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IMPORTANT ECONOMIC PLANTS OF SAVANDURGA RESERVE FORESTS

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ABSTRACT

Surveys of the economic plants were made in the Savandurga Reserve Forest of Magadi Taluk. It was found that 85 species of 44 families have economic use of which 60 species have medicinal value, 29 plants are used as timber/agricultural implements, 18 species are used as food (edible), 11 plants are used as fibre, 4 plants are used as green manure, 4 plants as source of dye, 3 plants are used as source of tannin. Data on the distribution showed that most of the species are common in distribution. Also data on the flowering and fruiting showed that most of the species flowered in the month of August and fruited in the month of January.

Keywords : Savandurga Economic Plants, Dry deciduous forests.

Introduction

Savandurga state forest situated about 56 km. west of Bangalore and has been notified as since 1884 and represents the dry deciduous scrub type of forests. The state forest occupied an area of 2664 hectares and huge rocky hills and boulders, which are strewn along the valleys, expose the landscape. Altitude range between 800-1025m MSL. Reportedly these forests have been in use by the people while much of the forests are degraded; there are still patches where the original vegetation of their forest type can be fully re-established given adequate and prolonged protection. Deciduous species, which thrive

with drier climates, predominate. Rainfall is low averaging around 800mm per year and rainy seasons extend from May to October. The sandy soil derived from granitic genesis does not retain moisture for long time resulting in stunted trees of the scrub type can be seen. The earliest accounts describe the track as covered with forest forming a part of great Dandakaranya. The different kinds of the trees like *Ficus bengalensis*, *Mangifera indica*, *Tamarindus indica*, *Bassia latifolia*, *Artocarpus heterophyllum* all grow well together. Communities of *Acacia*, *Bambusa*, *Feronia* *corchantum* and *Santalum alba* trees which were once common in these forests have now been

disappearing gradually due to high exploitation. Some floristic works have been done by Razi and Govindu (1952) and Ramaswami and Razi (1967), (1973). Several plants which are used as medicine, timber, agricultural implements, dye, food, fibre, tannin, manure are known to occur in this forest area and hence the above perspective study was undertaken to list important economic plants of Savandurga area.

Materials and method

Savandurga state forest located between Lat. 12°15' N and 77°20'E. Quadrants of size 20 x 20m were laid randomly in the forest area to enumerate plant species, which include trees, shrubs, herbs, climbers and epiphytes. Information on economic use were collected by consulting people in the villages around periphery of the forest and also from gathered books, journals, etc. Based on this information important economic plants are listed. Data on flowering and fruiting were collected by frequent field visits (once in month) throughout the year and preserved in the form of herbarium specimen at Dept. of Botany, UAS, GKVK, Bangalore.

Results

Studies revealed that the forest is of perfectly dry deciduous type. After thoroughly analyzing the forest species for important economic useful plants it was found that of the 85 plant species belonging to 44 families listed of which 60 plants are used as Medicine (M), 29 are used as Timber/Agricultural implements (T/Ag), 18 plants are Edible (Edi), 11 plants are used as Fibre (F), 4 plants are used as Green Manure (GM), 4 plants are used as dye source (D), 3 plants are used as source of Tannins (F), (Fig. 1). Also data on the distribution of economic plants showed most of them are common in their distribution. Among the economic plants trees are dominant (40), shrubs and climbers (16), followed by herbs (13). Data on flowering showed that most of the species flowered in August and least flowered in June. Fruiting is more in January and least in September (Fig. 2). Trees set flower during onset of summer, during this period trees shed their leaves and pave the way for new flush.

