

*Full Length Research Paper*

# **Plants of Xhosa people in the Transkei region of Eastern Cape (South Africa) with major pharmacological and therapeutic properties**

**R. B. Bhat**

Department of Botany, University of Venda, Private Bag X5050, THOHOYANDOU, 0950, South Africa.

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**The indigenous people of Transkei, Eastern Cape, South Africa depend on the natural plant resources from their environment for medicine, food, pastoral, cultural and religious needs. This area, mainly inhabited by the Xhosa people, has remained ethnobotanically unexplored until recently. The present investigation among the herbalist, traditional doctors, herb traders, tribal priests and other knowledgeable local people recorded medicinal and other uses of 35 plant species. This firsthand information points out the importance of local flora to tribal groups and modern people of Transkei. In spite of western influence, the Xhosa people of Transkei still believe in the efficacy of herbal medicine, and prefer to use these traditional remedies currently.**

**Key words:** Indigenous medicine, medicinal plants, South Africa, Transkei, Xhosa.

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## **INTRODUCTION**

Plants have played a great role in the history of humankind (Qureshi et al., 2006). The Xhosas are the major inhabitants of the Transkei region of the Eastern Cape of South Africa. For many years, the people of Transkei had no interaction with the Western world and they relied mainly on the traditional knowledge they had of medicinal plants to meet their requirements. Eastern Cape is one of the poorest regions of South Africa and the people of Transkei region had no contact with Western world, and they were dependent mainly on the knowledge they had of medicinal plants to meet their needs. In recent years, with the establishment of modern medicine in Transkei, the Xhosas still believe in the efficacy of herbal medicines and prefer to use traditional remedies. Even today, a great majority of the world population, about 80%, does not have the access to the modern medicine and depend mainly upon the herbal

remedies for their needs (Wambebe, 1990).

The Xhosa speaking people of Transkei use a wide range of remedies to treat diseases and illnesses. During the present investigation, a number of plants and plant materials have been collected and identified. These phytomedicines are known as imithi (singular umthi) and include remedies derived from trees, shrubs, herbs, leaves, barks, bulbs and roots. The elderly people, herbalists and traditional healers have much knowledge about medicinal plants and phytomedicines. The mothers and grandmothers are more knowledgeable about medicinal plants and their therapeutic values. The grandmothers generally collect the plants and prepare the medicines for their daughters and their daughter-in laws. These remedies are mainly concerned with pregnant women, maternal and child health like *Agapanthus* sp., *Chlorophytum comosum* (Thunb.) Jacq. and *Salvia scabra*

L. f., all locally known as Isicakathi (Simon and Lamla, 1991).

Transkei region has got a large number of plant biodiversity which vary in their ethnobotanical value. Indigenous plants have played a great role in the day today lives of the local people in Transkei, and there are several reports on their use (Lamla, 1981; Bolofo and Johnson, 1988; Hutchings, 1989; Simon and Lamla, 1991; Bhat and Jacobs, 1995; Bhat, 1998; Tyiso and Bhat, 1998; Bokwe and Bhat, 1998; Dlisani and Bhat, 1998; Bhat and Robuluza, 2002). In spite of all these previous works done, there are still a number of plants that remain to be recorded. Thus the need for this project is raised with a view to examine closely into the indigenous plants used by Xhosa people in the Transkei region of Eastern Cape (South Africa), with major pharmacological and therapeutic properties.

## METHODOLOGY

The investigation was carried out in 15 districts of Transkei during different seasons, for a period of two years. During each visit, plants were collected from different parts of the regions, a detailed field notes were taken on the medicinal plants and uses of phytomedicines following the suggestions of Croom (1983), Bhat et al. (1990) and Martin (1995). The information was obtained through a series of interviews with elderly villagers, rural and urban people, traditional doctors and herbalists. Herbalists and traditional doctors do not have organized hospitals and the patients who receive the treatment are always out patients. As a result, it was not possible to record the response to the drug therapy as patients were not easily and readily available for the interviews at the time of documentation.

