

## Wild edible and ethno medicinal angiosperms from plateaus of Satmala ranges, Nasik district, Maharashtra, India

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### ABSTRACT

The present paper gives a checklist of 100 wild edible & ethno medicinal angiosperms from the plateaus of the Satmala ranges. The present plateaus are distributed in the remote areas of Chandwad (Nashik)tehsil. Various tribal and local communities in the region viz. Bhill, Thakur, Mahadeo-Koli, Kokani, Katkari, Warli, Kunbi, Kokana, Aadiwasi etc. use many plants as a source of food and ethno medicinal purposes. Plant parts like tubers, rhizomes, roots, leaves, fruits, seeds, flowers, bark etc. are used as food and to cure various ailments. Therefore authors have made efforts to collect information on these plants from the region.

Figures : 02

References : 16

Table : 00

KEY WORDS : Angiosperms, Ethno medicinal, Plateaus, Satmala ranges, Wild edible

### Introduction

India is one of the twelve mega-diversity countries in the world. The Western Ghats is one of the mega diversity hotspots in India. Satmala is a well-known mountain range in the Nashik district of Maharashtra. The coordinates of this range are 20°23'25" N latitude and 73°54'23" E longitude. It is an integral part of the Northern Western Ghats. The peaks of the Satmala Hill range are visible from National Highway Number 3 (NH3) runs across Nasik district. Many high-altitude plateaus are present on this hill range. These plateaus harbour mostly seasonal herbaceous vegetation. People living in nearby areas use various plant parts as a source of food and ethno medicines purpose to cure various ailments. In India, few researchers have documented folk medicines of the subcontinent to some extent<sup>2,3,5,9</sup>. In the recent past, few workers reported these wild edibles and ethno-medicinal plants from the Nasik district. Total 34 wild edible taxa reported in the flora of Nashik district<sup>10</sup>. However, their observations mostly were on flowering taxa from the region. Moreover, a few researchers documented wild edible and ethno medicinal plants of Nashik district to some extent<sup>1,4,6,7,9,11,12,16</sup>. These wild edibles are used as a source of food as well as for ethno-

medicinal purposes by the local community. Since 2020 to 2023, authors have carried out extensive and intensive surveys in the study area to collect the angiosperms, and attempts have been made to document wild edible and ethno medicinal angiosperms from the collected taxa.

### Materials and Methods

Extensive and intensive field tours were carried out (2020-2023) in the study area to collect the plant specimens. Information on wild edible and ethno medicinal plants was obtained through discussion and interviews with local and tribal people living in nearby areas. It was affirmed through repeated inquiries in various seasons and with different people. Identification of taxa was carried out using local<sup>10</sup> and regional flora<sup>13-15</sup>. The herbariums of the collected taxa were prepared by following the standard method<sup>5</sup>. One set of herbariums was housed at BSI Pune and other set of all collected taxa was deposited at SNJB's ACS College Chandwad for future reference. All the herbariums were arranged alphabetically and details about the botanical name, vernacular name, family, wild edible and ethno medicinal importance are provided. A few selected photographs of wild edible and ethno medicinal plants are provided (Figs. 01 & 02).

## Results and Discussion

Enumeration of Wild edible and Ethno Medicinal plants from study area:

***Abrus precatorius*** Fabaceae

Purified seeds used as a nerve stimulant and against sex vigour. Leaves used to cure cough, cold and fever

***Abutia indicum*** Sweet (Petari;

Malvaceae): The powder of leaves is used to cure fever

***Achyranthes aspera*** var. *aspera*

(Aghada; Amaranthaceae): Young shoots of plant are used to cure vitiligo disease

***Aerva javanica***

(Amaranthaceae ):The whole plant (Leaves, Stem & Roots) is used as diuretic and demulcent

***Aeschynomene virginica***

(Fabaceae):