Discussion

Savandurga state forest is a dry deciduous forest, our studies recorded 85 economic plant species

belonging to 44 families. Razi and Govindu (1952) enumerated plant associations of Savandurga in the month of October and February and mentioned vegetation to be of monsoon rain forest but are without its storied vegetation. Dominant plants in the forest area are *Terminalia bellarica*, *Emblica officinalis*, *Terminalia tomentosa*, *Wrightia tinctoria*, *Schleichera oleosa*, *Ficus bengalensis*, *Diospyros montana*, *Albizia odoratissima*, etc. Ramaswami and Razi (1967) listed 332 species of all forms while studying vegetation of Savandurga reserve forests. Our studies in Savandurga on economic plants revealed 60 plants used as medicine (M), 29 plants are used as Timber/Agricultural implements (T/Ag), 18 plants are used as food (Edi), 11 plants are used as fibre (F), 4 plants are used as green manure (GM), 4 plants as source of dye (D), 3 plants are used as source of tannins (T). Keshavamurthy *et al.* (1982) listed 50 medicinal plants while studying vegetation of Kanakapura state forest of which 23 are alkaloid yielding, 14 are tannin, 19 are steroid yielding, 11 are saponin, 9 essential oil, 13 yield resin. Dasappa *et al.* (1992) while studying vegetation of Timmalapura range forest near Madugiri mentioned 60.7% are used for remedies (medicinal), 25% for timber and 19.2% as food value. Reddy and Venkataraju (1999) reported several plants, which are used as Ethnoveterinary plants in tribal dominated areas of Anantapur district. Seetharam *et al.* (1998) reported medicinal and ethnoveterinary plants from dry deciduous forests of Bidar district. Forests of Savandurga in general appeared to be degraded because of effect of anthropogenic pressures like fire, human habitation, grazing and land use planning etc., in spite of these we have got good source of economic plants. Also site of quality and nutrient status of soil indicated the forests if given adequate protection from biotic pressures, can be improved and conserved for indigenous plant species of economic importance which will be of great use for local villages who depend on forest for their sustenance.

References

1. Dasappa, N. Swami Rao and C. Nagarajaiah (1992). Inventory and Quantitative estimation of indigenous uses – A case for Conservation in

- Timmalapura Range Forest, Myforest, 28(1); 63-78.
2. Keshavamurthy, K. R., S. N. Yoganarasimhan, K. Vasudeva Nair (1982). Medico Botany of Karnataka II (Observations of Plants from Kanakapura Range Forests, Bangalore District), Myforest, 18(2); 43-52.
 3. Ramaswamy, S. V. and B. A. Razi (1967). The study of vegetation of Savandurga, *Bull. Botan. Soc., Bengal*, 21(2); 87-98.
 4. Ramaswamy, S. V. and B. A. Razi (1973). Flora of Bangalore District, Prasara, *University of Mysore, Mysore*.
 5. Razi B. A. and Govindu, H. C. (1952). Some plant associations of Savandurga, *J. Mysore University*, 12(9); 103-108.
 6. Reddy, K. N. and Venkata Raju, R. R. (1999). Plants in Ethnoveterinary practices in Anantpur District, Andhra Pradesh, *J. Eco. and Taxon. Bot.*, 23(2); 347-357.
 7. Seetharam, Y. N., C. Haleshi and Vijay (1998). Medicinal Plants of North-Eastern Karnataka and their status, *Myforest*, 32(2); 767-772.
 8. Seetharam, Y. N., Vijay *et al.* (1998). Folk and Ethnoveterinary Medicine of Bidar District. *Myforest*, 34(3); 917-919.

