAU Library, Vivienne Williams for providing her lexicon on plants traded on the Witwatersrand, Mrs Mathilde Sobiecki for her support and encouragement through hard times, and NoluthandoNtou who assisted me in translating material.

REFERENCES


Appendix 1

Species used for the main categories of psychoactive plant use in southern Africa

? indicates uncertain use for the category specified.
* denotes non-indigenous species.

1. Mental disorders: insanity, mental disease, hysteria, delirium, etc. (120 species)

<table>
<thead>
<tr>
<th>Species</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adansonia digitata</td>
<td>Ceratandra grandiflora</td>
</tr>
<tr>
<td>Adenia gumifera</td>
<td>Chelonium ambrosioides</td>
</tr>
<tr>
<td>Agapanthus campanulatus</td>
<td>Chlorophytum blepharophyllum</td>
</tr>
<tr>
<td>Anemone caffra</td>
<td>Chrysanthemoides monilifera</td>
</tr>
<tr>
<td>Annona senegalensis</td>
<td>Cinnamomum camphora*</td>
</tr>
<tr>
<td>Ansellia africana</td>
<td>Cissampelos torulosa</td>
</tr>
<tr>
<td>Aspilia pluriseta</td>
<td>Clausena anisata</td>
</tr>
<tr>
<td>Astripomoea malvacea</td>
<td>Clematopis scabiosifolia</td>
</tr>
<tr>
<td>Athrixia heterophylla</td>
<td>Combretum microphyllum</td>
</tr>
<tr>
<td>Azanza garckeana</td>
<td>Crubbea hirsuta</td>
</tr>
<tr>
<td>Ballota africana</td>
<td>Crassula alba</td>
</tr>
<tr>
<td>Blumea alata</td>
<td>Cussonia arborea</td>
</tr>
<tr>
<td>Boophane disticha</td>
<td>Cussonia longissima</td>
</tr>
<tr>
<td>Brachylaena elliptica</td>
<td>Cussonia paniculata</td>
</tr>
<tr>
<td>Brackenridgea zanguebarica</td>
<td>Cussonia spicata</td>
</tr>
<tr>
<td>Brachycorythis ovata</td>
<td>Datura metel*</td>
</tr>
<tr>
<td>Buddleja species</td>
<td>Datura stramonium*</td>
</tr>
<tr>
<td>Capparis tomentosa</td>
<td>Diocoma anomala</td>
</tr>
<tr>
<td>Catearia gladiiformis?</td>
<td>Dioscorea diversifolia</td>
</tr>
<tr>
<td>Cassia dulcebotrya</td>
<td>Dioscorea dregeana</td>
</tr>
</tbody>
</table>
2002

**Printzia pyrifolia**
**Psoralea pinnata?**
**Pycnostachys artificifolia**
**Pygmaea nummularia**
**Raphionacme sp†**
**Rauwolfia serpentina**
**Rhamnus prinoides**
**Rhus pyrophoroides**
**Rhynchosia sp?**
**Ruta graveolens**
**Schefflera umbilicata**
**Scilla nervosa?**
**Senna occidentalis**
**Silene capensis**
**Siphonochilus aethiopicus**
**Solanecio angulatus**
**Sphedamnocarpus pruriens**
**Stachys aethiopica**
**Sutera burkeana**
**Tephrosia capensis**
**Talinum caffrum**
**Turraea nilotica**
**Trichodesma physaloides**
**Tagetes minuta**

2. **Convulsive conditions: convulsions, epilepsy, fits, etc. (102 species)**

**Abrus precatorius?**
**Acacia amythethophylla**
**Acacia karroo**
**Acacia nigrescens**
**Acokanthera oppositifolia**
**Adenia gummifera**
**Acokanthera oppositifolia**

3. **Sedatives: nervous disorders or diseases, anxiety, etc. (51 species)**

**Abras precatorius?**
**Acoras calamus†**
**Alepidia amatymbica**
**Arctopus echinatus**
**Asclepias fruticosa**
**Asclepias physocarpa**
**Belamcanda chinensis**
**Berkeleya discolor**
**Bersama lucens**
**Boophane disticha**
**Buddleja species**
**Cannabis sativa†**

4. **Visionary uses: divining, trance, dream induction, hallucinatory (48 species)**

**Adenia gummifera**
**Adenopodia spicata**
**Albizia adiantifolia**
**Alepidia amatymbica**
**Anacampseros rhodopensis**
**Boophane disticha**
**Boscia albitrunca**
**Brackenridgea zanguebarica?**
**Cannabis sativa†**
**Chenopodium ambrosiodes**
**Crabbea hirsuta**

