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TO IDENTIFY AND IMPROVE THE USE OF MEDICINAL PLANTS OF SOUTHERN BALOCHISTAN TURBAT (KECH)

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Abstract:

Balochistan is the native home of many medicianl plants. Local people use thses medicinal plants cure of different disesase. Current reserch work descibes the knowledge in traditional practices of plants identified among the peoples of district turbat, balochistan pakistan. Information was collected from 50 informants. 38 informants were female and 12 were male. The informant was grouped into four distinctive age groups. Number of male herbalist were 12 from age 45 between 65 and number of female herbalist were 38 from age 38 to 70. Medicinal plant were used for different diseases from which 14 were used for diseases of git, 11 plants were used for anti-inflammatory and analgesic effects, 5 plants are used due to anti microbial effects, 4 plants were used for different blood disease, 3 plants were used in fever, 3 plants for skin disease, 2 plants for CNS effects and 2 used in liver disease, only one is in cough.

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INTRODUCTION:

In early days, in exploration for treatment of their disease, people's use natural medicinal plants obtain from different areas. [1] Till the introduction of modern chemistry of medicines in after 15th century, naturally plants were used for the both prophylaxis and healing. [2] According to the Chinese more then 360 drugs (their dried parts), numerous of them are still use now a days (ephedra, cinnamon, jimson, ginseng, gentian, *Podophyllum*, *Theae-folium*, camphor and *Rhei-rhisoma*).[3-4] various flavour plants also used still now a days originate from Asia (clove, nutmeg, pepper, etc). [5] Book Ebers Papyrus , circa in 1550 Before Christ , mention a group of more then 790 proscriptions related to 700 or more plant genus and medicinal plants used for treatment of several pathogenic conditions such as, common centaury, juniper, coriander, willow, fig, onion, garlic, senna, aloe, castor oil plant, pomegranate, etc.[6,7] curing different ritual accompany a treatment, different aromatic medicinal plants were used (incense and myrtle). [8] In epics (The Iliad and The Odysseys) written by homer, created circa in 800 Before Christ, more then 62 plant genus from the Minoan, Egyptian Assyrian and Mycenaean therapy by drugs were referred to, few plants out of them are named after their legendary characters from these epics. [9] Herodotus (500 Before Christ) referred to plant of castor oil, garlic and sweet-smelling hellebore, and Pythagoras referred to, Scilla maritima (common name sea onion), mustard and cabbage. The Hippocrates (459–370 Before Christ) work on more then 300 medicinal plants and classify them on their physiological action. [10,11] Botanical science is introduced by Theophrast (371-287 Before Christ) in his two different books "De Historia Plantarium" The Plant History and "De Causis Plantarium" The Plant Etiology. In his above books, the Theophrast classify more than 500 medicinal plants known that time.[12,13] Among many others, Theophrast referred to monkshood, fragrant and false hellebore, pomegranate, mint, cardamom, iris rhizome, cinnamon etc. For the explanation of the toxic action of plants, Theophrast introduced the important aspect for humans to become used to them by a steady and regular increase of the doses. [14,15] The book "De re medica" written by Celsus a medical writer (25 Before Christ 50 AD) quoted around 250 medicinal plants (false hellebore, cardamom, the star gentian, cinnamon, pepper, poppy, flax, henbane, aloe, etc). [16]

Utilization of shrubbery (Plants) as a resource of drug has been seen and is a significant constituent of the health care system was documented from stone ages. Conventional Unani medicine is an element of our country Pakistan. Pakistan has a wealth of 57 thousands variety of remedial plants. More than 350 plant species are common. Among these plants there are close to 456 medicinal plants, which are utilized to synthesis more than 350 conventional formulations to treat various ailments.[16]

Turbat is the Divisional head office of the Makran and has developed significantly in new days to become a vital data processing centre. Turbat is district of Balochistan, Pakistan. The municipality is the managerial centre of Kech and Turbat, the municipality contains only one U.C. Kech district has a hot & dry weather. Kech is classified as "hot summer and mild winter" temperature area. According to the weather of Turbat some plants are cultivated in summer and some other are cultivated in winter due to the hills covered with alluvial soils e.g.in Dasht and Nihing river.