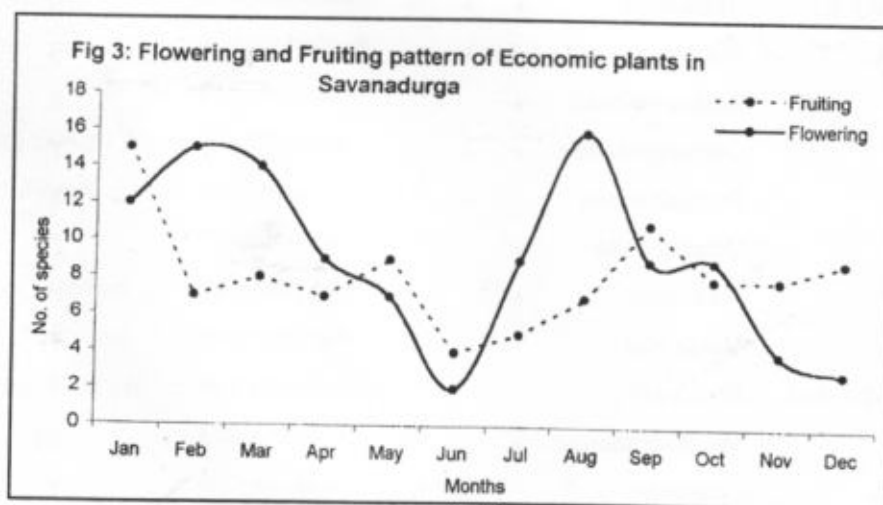
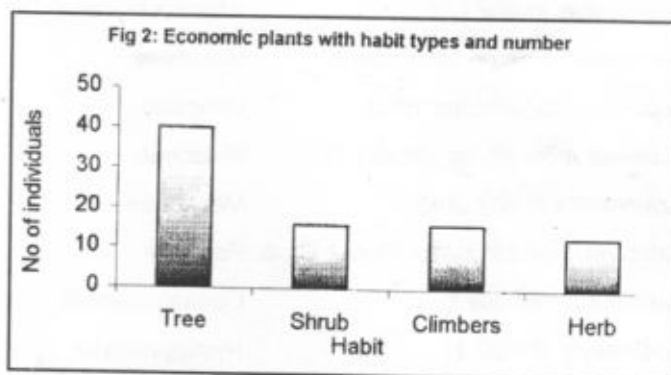
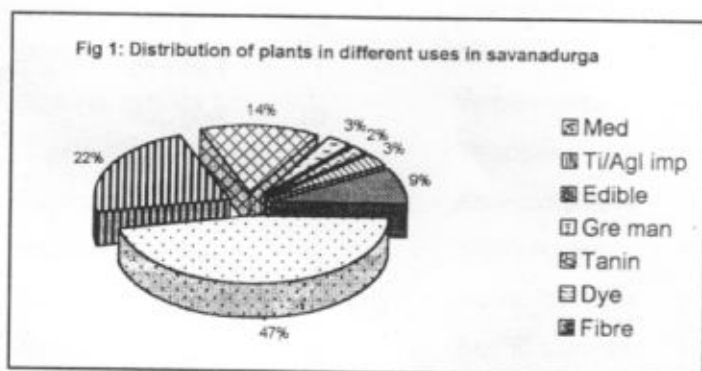


Table – List of economic plants and their uses recorded in Savandurga Reserve Forest