**Vitis rehmannii**
**Zanxiboryum capense**

**2002**

**Sobiecki: Plants used for psychoactive purposes 232002**
<table>
<thead>
<tr>
<th>5. Narcotics, soporifics (41 species)</th>
<th>6. Miscellaneous intoxicants (23 species)</th>
<th>7. Stimulants (22 species)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crinum species</td>
<td>Dioscorea dregeana</td>
<td>Agathosma tabularis</td>
</tr>
<tr>
<td>Datura metel*</td>
<td>Entandrophragma spicatum?</td>
<td>Areca catechu*</td>
</tr>
<tr>
<td>Datura stramonium*</td>
<td>Eucomis autumnalis</td>
<td>Balanites maughmii?</td>
</tr>
<tr>
<td>Dioscorea dregeana</td>
<td>Euphorbia helioscopia*</td>
<td>Catha edulis</td>
</tr>
<tr>
<td>Elephantine bulbosa*</td>
<td>Euphorbia pubescens</td>
<td>Cinnamomum camphora*?</td>
</tr>
<tr>
<td>Entada rhedii</td>
<td>Euphorbia tiruelli</td>
<td>Cymbopogon validus</td>
</tr>
<tr>
<td>Eucaea divinorum?</td>
<td>Hypericum perforatum</td>
<td>Erythroxylon coca</td>
</tr>
<tr>
<td>Ferraria glutinosa</td>
<td>Indigofera species</td>
<td>Hartogia schinoides</td>
</tr>
<tr>
<td>Helichrysum decorum</td>
<td>Lagerstroemia indica*</td>
<td>Hemizygia bracteosa?</td>
</tr>
<tr>
<td>Helminthus integrifolium</td>
<td>Ledebouria cooperi</td>
<td>Lobelia pintfolia</td>
</tr>
<tr>
<td>Indigofera flavicans?</td>
<td>Leonotis leonurus</td>
<td>Mentha aquatica</td>
</tr>
<tr>
<td>Ipomoea alba*</td>
<td>Lichtensteinia interrupta?</td>
<td>Nicotiana tabacum*</td>
</tr>
<tr>
<td>Ipomoea tricolor*</td>
<td>Millettia grandis</td>
<td>Nymphaea nouchali</td>
</tr>
<tr>
<td>Lobelia decurrentifolia</td>
<td>Nylanthia spinosa</td>
<td>Olea woodiana</td>
</tr>
<tr>
<td>Lonchocarpus capassa?</td>
<td>Olea europea subspecies africana?</td>
<td>Phyllanthus discoideus</td>
</tr>
<tr>
<td>Loranthus oleifolius?</td>
<td>Oysiridicarpos schimperianus?</td>
<td>Physicarpus pyenantha</td>
</tr>
<tr>
<td>Maesa lanceolata</td>
<td>Phylleia capensis</td>
<td>Plumbago zeylancia?</td>
</tr>
<tr>
<td>Monadenium lugardiae</td>
<td>Piper capense</td>
<td>Plumbago zeylancia?</td>
</tr>
<tr>
<td>Mundulea sericea</td>
<td>Pittosporum viridiflorum?</td>
<td>Strychnos henningsii</td>
</tr>
<tr>
<td>Myosotis afropalastris</td>
<td>Pleurostylia capensis</td>
<td>Sutera atropurpurea</td>
</tr>
<tr>
<td>Nicotiana tabacum*</td>
<td>Plumbago zeylancia?</td>
<td>Tragia species</td>
</tr>
<tr>
<td>Nymphaea nouchali</td>
<td>Rauvolfia caffra?</td>
<td>Trichodiadema stellatum?</td>
</tr>
<tr>
<td>Pancratium tenuifolium?</td>
<td>Rhamnus prinoides</td>
<td></td>
</tr>
<tr>
<td>Pittosporum viridiflorum?</td>
<td>Stachys thunbergii</td>
<td></td>
</tr>
<tr>
<td>Plumbago zeylanicia?</td>
<td>Tarchonanthus camphoratus?</td>
<td></td>
</tr>
<tr>
<td>Rabiea albinota</td>
<td>Tecomaaria capensis?</td>
<td></td>
</tr>
<tr>
<td>Rauvolfia caffra?</td>
<td>Valeriana capensis?</td>
<td></td>
</tr>
<tr>
<td>Rhodochissus tridentata</td>
<td>Withania somnifera</td>
<td></td>
</tr>
<tr>
<td>Scilla natalensis?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silene capensis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siphonochilus aethiopicus?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stephania species</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strychnos henningsii</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synaptolepis kirkii</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tulbaghia capensis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turraea floribunda</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withania somnifera</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Antidepressants (5 species)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agathosma tabularis</td>
</tr>
<tr>
<td>Anacampseros rhodesica</td>
</tr>
<tr>
<td>Arctotheca calendula?</td>
</tr>
<tr>
<td>Argemone mexicana*</td>
</tr>
<tr>
<td>Ballota africana?</td>
</tr>
<tr>
<td>Bolusanthas speciosus</td>
</tr>
<tr>
<td>Boophane disticha</td>
</tr>
<tr>
<td>Centella asiatica</td>
</tr>
<tr>
<td>Ceratostigma sericea</td>
</tr>
<tr>
<td>Cissampelos macronata</td>
</tr>
<tr>
<td>Clerodendrum glabrum</td>
</tr>
<tr>
<td>Commelina africana?</td>
</tr>
<tr>
<td>Conophyta species?</td>
</tr>
<tr>
<td>Conophyta species?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Euphoriants (3 species)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenia guinifera</td>
</tr>
<tr>
<td>Corydalis pruinosa</td>
</tr>
<tr>
<td>Hypericum perforatum*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Hypnotics (3 species)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euclea natalensis</td>
</tr>
<tr>
<td>Ruta graveolens</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Mnemonics (3 species)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albizia adianthifolia</td>
</tr>
<tr>
<td>Aiptosistum decembens</td>
</tr>
<tr>
<td>Helinias integrifolias</td>
</tr>
</tbody>
</table>