METHODOLOGY:

Our study was conducted in southern area of Balochistan at headquarter of Makran division district Kech and district consists of five sub tehsils. During the study information was collected from Dasht, Mand, Zamuran, Bal, Tump, Hoshab and Turbat.

Geographical Overview

Kech district is one of the prevalent districts in the province; with the subsequent largest population after Quetta city, the principal city of Balochistan. When makran district was titled the rank of a division and was segregated into three districts, Kech was designated as a district, with its name as Turbat, on July 1, 1977. In 1994-95, the name of Turbat district was altered to its pervious name, i.e., Kech. The district is mentioned as Kech while Turbat town is its headquarters. The total area of Kech district encompasses 22,539 square km. The district assimilated of four tehsils, Turbat, Buleda, Dasht and Tump.

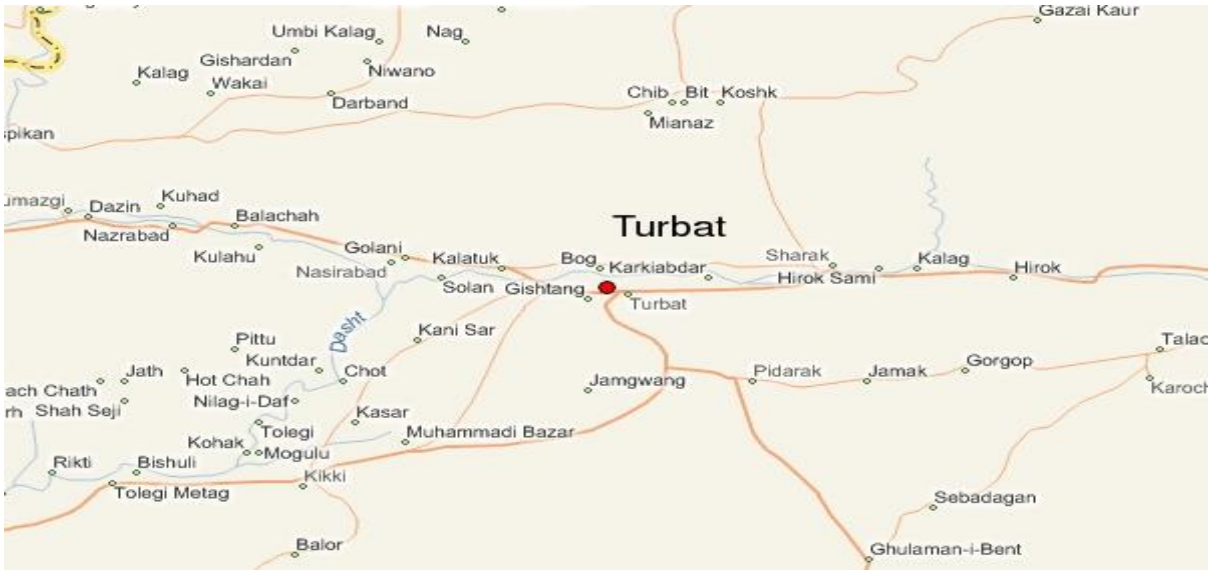
Socio-Economic Condition:

The land utilization statistics in terms of cultivated, cropped and irrigated areas is furnished. Accordingly, the district shares are about 2, 4 and 3 percent in the province respectively, while the share of geographical area is about 7 percent. Canal is the major source of irrigation with about 67 percent share in total irrigated area. Tube wells and spring/karezes are the also important sources of irrigation.

Major crops with a share of at least 5 percent of cropped area of the district with the largest share in the cropped area, dates is sown on 24092 hectares. This is followed by wheat (9972 hectares) and Kharif fodder (2860 hectares). The numbers and share of agricultural machinery reflect the extent of modernization of agriculture. Extremely low shares of agriculture machinery with respect to cropped areas portrays a gloomy picture. Only 11tractors are available per on thousand cropped area, while the share of other machinery is also insignificant.

