A floristic survey of Bidar district was made to assess the medicinal value of herbaceous flora. It is observed that local people practice traditional system of medicine in their healthcare system. About 30 plant species, belonging to 29 genera and 20 families largely used as medicine by tribals and local people of Bidar have been enumerated in this paper. These plants contain valuable chemical substances and are employed in the treatment of various ailments. The present work aims at documentation of traditional uses of the local medicinal plants for the benefit of mankind and further scientific investigation.

Keywords: Folk medicine, Herbal remedies, Karnataka, Tribals, Medicinal plants, Bidar district, Ethnomedicine, Lambanis tribe

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Since early times, man has used plants for medicine, fuel, timber and food. The traditional knowledge on the use of plants as medicine is well documented\(^1\)\(^5\). The interest in ethnobotanical research has increased considerably for the last couple of decades. Many scholars directed towards the valorization of ethnobotanical patrimony because of the belief that such remedies may be useful sources for new therapeutic products\(^4\)\(^5\). About 1/3 population of Bidar district depends on traditional medicine as it is commonly available and does not cause any side effects at the optimum level. Since, no such detailed studies reported so far from the district, the present report is communicated.

Methodology

Bidar district situated in the Northeastern part of Karnataka covering an area of 5448 sq km within 17°35’ and 18°25’N latitude and 76°42’ and 77°39’E longitude (Fig. 1). It has very rich heritage of herbal medicinal plants. During the year 2003-04, several field trips were undertaken to different villages in Bidar district, viz. Sustapur, Yerandi, Rajeshwar, Mudubi, Pratapur (Basavakalyan taluka), Manna-E-Khelli, Chittaguppa, Shedol, Borampalli (Humnabad taluka), Bhatambra, Saigaon, Mehekher, Dhannur tanda (Bhaliki taluka), Khanapur, Nidavancha, Bagdal tanda, Kadvad, Bavagi, (Bidar taluka) and Sangam, Badalgoan, Santapur (Aurad taluka).

The ethnic groups like Halakki, Kadukurba, Lambani, etc. are scattered in both village and forest areas of this district. The Lambanis are also called, as Banjara and their settlement are known as Tanda. The tribal head called as Vaidya or Nayaka are generally aware of uses and therapeutic importance of plants. Similarly, Halakki and Kadukurba are also very much aware about therapeutic use of medicinal plants.

Four people in each village, who are the experts or practitioners, were interviewed and the information on the use of medicinal plants was recorded (Figs 2-6). These plant species were identified and the Herbarium specimens were deposited in the Department of Botany, Gulbarga University, Gulbarga\(^6\)\(^7\) (Figs 7-10).

Results

Information on 30 plant species, belong to 29 genera and 20 families, used commonly as remedies for various diseases are arranged in alphabetical order of their scientific name along with family, followed by local names (Kannada and Hindi languages), plant parts, mode of administration, dose and duration of treatment are enumerated below:
**Abrus precatorius** Linn., (Fabaceae), Kannada- *Guluganju*, Hindi-*Gunchi*
Uses: For voice clearance, 4-5 leaves are chewed. Root decoction is taken internally as a remedy for swelling of legs and hands.

**Acalypha indica** Linn., (Euphorbiaceae), Kannada - *Gundayela tappalu*, Hindi – *Goola patteka bale*
Uses: Extract of leaves (one cup) is taken once in a day for two days to cure stomach pain and cough.

**Aloe vera** (L.) N.Burm, (Liliaceae), Kannada - *Kumari*, Hindi-*Koaper*
Uses: Fresh leaves paste with crushed turmeric is taken internally thrice a day to reduce body heat. Fresh leaves paste with sugar is taken internally once a day for three days to cure chest pain. Fresh leaves paste with table salt is taken internally as laxative.

**Andrographis paniculata** Nees., (Acanthaceae), Kannada - *Nelabevu*, Hindi-*Bhoyalimb*
Uses: For stomach pain, two pills made from a handful of leaves crushed with sugar, are taken internally every day for two days. Fresh leaves paste with table salt is taken internally as a remedy for snakebite and scorpion bite.