The identification of the plants was done with the aid of floristic and related works of southern Africa, especially Dyer (1975), Watt and Breyer-Brandwijk (1962) and Bryant (1966). The collected specimens were prepared and stored at the University of Transkei (now Walter Sisulu University) Herbarium, in the Department of Botany.

## RESULTS

Based on the interviews conducted, it is evident that the knowledge about the use of plants and herbal products is limited mainly to traditional healers, herbalists, traditional doctors and elderly people living in rural areas. The curative art of herbal medicines, however, is limited to a number of families with some sanctity and secrecy. The present investigation among the herbalists, traditional doctors, herb traders, tribal priests and other knowledgeable local people recorded medicinal and other uses of 35 plant species. In Table 1, families are alphabetically arranged and the data presented in the following sequence: family/botanical names, vernacular names in Xhosa (X) and English (E), plant part collected and information on uses and method of use.

## DISCUSSION AND CONCLUSION

The early settlers and missionaries considered the Xhosa diviners and their traditional healing practices as 'mainstay of the grossest darkness of the human mind' (Lamla, 1981). However, it has been observed that some of the traditional medicines used by the Xhosa healers are effective and it attracted the attention of pharmacologists, anthropologists and scientists (Rose, 1972; Bolofo and Johnson, 1988; Hutchings, 1989; Simon and Lamla, 1991). In spite of modern civilization and access to modern medicine, the practice of traditional treatment still continues.

The traditional Xhosa medical practices go far beyond the limits of pure empirical scientific study. Hunter (1936), Hammond-Tooke (1962) and others have shown that appeasing the ancestral spirits, amathongo, is an integral part of Xhosa medicine. According to Xhosa healer, it is the 'person' who is ill, not one of his organs. Hence, a medicine given to heal a particular disease has also an esoteric aspect that comforts and strengthens the patient as well (Lamla, 1981). However, the treatment of complex diseases is still confined to mostly practicing herbalists or to certain family members of the traditional healers who directly inherit the knowledge from their forefathers. The curative art is always kept with sanctity and some secrecy. It is also believed that the efficacy of phytomedicine will be lost if revealed to other people. Fear factor of losing patronage is also a probable reason for the monopoly of the curative art. It conforms to the study made in other parts of the world (Singh et al., 1979; Bhat et al., 1985, 1990).

The knowledge and use of herbal medicines are also linked with supernatural and spiritual powers. Some of the preparations and remedies are followed by rituals such as sacrificing the birds and animals and chanting of incantations. It conforms to the observations made by Bhat et al. (1985, 1990) and Jain and Borthakur (1980). It is also believed that complex diseases are attributed to the spell of evil spirits or due to the violation of laws of their gods. So, the ultimate purpose of the rituals along with medicinal uses therefore, is to propitiate these gods. Nevertheless, the common and minor ailments are considered to be natural.

During the field work, it has come to my notice that the vernacular names and uses of a given plant species may change from one place to another. *Helichrysum cymosum* and some other species of the genus is known by vernacular name impepho or impepha, while *Helichrysum pedunculatum* is known as Indlebe zebhokwe, isicwe, undleni, or isigqutsi, in the Xhosa (X) language. Therefore, it was important that the names of the plants and plant specimens were collected from one and the same area. Long discussions in the field are time consuming, but it helped in collecting correct plants and