The young shoots with leaves used are as a fodder for domestic animals

***Agave vivipara*** (Asparagaceae):

The roots are used as a diaphoretic and diuretic

***Ageratum conyzoides*** (Asteraceae):

The whole plant is used to cure diarrhoea, dysentery and colic trouble

***Ailanthus excelsa*** (Maharukhi;

Simaroubaceae): Leaf paste is used to prepare tablets which is given with banana to treat jaundice

***Alternanthera sessilis***

(Amaranthaceae): Leaves are used to cure inflammation, diarrhoea and fever

***Amaranthus spinosus*** (Amaranthaceae):

Plant parts viz. leaves, roots are used as diuretic and to cure stomach-ache

***Asparagus racemosus***

(Shatawari; Asparagaceae): Tubers of

plants are used to cure cough, gonorrhoea, piles, diabetes, anthelmintic, headache, gastric troubles, rheumatism, diarrhoea and dysentery also increase lactation

***Azanza lampas*** (Malvaceae):

Fruits are used to cure gonorrhoea

***Bacopa monnieri***

(Bramhi; Plantaginaceae): Leaf juice is used to cure bronchitis and diarrhoea

***Barleria prionitis*** (Kate-Koranti;

Acanthaceae):Leaves are applied to cure wounds

***Blepharis maderaspatensis***

(Acanthaceae):Leaf juice is used to cure cut and wounds

***Bidens biternata***

(Asteraceae): The whole plant juice is used to cure eye and ear problems

***Butea monosperma***

(Palas;Fabaceae): Gum is used to cure diarrhoea

***Cajanus scarabaeoides***

(Fabaceae): The whole plant is used to cure dropsy, fever, pains, sores and dysentery.

***Capparis decidua***

(Capparaceae): Leaf is used to cure earache

***C. grandis***(Capparaceae): Bark and leaves are used against swelling

***Caralluma adscendens***

(Apocynaceae): The whole plant is used as a wild vegetable

***Carissa spinarum*** (Karwand;

Apocynaceae):Fruits are edible

***Cassia fistula*** (Bahawa;Fabaceae):

Bark is used to cure dysentery, inflammatory swellings and as a cleaning agent for ulcers and fruits are used as laxative.

***Catharanthus pusillus***

(Apocynaceae): Roots are used to cure septic wounds and fever. Latex used in scabies.

***Catunaregam spinosa***

(Rubiaceae): Bark is used to cure diarrhoea and dysentery

***Ceropegia bulbosa***

Apocynaceae):Tubers are edible and used as a wild vegetable

***Chamaecrista abscus***

(Fabaceae): The whole plant is used to cure anaemia, diarrhoea, asthma, dysentery and poisonous bites

***Chamaecrista mimosoides***

(Fabaceae): Roots are used in treatment of dysentery and stomach pain

***Cleome chelidonii*** (Cleomaceae):

Leaf paste is used to cure wounds

***C. monophylla*** (Cleomaceae ):

Leaves are used as a wild vegetable

***C. viscosa*** (Cleomaceae):

Leaf paste is used to cure headache

***Crotalaria medicaginea*** (Khulkhula;

Fabaceae): The whole plant is used as cattle feed

***Crotalaria mysorensis*** (Khulkhula; Fabaceae):

The seeds are used as a green manure.

***Cryptolepis buchanani***

(Bhuikawali; Apocynaceae): Roots of this plant are boiled and solidified into paste which is applied to cure skin diseases.

***Chlorophytum borivilianum***

(SafedMusali; Asparagaceae): Tubers are used to cure leucorrhoea, gonorrhoea, impotence, infertility, diarrhoea and dysentery.