**Aristolochia indica** Linn., (Aristolochiaceae), Kannada - *Beelieshwari balli*, Hindi-*Safed ishri*
Uses: Fresh or shade dried leaves are crushed with *Piper nigrum* and made into pills. Two pills taken internally twice a day as a remedy for snakebite and scorpion bite.

**Asparagus racemosus** Wild., (Liliaceae), Kannada - *Shatavari*, Hindi-*Satvar*
Uses: For Galactagogue and seminal weakness, two teaspoonful of root crushed with sugar is taken once a day for 15 days.

**Buchanania lanzan** Spreng., (Anacardiaceae), Kannada - *Nurkala*, Hindi-*Chironji*
Uses: Two teaspoonful extract of fresh leaves and stem bark (in equal proportion) crushed and mixed in a cup of milk is taken internally once in a day for 7 days to cure temporary male sterility and also to purify blood.

**Butea monosperma** Roxb., (Fabaceae), Kannada - *Muttulugida*, Hindi-*Palas*
Uses: For menorrhagia and leucorrhoea, One teaspoonful powder of stem bark crushed with *Cuminum cyminum* mixed in water is taken internally once in a day for 4-5 days.

**Calotropis procera** R.Br., (Asclepiadaceae), Kannada – *Yekkegida*, Hindi-*Ruchik*
Uses: One teaspoonful of flower powder along with *Piper nigrum* powder mixed in a glass of water is taken internally daily twice for two days to cure stomach pain. For dog bite, 2-3 drops of plant latex is applied at the affected parts.

**Cassia auriculata** Linn., (Fabaceae), Kannada – *Avaregida*, Hindi-*Abatalaval*
Uses: Ten gm young leaves crushed in curd are taken internally for two days to keep body cool.

**Cassia fistula** Linn., (Fabaceae), Kannada– *Kakkegida*, Hindi-*Amaltas*
Uses: For snakebite, one teaspoonful fruit powder is taken internally. For breast cancer and wounds, paste of fruit crushed in water is applied at the affected parts till it cures.

*Casuarina equisetifolia* Linn., (Casuarinaceae), Kannada – *Kaijodi*, Hindi- *Haathjodi*

Uses: The whole plant is crushed and the paste is applied at the affected parts for four days, as a remedy for bone fracture.

*Cocculus hirsutus* Linn., (Menispermaceae), Kannada - *Dagadagya balli*, Hindi-Patalgaradi bale

Uses: For spermatorrhoea, shade dried whole plant is powdered, one teaspoonful powder mixed in a glass of water is taken internally, daily, once for three days.

*Commelina banghalensis* Linn., (Commelinaceae), Kannada-*Eagali*, Hindi–*Eagali*

Uses: For wounds and scabies, paste of whole plant is applied at the affected parts till it cures.

*Crotalaria prostrata* Roxb., (Fabaceae), Kannada – *Beeli khulkhuli*, Hindi- *Safed khulukhula*

Uses: For leucorrhoea, the whole plant crushed in buttermilk is taken internally, one cup every day for three days. For snakebite, 10 gm fresh leaves crushed in water is taken internally. Paste of whole plant is applied all over the body as a remedy for improper circulation of blood.

*Cyperus rotundus* Linn., (Cyperaceae), Kannada -*Jaqgaddi*, Hindi-*Jackgadda*

Uses: Paste of tuber prepared along with 2-3 betel leaves is applied for 3-4 days on the affected parts as a remedy for psoriasis (*gajakarni*).

*Dendrocalamus strictus* Roxb.,(Poaceae), Kannada - *Beederu*, Hindi-*Yelu ka zeda*

Uses: For mouth ulcers, crushed leaves are taken internally, and a paste is applied on the affected parts till it cures.

*Dolichandrone falcata* Seem., (Bignoniaceae), Kannada - *Ooddimara*

Uses: For menorrhagia and leucorrhoea, one glass extract of stem bark is taken internally once a day for three days.

*Enicostema axillare* Lam., (Gentianaceae), Kannada- *Nayitappalu*, Hindi-*Nayika patta*

Uses: For blood purification, one glass extract of fresh leaves is taken internally every day for 15 days.