Geo-Climate:

The type of weather of Kech is warm in summer and placid in winter. Summer season persists from March to November, with June being o the warmest month when mercury elevates upto 44 ^{0}C. Winter season persists from December to February with January as the chilliest month, acquiring greatest temperature almost at 10 ^{0}C. In winter the north and north-east wind (goreech) is freezing. The rainy season is frequently untentative and average rainfall is inadequate.



Field Work:
We started to focus on the ethano-medicinal plants of the mentioned area turbat (kech) since beginning of March 2015. We have selected the area due to lack of concentration on the medicinal plants their traditional uses, parts used and dosage form of the herbs of this area. The knowledge was gathered by free listening interviews with indiscriminately selected field interviews with main informants selected after free listening. The information regarding herbal medicines their local names and traditional uses of medicines from Turbat (Kech). The survey was chiefly focused on ethano-medicinal utilization of herbal plants in district Kech. The field interviews were conducted in local language (Makrani balochi). The ethano-medicinal information of medicinal plants their local names, location, part used, dosage form and uses were collected from 12 males and 38 females, age of 38 to 70 herbalist. Number of male herbalist were 12 from age 45 between 65 and number of female herbalist were 38 from age 38 to 70.

Colletion, Identification of Medicinal Plants:
Information about the therapeutic utilization of endemic plants villages and towns of Turbat city, Hoshab, Mand ,Tump, Dasht, Zamuran, Bal. were surveyed and collected plants during (2014-2016). We tried to collect the right plant after knowing the correct growing area of the specific medicinal plant. After collection we dried the plant under shade at room temperature.

RESULTS AND DISCUSSION:

Socio-demographic information of the inhabitants and documentation of medicinal plants
We met a sum of 50 informants. 38 informants were female and 12 were male. The informants were grouped into four distinctive age groups. Substantial quantities of informants were in the age group of 38 to 70 years. Number of male herbalist were 12 from age 45 between 65 and number of female herbalist were 38 from age 38 to 70 (table 1).

Parts Used of the Medicinal Plants
The most widely recognized plant parts used were their Leaves (29%), Seeds (17%), whole plant (14 %), Fruits and Milky Exudate (8% for each) Stem (6%), flowers, root and bark (2% for each) (Table 2).

Diversity of the Medicinal Plants
A total of 51 plant species belonging to 49 genera and out of which 14 were used in different diseases of GIT, 11 plants have anti-inflammatory, analgesic effects, some of them (6) used for other disease, 5 plants were used due to their anti microbial effects, 4 plants for different blood disease, 3 plants are used in fever, 3 plants for skin disease, 2 plants for CNS effects and 2 used in liver disease, only one is in cough (table 3).

Families of the Medicinal Plants
The most well known plant families as far as the quantity of species were the Fabaceae And Lamiaceae (4 species for each), Amaranthaceae And Asteraceae (3 species for each), Asclepidaceae, Boraginaceae, Compositae, Malvaceae, Mimosaceae, Poaceae, Rubiaceae, Xanthorrhoeacea And Zygophellacea (2 species for each), Apiaceae, Apocynaceae, Apressaceae, Bruseraceae, Cannabinaceae, Capparaceae, Chenopodiaceae, Euphorbiaceae, Lythraceae, Myrtaceae, Nyctaginaceae, Papaveraceae, Plantagaceae, Polygonaceae, Resedaceae, Rhamnaceae, Solanaceae, Tamaricaceae And Umbeliferae, (1 specie for each) (table 4).

Administration Routes And Dosage
In current study, it was clear that taking the medicinal plants orally was the most favored administration mode (83%), and 17% plant species were used topically. Several reports shows that, the most parts of the natural plants are liked to take orally and oral method of administration is the ruling over the topical method of administration [17, 18, 19, 20].

Types of Plants of the Medicinal Plants
The growth habit of plant reveals that, there were total 10 trees, 21 shrubs (both small and large), 18 herbs and 2 climbers. Thats why there is large medicinal plants are in shrub and herb form (table 5).