**Table 1.** Plants of the Xhosa with major pharmacological and therapeutic properties.

Family/Species (Voucher Specimen)	Vernacular names in Xhosa (X) and English (E)	Parts used	Preparation and uses
<b>ALLIACEAE</b>			
<i>Agapanthus africanus</i> Hoffmanns. (RBB 174)	Isicakathi (X)	Leaves	The crushed leaves are used as an antiseptic and a fast remedy of skin rashes in babies. Fresh leaves are also boiled in water and the filtered decoction is orally given in small quantities for effective cure of stomach related problems in small children and babies
<b>ALOACEAE</b>			
<i>Aloe arborescens</i> Mill. (RBB179)	Ikhakhulu (X) wild aloe (E)	Leave	Leaves are boiled in water and allowed to cool. The mixture is then filtered and given orally twice a day to treat the stomach ailments. It is considered to be very effective especially in children
<i>Aloe marlothii</i> A. Berger (RBB171)	Ikhala (X); Bitter aloe (E)	Leaves	The fresh mucilaginous sap collected from young and mature leaves, mixed with warm water and the mixture is administered orally as a laxative
<i>Aloe tenuior</i> Haw. (RBB 105)	Ikhala (X); Cape aloe (E)	Leaves	Fresh leaves are ground on a grinding stone and mixed with water. The filtered infusion is taken orally for the treatment of fever and stomach related ailments. It is also used for the treatment of diseases in chickens
<b>AMARYLLIDACEAE</b>			
<i>Clivia miniata</i> Regel (RBB75)	umayime (X)	Stem	Fresh stems are ground on a granite stone and boiled in water. The filtered decoction is taken orally to cure stomach related ailments and clean blood
<b>APIACEAE</b>			
<i>Alepidea amatymbica</i> Eckl. & Zeyh. (RBB 68)	Iqwili (X)	Stems	Underground stem is washed thoroughly, grated and boiled with milk. The mixture is cooled and filtered using a clean cloth. The decoction is taken orally three times a day to cure stomach ulcer
<i>Foenicullum vulgare</i> Mill. (RBB 317)	Imboaiso (X); fennel (E)	Leaves and fruits	Fresh leaves and fruits are crushed and used as an emetic to get rid of toxic substances from stomach. The fresh leaves and fruits are also chewed for refreshing breath
<b>ASTERACEAE</b>			
<i>Acanthospermum hispidum</i> DC. (RBB 354)	Inkunaana (X); upright star bur (E)	Entire plant	The whole plant is cooked in water up to the boiling point to prepare a plant decoction which is filtered and given to children twice a day to combat malnutrition and kwashiorkor. It is also used to treat stomach ache in children
<i>Arctotis arctotooides</i> O.Hoffm. (RBB 213)	Ubushwa (X); fever few (E)	Leaves	The leaves are ground on a grinding stone and the paste thus obtained is applied externally for the treatment of stiff nostrils
<i>Berkheya purpurea</i> (DC.) Mast. (RBB173)	Isihlungu (X)	Entire plant	The whole plant is boiled in water, filtered and the decoction is taken for stomach disorders and constipation

Table 1. Contd.