***Chlorophytum tuberosum***

(SafedMusali; Asparagaceae): Tubers are used as a galactagogue and aphrodisiac

***Cissampelo spareira*** (Menispermaceae):

The whole plant is used to cure skin itching

***Cocculus hirsutus***

(Menispermaceae): Leaves are used to promote appetite and digestion

***Coleus barbatus***

G. Don (Lamiaceae): Leaves are used to cure cold and cough

***C. strobilifer***

(Lamiaceae): The juice of whole plant is used to cure cough and cold

***Commelina forskaolii***

(Kena, Commelinaceae): Leaves are used as a wild vegetable

***Corchorus capsularis*** (Malvaceae):

Seeds are used as antipyretic

***Curcuma pseudomontana***

(Ranhalad; Zingiberaceae):

Rhizomes are used in treatment of dysentery, jaundice, leprosy, cardiac disease, diabetes. To increase lactation and have antimicrobial and antioxidant properties.

***Cyanthillium cinereum***

(Asteraceae): The whole plant decoction is used to cure diarrhoea and dysentery

***Cymbopogon martini***

(Gawatichaha; Poaceae Barnhart): Leaves are used as wild vegetable and to treat aromatherapy

***Cyphostemma setosum***

(Vitaceae): Leaves are used to cure stomach ulcer

***Cucumis setosus*** Cong

(Cucurbitaceae): Fruits are edible

***Cucumis sativus*** (Cucurbitaceae):

Fruits are edible

***Curculigo orchioides*** (Kali

Musali; Hypoxidaceae): Paste of roots is applied to remove worms from injuries and septic.

***Dioscorea hispida*** (Chaicha

mohor; Dioscoreaceae):

Inflorescence is used as a wild vegetable

***Echinopse chinatus***. (Asteraceae):

Root powder is used to cure wounds

***Eclipta prostrata*** (Asteraceae):

Gum with oil is applied to cure headache

***Emilia sonchifolia*** (Asteraceae):

Leaf juice is used to cure night blindness

***Enicostema axillare***

(Gentianaceae): Plant parts are used to cure migraine and headache

***Eranthemum roseum*** (Acanthaceae):

Tuberous roots are used to cure

Leucorrhoea

***Euphorbia neriifolia***

(Euphorbiaceae): The heated extract of peels of stem is used to treat ear-ache.

***Evolvulus alsinoides***

(Convolvulaceae): Whole plant is used as an antipyretic

***Ficus carica*** (Anjir; Moraceae):

Fruits are edible

***Flueggea virosa***

(Phyllanthaceae): Fruits are edible

***Gymnosporia senegalensis***

(Celastraceae) : Leaves are used as a fodder for domestic animals

***Grangea maderaspatana***

(Asteraceae): Infusion of leaves is used to promote appetite

***Helictere sisora***

(Malvaceae): Bark and pods are used to cure diarrhoea and dysentery

***Hemidesmus indicus***

(Apocynaceae): Leaves are used to cure asthma and bronchitis

***Heracleum grandis***

(Apiaceae): Water extract of entire plant or tubers is given to patient suffering from cholera.