Species Name	Family	M	T/A	I	E	Gm	T	D	F	Habit	Flo/Fru	Dist.
<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	+							+	S	Jan-Oct	f
<i>Acacia concinna</i> (Willd.) DC.	Mimosaceae	+								Cl	Feb-Apr	c
<i>Acalypha indica</i> L.	Euphorbiaceae	+								H	Sep-Dec	o
<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	+								T	Apr-May	f
<i>Aerva lanata</i> (L.) Juss.	Amaranthaceae	+								H	Aug-Mar	c
<i>Aglaia elaeagnoides</i> (Juss.) Benth.	Meliaceae		+							T	Jul-Jul	o
<i>Ailanthus excelsa</i> Roxb.	Simaroubaceae		+			+				T	Feb-Oct	c
<i>Alangium salvifolium</i> (L.f.) Wang.	Alangiaceae		+							T	Feb-May	f
<i>Albizia lebbek</i> (L.) Bth.	Fabaceae		+							T	Jan-Aug	f
<i>Allophylus cobbe</i> (L.) Raeusch.	Sapindaceae	+								S	Jul-Jul	o
<i>Anogeissus latifolia</i> (Roxb.) Wall.	Combretaceae		+							T	Aug-Jan	c
<i>Argyreia cuneata</i> Ker-Gawl.	Convolvulaceae	+								S	Aug-Jan	c
<i>Aristolochia indica</i> L.	Aristolochiaceae	+								Cl	Aug-Jan	c
<i>Artocarpus heterophyllus</i> Lamk.	Moraceae				+					T	Feb-Feb	c
<i>Asparagus racemosus</i> Willd.	Liliaceae	+								Cl	Aug-Jan	c
<i>Atalantia monophylla</i> (Roxb.) DC.	Rutaceae	+	+							S	Oct-Feb	r
<i>Azadirachta indica</i> Juss.	Meliaceae	+	+							T	Jan-Jul	c
<i>Bambusa arundanaceae</i> (Retz.) Roxb.	Poaceae		+			+				S	Infrequent	c
<i>Bauhinia racemosa</i> L.	Caesalpinaceae	+							+	T	Feb-Mar	f
<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	+								H	May-Jul	c
<i>Boswellia serrata</i> Coleb.	Burserraceae	+	+		+					T	Jan-Mar	f
<i>Bridelia retusa</i> Spreng.	Euphorbiaceae		+							T	Apr-Oct	f
<i>Canthium dicoccum</i> (Gaertn.) T.	Rubiaceae	+	+							S	Sep-Feb	f
<i>Canthium parviflorum</i> Lamk.	Rubiaceae		+		+				+	S	Apr-Jan	f
<i>Capparis sepiaria</i> L.	Capparidaceae	+								S	Apr-Sep	f
<i>Cassia fistula</i> L.	Caesalpinaceae	+	+				+			T	May-Sep	c
<i>Ceiba pentandra</i> Auct.	Bombacaceae		+						+	T	Mar-Apr	c
<i>Celastrus paniculata</i> Willd.	Celastraceae	+								Cl	Feb-Sep	r
<i>Centella asiatica</i> (L.) Urb.	Apiaceae	+								H	Feb-Apr	c
<i>Chloroxylon sweitaneia</i> DC.	Meliaceae	+	+							T	Apr-Apr	f
<i>Coclospermum religiosum</i> (L.) Alst.	Bixaceae								+	T	Jan-Jun	c
<i>Cyclea peltata</i> Hk. & Th.	Menispemaceae	+								Cl	Dec-Jan	r
<i>Dalbergia lanceolaria</i> Roxb.	Fabaceae		+							T	Mar-May	o
<i>Datura straumonium</i> L.	Solanaceae	+								S	Apr-Nov	f

Species Name	Family	M	T/A	I	E	Gm	T	D	F	Habit	Flo/Fru	Dist.
<i>Decalepis hamiltonii</i> W.&A.	Asclepiadaceae	+			+					Cl	Apr-Jul	f
<i>Dioscorea bulbifera</i> L.	Dioscoreaceae	+			+					Cl	Aug-Nov	f
<i>Dioscorea oppositifolia</i> L.	Dioscoriaceae	+			+					Cl	Aug-Nov	f
<i>Dioscorea pentaphylla</i> Linn.	Dioscoriaceae	+			+					Cl	Aug-Nov	f
<i>Diospyros montana</i> Roxb.	Ebenaceae		+							T	Sep-Mar	c
<i>Dregea volubilis</i> (L.F.) Bth.	Acanthaceae	+				+				H	Mar-Nov	o
<i>Embelia basal</i> DC.	Myrsiniaceae	+								S	Nov-Apr	f
<i>Emblia officinalis</i> Gaertn.	Euphorbiaceae	+			+					T	Dec-Aug	c
<i>Euphorbia antiquorum</i> L.	Euphorbiaceae	+								S	Aug-Jan	o
<i>Feronia elephantarum</i> Corr.	Rutaceae	+	+				+			T	Mar-Apr	c
<i>Ficus benghalensis</i> L.	Moraceae	+				+				T	Feb-Jan	a
<i>Ficus tsiela</i> Ham.	Moraceae									T	Mar-Jun	o
<i>Firmiania colorata</i> R. Br.	Sterculiaceae				+				+	T	Mar-Nov	f
<i>Givotia rottleriformis</i> Griff.	Euphorbiaceae		+							T	Mar-Jul	f
<i>Gloriosa superba</i> L.	Liliaceae	+								H	Aug-Oct	f
<i>Gmelina asiatica</i> L.	Verbenaceae	+			+					S	Feb-Aug	c
<i>Grewia tiliaefolia</i> Vahl.	Tiliaceae		+		+					T	Aug-Sep	f
<i>Gymnema sylvestre</i> (Retz.) R. Br.	Asclepiadaceae	+								Cl	Jul-Feb	c
<i>Helicteres isora</i> L.	Sterculiaceae	+							+	S	Sep-Feb	f
<i>Hemidesmus indicus</i> (L.) Schultz.	Asclepiadaceae	+								Cl	Jul-Jan	c
<i>Jatropha curcas</i> L.	Euphorbiaceae	+							+	S	Aug-Jan	o
<i>Lobelia aisinoides</i> Lamk.	Solanaceae	+								H	Oct-Apr	c
<i>Mallotus albus</i> auct.	Euphorbiaceae		+							T	Year	c
<i>Mallotus philippensis</i> (Lamk.) Muell.	Euphorbiaceae		+						+	T	Aug-Mar	o
<i>Mangifera indica</i> L.	Anacardiaceae				+					T	Feb-Apr	c
<i>Passiflora foetida</i> L.	Passifloraceae	+			+					Cl	Mar-Oct	r
<i>Peristrophe bicalyculata</i> (Retz.) Nees.	Acanthaceae								+	H	Oct-Jan	c
<i>Pongamia pinnata</i> (L.) Pierre	Fabaceae	+								T	Mar-Dec	c
<i>Santalum album</i> L.	Santalaceae	+								T	Jun-Feb	c
<i>Schleichera oleosa</i> (Lour.) Oken.	Sapindaceae		+							T	Feb-May	o
<i>Scutia circumscissa</i> (L.F.) Druce.	Rhamnaceae	+			+					S	Nov-Aug	c
<i>Secamone emetica</i> (Retz.) Schutt.	Asclepiadaceae	+								Cl	Aug-Mar	f
<i>Sida acuta</i> Burm.	Malvaceae	+							+	H	Aug-Feb	c
<i>Solanum nigrum</i> L.	Solanaceae	+			+					H	Year	c
<i>Spilanthes acmella</i> Cl.	Asteraceae	+								H	Sep-Dec	c