<i>Chrysanthemum parthenium</i> (L.) Pers. (RBB 80)	Ubushwa (X); fever few (E)	Leaves	Fresh leaves are boiled in water and then allowed to cool. The mixture is then filtered in a clean cloth. A drop of the decoction is put in the infected ear two or three times a day to treat inflammation of the ear. The decoction is also used to prevent migraine. External application of paste of the crushed leaves is considered to be a good remedy to treat wounds and sores
<i>Helichrysum appendiculatum</i> Less. (RBB 78)	Isicwe(X)	Leaves	The fresh leaves are used as an antiseptic to induce fast healing especially after circumcision to prevent external inflammation. Crushed leaves are also used as a bandage on the sores and wounds caused by hot water or fire
<i>Helichrysum cymosum</i> D.Don (RBB 249)	Impepho (X)	Leaves	The leaves are boiled in water and the decoction is used to cure headache. It is also used to drive away the evil spirits from home
<i>Helichrysum leiopodium</i> DC. (RBB 269)	letapiso (X)	Entire plant	The fresh leaves are boiled in water and the hot lotion is used to foment the swollen feet for rapid recovery
<i>Helichrysum nudifolium</i> Less. (RBB 93)	IColocolo (X); kaffir tea (E)	Leaves	Handful of leaves are boiled in water and the fumes are inhaled directly for the treatment of cold and flu
<b>CANNABACEAE</b>			
<i>Cannabis sativa</i> L. (RBB 250)	Matakwane/Intsangu/ Umya (X);dagga/cannabis (E)	Leaves	To heal whooping coughs and asthma; the fresh leaves are mixed with brandy and taken orally. To treat mental illness, the leaves are crushed and used as fumitory to reduce anxiety. The decoction prepared from the leaves is also consumed to get relief from chronic pain
<b>CHENOPODIACEAE</b>			
<i>Chenopodium album</i> L. (RBB 73)	Iyeza lomkhondo (X)	Roots	The roots are boiled in water cooled and filtered using a clean cloth. The decoction is used to treat stomach ailments in young babies
<i>Combretum imberbe</i> Wawra (RBB 342)	Umdubu-wehlathi (X); forest bush willow (E)	Roots	Freshly ground roots are boiled in water for a time and the mixture is allowed to cool. The decoction is filtered and taken two or three times a day to cure gonorrhoea
<b>EUPHORBIACEAE</b>			
<i>Acalypha glabrata</i> Thunb. (RBB 338)	Umthombothi (X)	Stem	Used for skin related problems in young children. The required amount of fresh stem is cut open and gently heated over open fire and applied over
<b>GERANIACEAE</b>			
<i>Geranium ornithopodum</i> Eckl. & Zeyh. (RBB 159)	Ikhambi lesihlungu (X)	Leaves	For treating diarrhea. The leaves are boiled in water and then allowed to cool. The filtered decoction is taken twice daily for curing diarrhea

Table 1. Contd.

<b>GUNNERACEAE</b>			
<i>Gunnera perpensa</i> L. (RBB 70)	Iphuzi (X); river pumpkin (E)	Stem	The young and old stems are cut into small pieces and ground on a granite grinding stone using a little water. The filtered mixture is taken orally morning and evening for rapid recovery from constipation
<b>HYACINTHACEAE</b>			
<i>Bowiea volubilis</i> Harv. ex Hook. f. (RBB 69)	Umagaquna (X)	Stem	The underground stem is ground, boiled in water. The filtered decoction is taken to treat the stomach related problem
<b>HYDNORACEAE</b>			
<i>Hydnora Africana</i> Thunb. (RBB 72)	Umavumbuka (X)	Roots	The roots are cut into small pieces, ground on a granite stone and boiled in water. The filtered decoction is taken orally half a cup twice a day as an effective remedy for dysentery
<b>ICACINACEAE</b>			
<i>Apodytes dimidiata</i> E.Mey. ex Bernh. (RBB124)	Mkhwenkwe (X)	Leaves	Leaves are boiled in water and then allowed to cooling. The filtered decoction is taken orally as remedy for fever and flu
<b>LAMIACEAE</b>			
<i>Leonotis leonurus</i> (L.) R. Br. (RBB 36)	Imfincamfincane (X)	Leaves	The leaves are boiled in water and then allowed to cool. The mixture is filtered using a clean cloth and the decoction is taken orally to cure headache diabetes. It is also used as narcotics
<b>MALPIGHIACEAE</b>			
<i>Acridocarpus natalitius</i> A. Juss. (RBB 313)	Umabophe (X)	Leaves	Fresh leaves are boiled, cooled and the filtered decoction is taken orally in small quantities twice a day to treat gastric related problems
<b>MALVACEAE</b>			
<i>Malva parviflora</i> L. (RBB 268)	Mosala-suping (X)Mallow (E)	Leaves	Fresh leaves are used as a wound dressing for fast healing
<b>MELIANTHACEAE</b>			
<i>Bersama lucens</i> (Hochst.) Szyszyl. (RBB 337)	Isindiya (X)	Bark	Bark is crushed or ground on a granite stone with small amount of water and the paste thus obtained is applied on the skin to treat the skin problems. The filtered decoction is also taken orally to cure stomach disorders
<b>MORACEAE</b>			
<i>Ficus capensis</i> Thunb. (RBB 333)	Ikhwane (X); wild fig (E)	Leaves	Paste obtained from the ground leaves is applied on the skin like a lotion to get rid of pimples and other skin problems

Table 1. Contd.