CONCLUSIONS:

The current study is report on ethanomedicinal uses of medicinal plants used in turbat district. Further research work is required on these mediicnal plants to authnticate the tradtional claim.

Table 1: Over all Plants detail

SCIENTIFIC NAME	FAMILY	LOCAL NAME	HABITAT	LIFE FORM	PART USED	THERAPEUTIC USES
ACACIA JACQUEMONTI	MIMOSEAE	CHIGIRD	TURBAT	PERENNIAL TREE	SHRUB	SNAKE BITE, SCORPION STUNG AND INDUCE SPONTANEOUS ABORTION
ALHAGI MAURORUM	FABECEAE	SHINZ	DASHT, MAND	PERENNIAL	STEM	DIABETES
ALOE BARBADENSIS	XANTHORRHOEACEA	KARZARWA	DASHT	EVERGREEN PERENNIAL	LEAVES	PAIN KILLER
ANETHUM GRAVEOLENS	UMBELIFERAE	GWATAG	TURBAT	ANNUAL HERB	DILL SEEDS	SEVERE PAIN
ARNEBIA DECUMBENS	BORANGINACEAE	RODEN	TURBAT	ANNUAL HERB	STEM	BURN,INFLAMMATION
ASPHODELUS TENUIFOLIUS	XANTHORRHOEACEAE	PIMALUK	DASHT, MAND	ANNUAL HERB	LEAVES	USED AS LAXATIVE IN CHILDREN
ATRIPLEX CANESCENS	AMARANTHACEAE	SORECHK	MAND	EVERGREEN PERENNIAL	FOUR-WINGED FRUITS	CHEST AND THROAT INFECTION
AZADIRACHTA INDICA	MELIACEAE	SHIRISH	ZAMURAN	EVERGREEN PERENNIAL	SEEDS, LEAVES	COOLING AGENT
BOERHAVIARUBICUNDA	NYCTAGINACEAE	LANTI	DASHT	ANNUAL HERB	ROOTS	JAUNDICE
BOSWELLA SERRATA	BRUSERACEAE	KONDRIK	TUMP	ANNUAL HERB	MILKY EXUDATE	TO PREVENT CHILDRENFROM VIRAL ATTACK
CALOTROPISPROURA	ASCLEPIDACEAE	KARAG	DASHT, MAND AND TURBAT	PERENNIAL SHRUB	MILKY EXUDATE	TO REMOVETHE THORN
CANNABIS SATIVA	CANNABINACEAE	BHANG	BAL	ANNUAL HERB ACEOUS PLANT	LEAVES	HYPOTIC
CAPPARIS DECIDUAS	CAPPARACEAE	KALER	DASHT	DECIDUOUS SHRUB	ROOT BARK	ANTI INFLAMMATORY FOR JOINTS
CARALLUMA TUBERCULATA	ASCLEPIDACEAE	MARMUTK	TURBAT	EVERGREEN PERENNIAL	FRUIT	HEPATITIS, TYPHOID
DIGERA MURICATA	AMARANTHACEAE	SOHRPOL	TURBAT	ANNUAL HERB	FLOWER ,LEAVES	ERTHROMELALGIA
FAGONIA INDICA	ZYGOPHELLACEA	KARKAWAG	DASHT	PERENNIAL	LEAVES	CANCER
FOENICULUM VULGARE	APIACEAE	RAZ	TURBAT	PERENNIAL HERB	FRUIT	IMPROPER DIGESTION
GREWIA TENAX	MALVACEAE	PUTRUNK	ZAMURAN	DECIDUOUS SHRUB	LEAVES	TYPHOID

Continue…….