*Gloriosa superba* Linn., (Liliaceae), Kannada- *Agnishika*, Hindi-*Bacchanaga*

Uses: For piles, paste prepared from tuber and zinger in equal proportion is applied at affected parts for 3 days. For skin diseases, the tuber crushed and the paste is applied at the affected parts once every two days till it cures.

*Gymnema sylvestre* R.Br., (Asclepiadaceae), Kannada-*Kodapathre*, Hindi-*Kodapatri*

Uses: For jaundice, the whole plant crushed and made into pills. Pills are taken internally every day one pill for 7 days. For diabetes, the whole plant crushed and made into pills. Everyday one pill is taken internally for 21 days. For gastric trouble, 5-6 leaves crushed in water and the extract is taken internally once a day after meals till it cures.

*Hibiscus rosa-sinensis* Linn., (Malvaceae), Kannada - *Dasavala*, Hindi-*Jasum*

Uses: Handful of leaves and flowers crushed in ghee and the paste is applied over the head part where hairs lost as a remedy for reformation of hairs.

*Hyptis suaveolens* Linn., (Lamiaceae), Kannada- *Manjpatre*, Hindi- *Beejabandh*

Uses: A spoonful of 10 gm seeds extract is taken internally once a day for 3 days as a remedy for menorrhagia, leucorrhoea and temporary male sterility.

*Kirganelia reticulate* Poir., (Euphorbiaceae), Kannada- *Huligida*

Uses: For jaundice, handful of fresh leaves crushed and made into pills, one pill is taken internally in a day during morning for 7 days.

*Leonitis nepetaefolia* Linn., (Lamiaceae); Kannada- *Lamani bondu*, Hindi- *Bond ka zada*

Uses: The whole plant is roasted and crushed; the paste is applied at the affected parts till it cures as a remedy for wounds, head sores and dark patches.

*Maytenus senegalensis* Lam., (Celastraceae), Kannada - *Togasigida*

Uses: For leucorrhoea and menorrhagia, one cup root extract is taken once a day for 3-4 days.

*Momordica cymbalaria* Frenzl. Ex Naudin, (Cucurbitaceae), Kannada- *Karchi kayi*, Hindi-*Karela*

Uses: One teaspoonful of crushed 10 gm whole plant is taken daily for 15 days as a remedy for diabetes.

*Tridax procumbens* Linn., (Asteraceae), Kannada – *Gabbu sanna savanthi*, Hindi-*Peela kach*

Uses: For kidney stones and heel cracking, 10 gm fresh leaves are crushed and a cup of extract is taken once a day for 3 days.

*Tylophora indica* (N.Burm) Merr., (Asclepiadaceae), Kannada.- *Adumuttada balli,*
Uses: For snakebite, handful of leaves is crushed in urine of snakebite person and the extract (2-3 drops) is passed through the nostrils. For food poison, extract of five leaves is taken; initially vomiting occurs and later gives relief.

*Vitex negundo* Linn., (Verbenaceae), Kannada.- Lakkigida, Hindi- Neergundi

Uses: For Night blindness, fresh leaves crushed along with salt and the extract is taken internally once a day for 7 days.

**Discussion**

This study revealed a considerable medicinal plants diversity of Bidar district. Data were compared with available literature in different regions of India on medicinal plants 8-12 and was found that many of the usage listed are not recorded earlier. In Karnataka, ethnobotanical studies on medicinal plants were conducted in Kodagu, Tumkur, and Uttar Kannada districts13-17. However, in Bidar district, no detailed studies on ethnomedicine have been conducted. The formulation and standardization of these effective phytomedicine should be encouraged for their sustainable uses. The data accrued is expected to serve as a useful tool for the development of herbal drug industries to improve tribal and rural economy of the region. The plants are used either singly or in combination with others. Same information pertaining to a particular remedy from different localities or groups of informants reflects the accuracy and authenticity of the medicines. Further, scientific assessment of these medicines on phytochemistry, biological activity and clinical studies are, however, necessary. This may provide a lead in the development of drugs to be used in modern system of medicine.

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**References**