<b>MYRSINACEAE</b>			
<i>Embellia krausii</i> Harv. (RBB 137)	Imboaisa (X)	Leaves	Fresh leaves are crushed on a grinding stone and boiled in water. The filtered decoction is used as an emetic to get rid of swallowed poison
<b>POACEAE</b>			
<i>Andropogon gayanus</i> Kunt (RBB 62)	Isiqungu (X)	Roots and leaves	The roots and leaves are crushed and mixed with warm water. The mixture is filtered using a clean cloth and the infusion is taken orally as an effective remedy for diarrhea
<b>RHIZOPHORACEAE</b>			
<i>Cassipourea flanaganii</i> Alston (RBB 358)	Umemezi (X)	Bark	Bark is crushed on a grinding stone with small quantity of water. The paste thus prepared is smeared on face to protect sun burn
<b>SOLANACEAE</b>			
<i>Datura stramonium</i> L. (RBB 128)	Ingqanga-ngqanga (X)	Fruits and leaves	Fresh fruits are eaten in small quantities to relieve constipation. Leaves are boiled, cooled and filtered. The decoction is taken twice a day to cure asthma and bronchitis
<b>STERCULIACEAE</b>			
<i>Hermannia depressa</i> N.E.B (RBB 112)	Phate ea ngaka (X)	Leaves	The leaves are boiled in water and the filtered infusion is taken orally for the effective treatment of cough and whooping coughs
<b>THYMELAEACEAE</b>			
<i>Lasiosiphon capitatus</i> Burtt Davy (RBB 350)	Umdlavuzi (X)	Bark	Fresh or dry bark is grated and boiled in water. The filtered half a cup decoction is taken two times a day for detoxification

fewer misunderstandings.

*Cannabis sativa* is a well-known plant as a recreational drug all over the world. But among the Xhosa people it is known to heal whooping coughs and asthma; the fresh leaves are mixed with brandy and taken orally. The leaves are crushed and used as fumitory to reduce anxiety. The decoction prepared from the leaves is also consumed to get relief from chronic pain. The medicinal uses of this plant have also been recorded by Rauf et al. (2012) in Pakistan.

The present study has revealed that the current traditional medicinal practices of the Xhosa people can be divided under four categories:

1. Common remedies not followed by rituals, mostly practiced by common people.
2. Considered to be family secrets handed down from generation to generation-Herbalists.
3. Traditional doctors who are in touch with their ancestors and who divine the cause of disease as misfortunes or who acquire the knowledge of

medicinal plants and their application from the ancestors in their dreams (called diviners known as 'amgaqirha' in the Xhosa language). They are generally women (Hutchings, 1989).

4. Traditional doctors who physically diagnose, prescribe and sell the medicine for various diseases (true traditional doctors known as 'amaxwhele' in the Xhosa language). They do not divine the causes of diseases (Hutchings, 1989).

Ethnobotanical work is intended to bring to light

the traditional knowledge about plant use and its cultural significance, in order to lead to better ways of natural resource exploitation or to propose their management according to their needs and anthropological characters of the human groups over which it is planned to intercede, as well as to the elements present in their environment (Zamora-Martinez and de Pascual Pola, 1992). The plant kingdom represents a source of food and medicine. Therefore, with the tendency in modern medicine to assimilate and re-assimilate natural remedies in common practice, under various forms, the potential of regional flora becomes very important (De Feo et al., 1992). The Xhosa people claim a high percentage of efficacy for plant remedies though, further scientific and clinical studies are required to confirm this information.

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