HALOXYLON PERSIUM	AMARANTHACEAE	TRAHT	MAND	ANNUAL	SEED	IMPROPER DIGESTION
HALOXYLON SALICORNICUM	CHENOPODIACEAE	TRAHT	MAND	PERENNIAL WOODY PLANTS	AERIAL PARTS	HEPATOPROTECTIVE EFFECT, HEPATO-BILIARY DISORDERS
IPHIONA AUCHERI	COMPOSITAE	KULMEER	DASHT	EVERGREEN SUBSHRUB	AERIAL PARTS	TREAT SWELLING AND JOINT PAIN
JAUBERTIAAUCHERIA	RUBIACEAE	TUSSO	TURBAT	ANNUAL SHRUB	LEAVES	STOMACHACHE
JUNIPERUS EXCELSA	APRESSACEAE	APURS	MAND	PROSTRATE SHRUB	SMOKE FROM THE BRANCHES	DELIRIUM OF FEVERS
LACTUCA SATIVA	ASTERACEAE	HALIKO	MAND	ANNUAL OR PERENNIAL HERB	LEAF,SEEDS & STEM	AN ANAPHRODISIAC, ANODYNE, CARMINATIVE, DIURETIC, EMOLLIENT, FEBRIFUGE, HYPOGLYCAEMIC, HYPNOTIC, NARCOTIC, PARASITICIDE AND SEDATIVE.
LAUNAEA CAPITATA	ASTERACEAE	ALAKU	TURBAT	ANNUAL SHRUB	AERIAL PARTS	ANTIBACTERIAL ACTIVITY
LAWSONIAINERMIS	LYTHRACEAE	HINI	MAND	ANNUAL SHRUB	LEAVES	ERTHROMELALGIA
MYRTUS COMMUNIS	MYRTACEAE	MORT	ZAMURAN	PERENNIAL SHRUB	BARK	USED FOR CHILDREN AS GERMICIDAL
OCIMUM BASILICUM	LAMIACEAE	NAZBO	DASHT	ANNUAL; PERENNIAL	LEAVES	STOMACH AND GERD
OLIGOMERIS LINIFOLIA	RESEDACEAE	IZBOTK	MAND	PERENNIAL HERB	AERIAL PARTS	USED FOR FEVER
PAPAVERA PAEONIFLORUM	PAPAVERACEAE	ISHASH	TURBAT	ANNUAL	FLOWER BORDERS AND BEDS	HYPNOTIC
PEGANUMHERMALA	ZYPOPHELLACEA	GANDAKO	TURBAT	PERENNIAL SHRUB PERENNIAL HERB	SEEDS	CANCER
PLANTAGO AMPLEXICAULIS	PLANTAGACEAE	DANICHK	TUMP	ANNUAL	SEEDS	STOMAHCACHE

Continue…….