***Hibiscus lobatus***

(Malvaceae): Leaf powder used to cure fever and

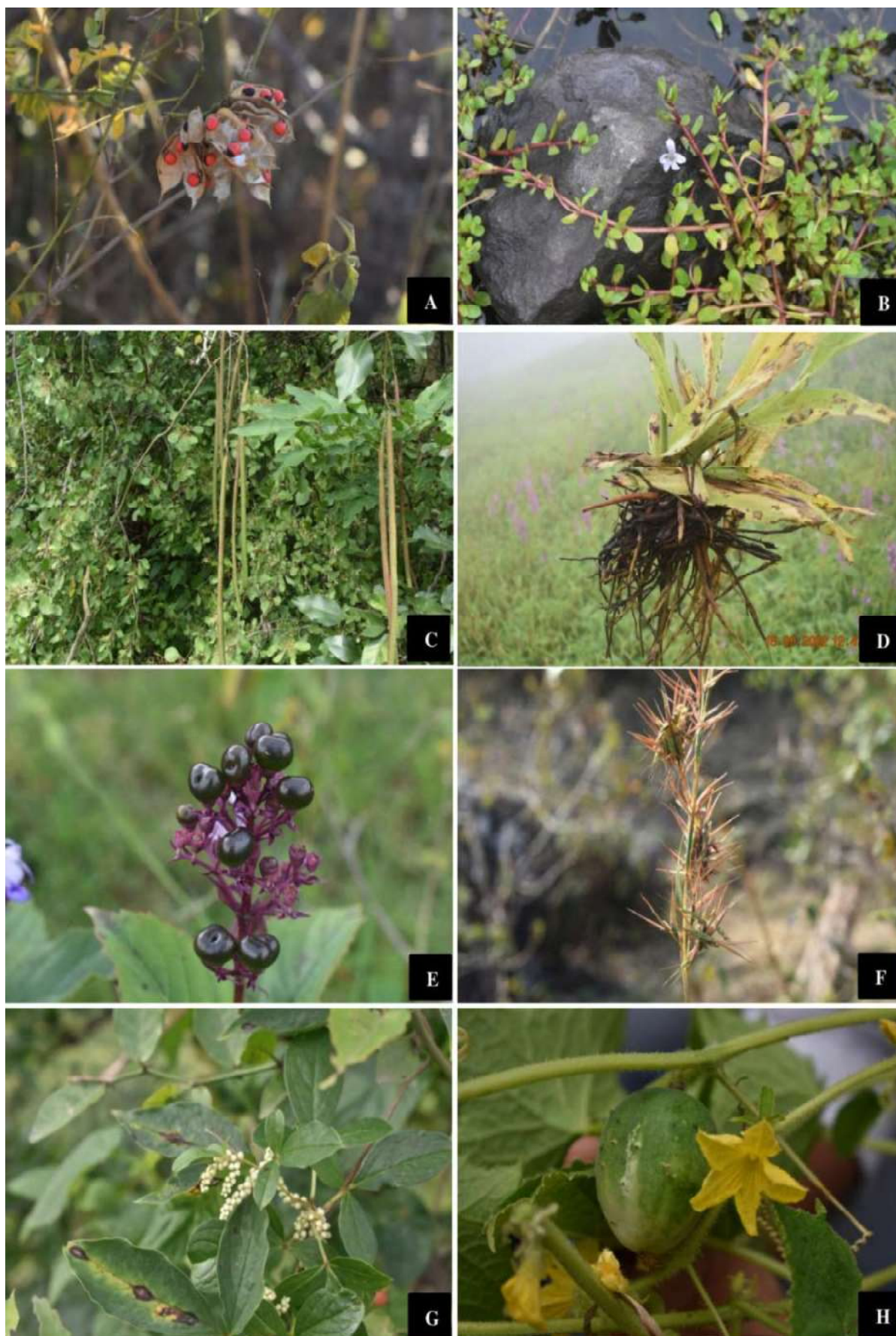


Fig. 1 : A. *Abrus precatorius* B. *Bacopa monnieri* C. *Cassia fistula* D. *Chlorophytum tuberosum* E. *Clerodendrum serratum* F. *Cymbopogon martini* G. *Dioscorea hispida* H. *Cucumis sativus*

appetiser

***Impatiens balsamina***

(Balsaminaceae): Leaves are used as a wild vegetable

***Ipomoea hederifolia*** (Convolvulaceae):

Leaf juice is used to cure cut and wounds

***Ipomoea illustris***

(Convolvulaceae): The fumes of burning leaves are passed over body of children to cure chicken pox.