Species Name	Family	M	T/A	I	E	Gm	T	D	F	Habit	Flo/Fru	Dist.
<i>Sterculia urens</i> Roxb.	Sterculiaceae		+		+				+	T	Nov-Dec	c
<i>Streblus asper</i> Lour.	Moraceae	+	+		+					T	Feb-Mar	c
<i>Strychnous potaturum</i> L.f.	Loganiaceae	+								T	May-Feb	f
<i>Syzygium cumini</i> (L.) Skeels.	Myrtaceae	+	+							T	Feb-Sep	c
<i>Tamarindus indicus</i> L.	Caesalpinaceae	+					+			T	Feb-Nov	a
<i>Terminalia arjuna</i> (Roxb.exDC.) W.&A.	Combretaceae	+	+							T	Apr-Jun	o
<i>Terminalia bellerica</i> (Gaertn.) Roxb.	Combretaceae	+						+		T	Mar-Aug	c
<i>Tinospora cordifolia</i> Miers.	Menispermaceae	+								Cl	Sep-Apr	f
<i>Tribullus terrestris</i> L.	Zygophyllaceae	+								H	Aug-Mar	c
<i>Tylophora asthamatica</i> W.&A.	Asclepiadaceae	+							+	Cl	May-Mar	c
<i>Ventilago madraspatana</i> Gaertn.	Rhamnaceae	+						+		Cl	Dec-May	c
<i>Vitex altissima</i> L.F.	Verbenaceae		+							T	Mar-May	c
<i>Withania somnifera</i> (L.) Dunal.	Solanaceae	+								H	Jan-Dec	c
<i>Wrightia tinctoria</i> R. Br.	Apocyanaceae	+	+							T	Mar-Dec	c
<i>Ziziphus jujuba</i> Lamk.	Rhamnaceae	+			+					T	Jul-Oct	c
<i>Ziziphus xylopyrus</i> (Retz.) Willd.	Rhamnaceae									S	May-Oct	c

M = Medicinal; T/Ag = Timber/Agril. implements; E = Edible; F = Fibre; T = Tannin; Gm = Green manure; D = Dye; H = Herb; T = Tree; S = Shrub; Cl = Climber, f = frequent; c = common; o = occasional; r = rare; a = abundant.

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