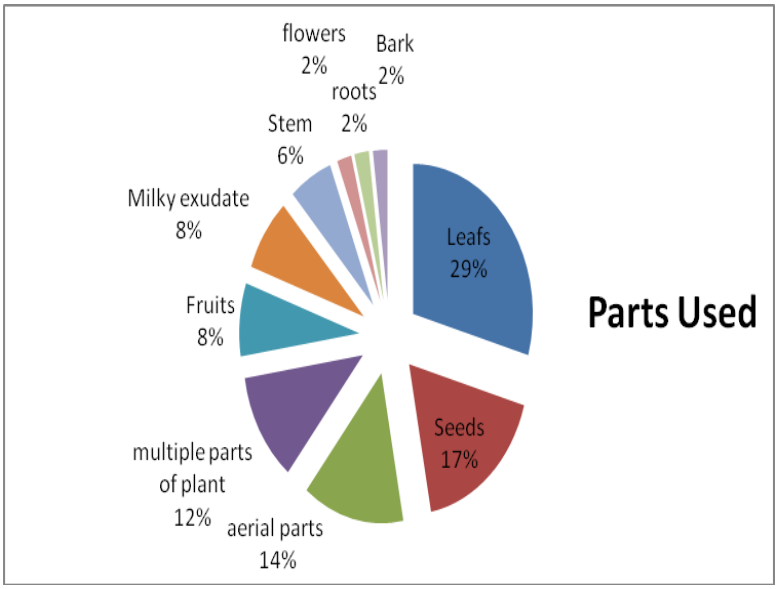
POLYGONUM PLEBEIUM	POLYGONACEAE	GULSOOR	TURBATMAND	ANNUAL	SEEDS, ROOT	GERMICIDAL
PROSOPIS CINERARIA	MIMOSACEAE	KAHUR	TURBAT	PERENNIAL TREE,	LEAVES	TO REMOVE PUSS
RHAZIASTRICTA	APOCYNACEAE	ISHIRK	DASHT, MAND	PERENNIAL SHRUB	MILKY EXUDATE	DIABETES
RICINUSCOMMUNIS	EUPHORBIACEAE	MURGHPAD	MAND	ANNUAL TREE	SEEDS	PURGATIVE
RUBIA CORDIFOLIA	RUBIACEAE	MAJIT	TURBAT	EVERGREEN	LEAVES	ANTI-INFLAMMATORY
SONCHUS OLERACEUS	ASTERACEAE	KALAMU	DASHT	ANNUAL HERB	LEAVES	ANTI-INFLAMMATORY, ANTICANCER
SORGHUM HALEPENSE	POACEAE	GOMAZ	DASHT	PERENNIAL GRASS	SEED	ANTI-ALLERGY,INFLAMMATION
STIPAGROSTIS PLUMOSA	POACEAE	MAZG	TURBAT	PERENNIAL	SEEDS	ANTI-INFLAMMATRY
TAMARIX STRICTA	TAMARICACEAE	GUZ	DASHT	EVERGREEN PLANT	MILKY EXUDATE	RHEUTASIM
TEPHROSIA APOLLINEA	FABACEAE	MATHKENO	MAND, TURBAT	PERENNIAL	LEAVES	ACNE
TEUCRIUM STOCKSIANUM	LAMIACEAE	KALPORA	HOSHAB	ANNUAL	AERIAL PARTS	SEVERE PAIN INSIDE BODY
TRICHODESMA AFRICANUM	BORAGINACEAE	CHARMAING	TURBAT	ANNUAL,PERENNIAL PLANT	LEAVES, STEM	COUGH
TRIGONELLA ANGUINA	FABACEAE	SHIMSH	TURBAT	PERENNIAL SHRUB	LEAVES	STOMACH GAS
TRIGONELLA FOENUM	FABACEAE	AMBAG	MAND	ANNUAL PLANT	SEED	CARMINATIVE, GASTRIC STIMULANT, ANTIDIABETIC AND GALACTOGOGUE
VITEX AGNUS	LAMIACEAE	GWANIK	MAND, TUMP	DECIDUOUS SHRUB	RIPE, DRIED FRUITS	PAIN KILLER
WITHANIA COAGULANS	SOLANACEAE	PANEER BAD	DASHT	PERENNIAL TREE,	SEEDS	ULCER
ZATARIA MULTIFLORA	LAMIACEAE	IZGHAND	TURBAT	PERENNIAL PLANT	AERIAL PARTS	DIURETIC, ANTI-PARASITE, ANTI-FLATULENCE AND APPETIZER
ZIZIPHORA CLINOPODIOIDES	LAMIACEAE	PURCHINK	MAND	PERENNIAL	LEAVES	STOMACH GAS
ZIZIPHUS MAURITIANA	RHAMNACEAE	KUNAR	TURBATMAND	EVERGREEN PLANT	LEAVES	TO REMOVE HEAT FROM HEAD

Table 2: Parts of Plants Used

PART USED	LEAVES	SEEDS	AERIAL PARTS	MULTIPLE PARTS OF PLANT	FRUITS	MILKY EXUDATE	STEM	FLOWERS	ROOTS	BARK
Total	15	9	7	6	4	4	3	1	1	1

TABLE.N0.3. Effective in Diseases

DISEASE	TOTAL
GIT DISEASE	14
ANTI,INFLAMMATRY, ANALGESIC	11
MULTI USE	6
MICRO-ORGANISM INFECTIONS	5
BLOOD DISEASE	4
ANTI-PYRETIC	3
SKIN DISEASE	3
CNS EFFECTS	2
LIVER DISEASE	2
RESPIRATORY DISEASE	1