***Lavandula bipinnata***

(Lamiaceae): Leaves are used to cure wounds

***Lepidagathi scristata*** (Acanthaceae):

Fresh leaves are used to cure wounds

***Moringa concanensis***

(Moringaceae): Leaves are used as a wild vegetable

***Mucunapruriens*** (Fabaceae):

Fruits are used as a wild vegetable

***Ocimum americanum*** (Lamiaceae):

The whole plant is used to cure dysentery and migraine

***Oxalis corniculata*** (Oxalidaceae):

Leaves are used as a wild vegetable

***Parthenium hysterophorus*** (Asteraceae):

Decoction of roots is used to cure dysentery

***Pithecellobium dulce***

(Fabaceae): Fruits are edible

***Plumbago zeylanica*** (Plumbaginaceae):

Roots are used to cure jaundice

***Polycarpaea corymbosa***

(Caryophyllaceae): Leaf decoction is used to cure jaundice

***Polygala arvensis*** (Polygalaceae):

Leaves are used to cure jaundice

***Pupalia lappacea***

(Amaranthaceae): Fruits are used to cure cough and fever

***Rivea hypocrateriformis***

(Convolvulaceae Juss.): Roots are given after child birth and leaves are used as a wild vegetable

***Rotheca serrata***

(Lamiaceae): Decoction of roots is used to cure fever

***Senna tora*** (Fabaceae): Leaves are used as a wild vegetable

***Searsiamy sorensis***

(Anacardiaceae): Fruits are edible

***Sida cordata***

(Malvaceae): Roots are used to cure fever and arthritis

***Sidamy sorensis***

(Malvaceae): Seeds are used against diarrhoea

***Solanum anguivi*** (Solanaceae):

Plant part are used against itching and fruits are edible

***Sonchus oleraceus*** (Asteraceae):

Whole plant is used as a fodder for goat and cattle's

***Synedrella nodiflora***

(Asteraceae): Leaves are used to cure rheumatism

***Tamarindus indica*** (Fabaceae):

Fruits are edible

***Terminalia anogeissiana***

(Combretaceae): Plant provides gum and wood is very useful as firewood.

***Tinospora cordifolia***

(Menispermaceae):

Leaves are edible; pieces of stem are tied around neck to cure jaundice in patient.

***Tribulus terrestris*** (Zygophyllaceae):

Fruits are used to dissolve kidney stones

***Tridax procumbens*** (Asteraceae):

Leaf juice is applied to wounds

***Triumfetta malebarica***

(Malvaceae): Seeds are used for relieving inflammation or irritation

***Vachellia nilotica***

(Fabaceae): Bark is cooling, aphrodisiac and expectorant in nature. Gum is used as an emollient, expectorant, detoxifier, aphrodisiac and antipyretic. Leaves are used in healing wounds

***Verbascum coromandelianum***- (Scrophulariaceae):

Juice of plants parts is used to cure diarrhoea and dysentery

***Vicoa cernua*** (Asteraceae): Leaves are used to soften the skin

***Vitex negundo*** (Lamiaceae): Burning dried leaves smoke is used to cure headach

***Waltheria indica*** (Malvaceae): Leaves are used to cure burn wound

A total of hundred wild edible and ethno medicinal taxa were reported from study areas belonging to thirty five families. Various plant parts of eleven taxa are used as wild vegetables and fruits of nine taxa are used as wild edible fruits. A total of seventy one taxa are used to cure different ailments. Mostly plant parts like leaves, stems, bark, roots, tubers, rhizomes and seeds etc. are used to treat various ailments. Whole plants viz.