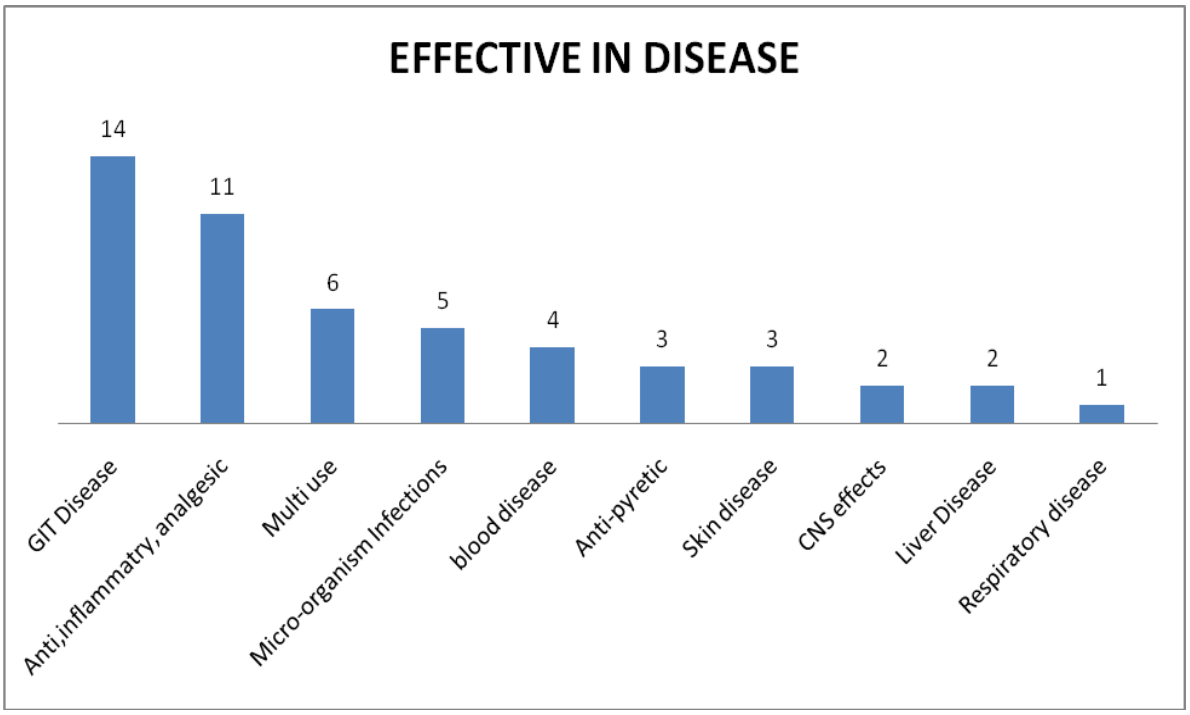


Table No. 4. Families of Plants

FAMILY	PLANTS
APIACEAE	1
APOCYNACEAE	1
APRESSACEAE	1
BRUSERACEAE	1
CANNABINACEAE	1
CAPPARACEAE	1
CHENOPODIACEAE	1
EUPHORBIACEAE	1
LYTHRACEAE	1
MYRTACEAE	1
NYCTAGINACEAE	1
PAPAVERACEAE	1
PLANTAGACEAE	1
POLYGONACEAE	1
RESEDACEAE	1
RHAMNACEAE	1
SOLANACEAE	1
TAMARICACEAE	1
UMBELIFERAE	1
ASCLEPIDACEAE	2
BORAGINACEAE	2
COMPOSITAE	2
MALVACEAE	2
MIMOSACEAE	2
POACEAE	2
RUBIACEAE	2
XANTHORRHOEACEA	2
ZYGOPHELLACEA	2
AMARANTHACEAE	3
ASTERACEAE	3
FABACEAE	4
LAMIACEAE	4

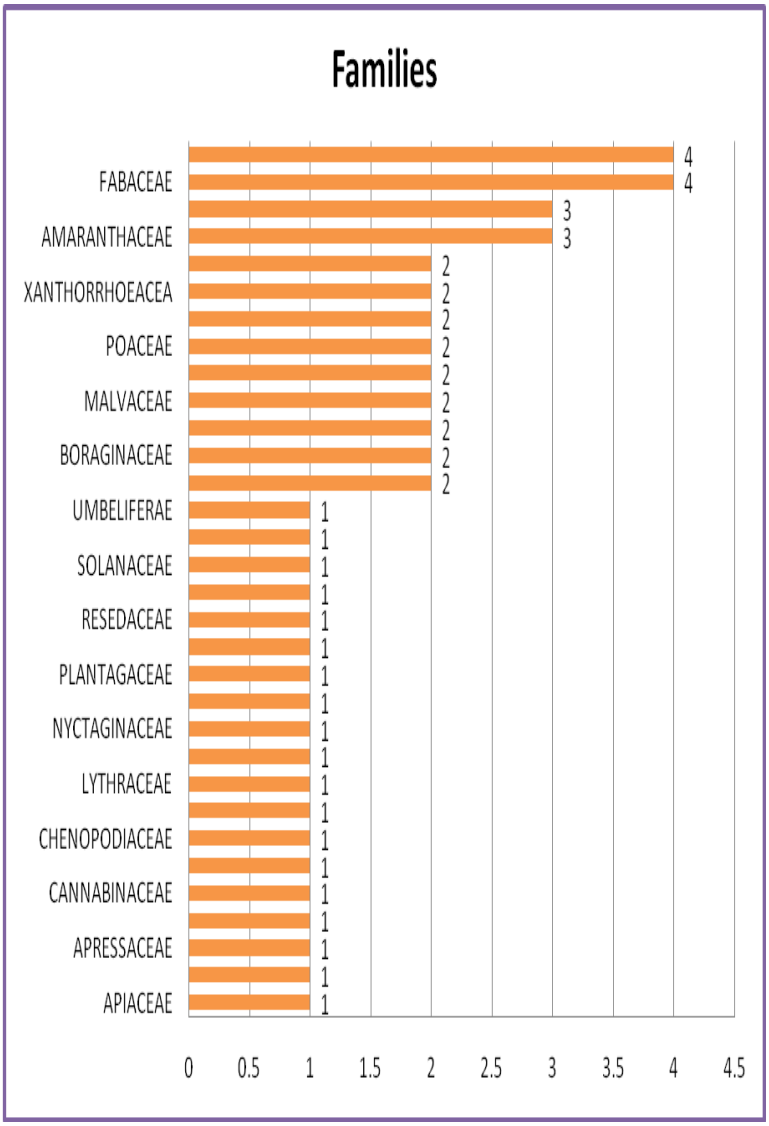
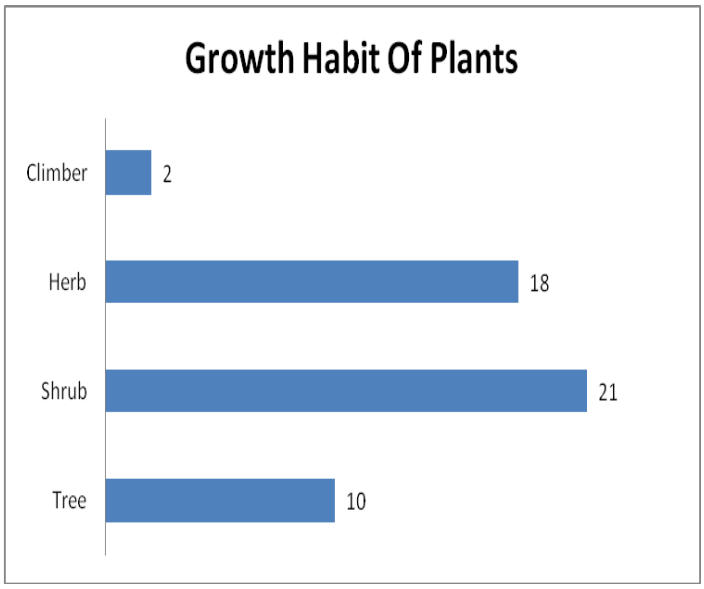


Table 5: Growth Habit of Plants

Growth Habit	Total
Tree	10
Shrub	21
Herb	18
Climber	2



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