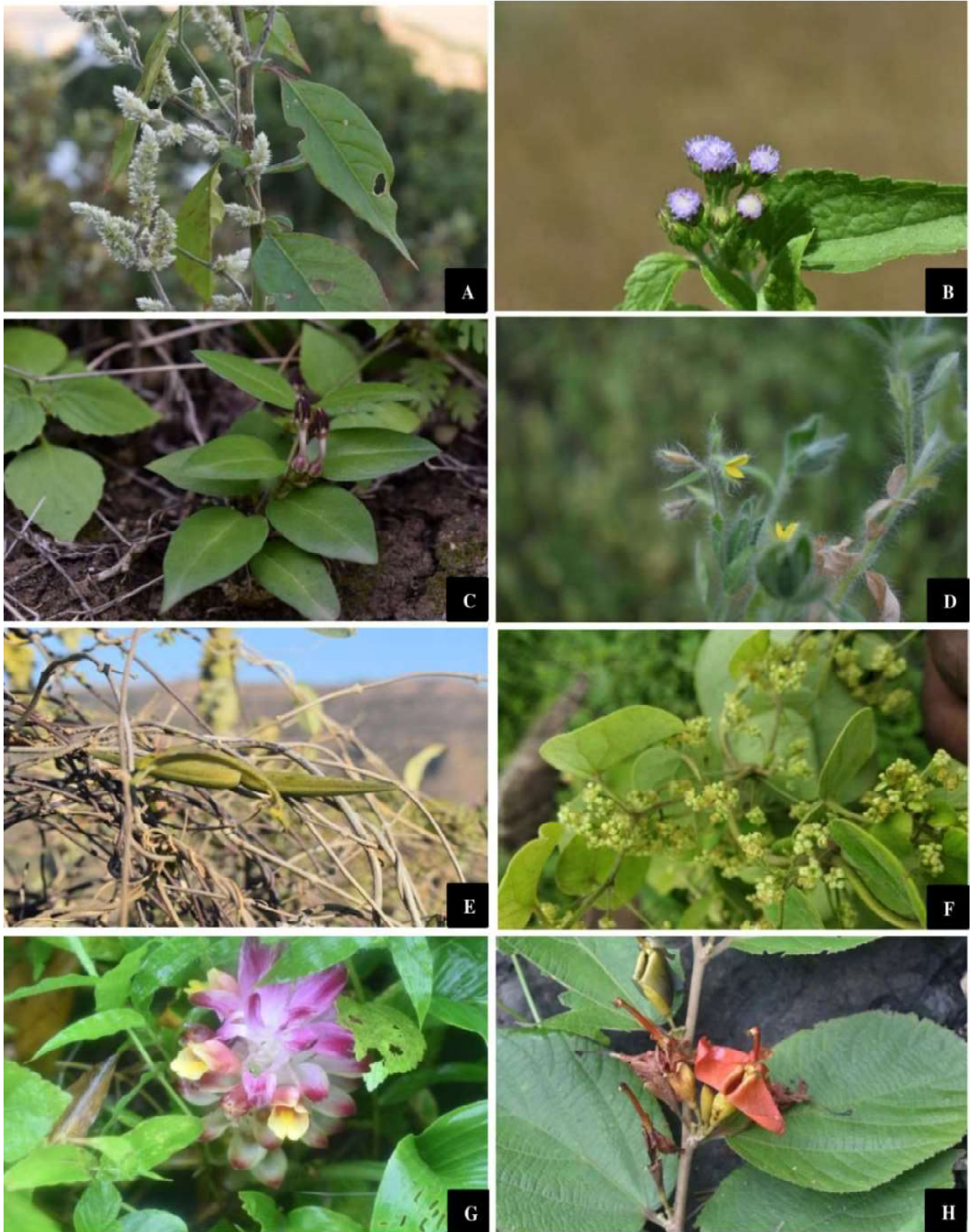


Fig. 2 : A. *Aerva javanica* B. *Ageratum conyzoides*, C. *Ceropogia bulbosa* D. *Crotalaria mysorensis* E. *Cryptolepis buchanani* F. *Cissampelos pareira* G. *Curcuma pseudomontana* H. *Helicteres isora*

*Aeschynomene virginica*, *Gymnosporia senegalensis* and *Sonchus oleraceus* are used as fodder for domestic animals. Seeds of *Crotalaria mysorensis* are used for sowing on farms for the production of green manure

### Conclusions

The studied plateaus are dry for eight to nine months in a year, in spite of the fact that plant diversity is rich on these plateaus. Mostly herbaceous vegetation dominates these plateaus. The present work defines the

diversity and uses of wild edible and ethnomedicinal plants used by the local community. These data will help for the protection, conservation and management of wild edible and ethno medicinal taxa from the region. Efforts are required to increase awareness among the community about the cultivation, medicinal and nutritional uses of these plants. This could expand the area where these species are grown, which is beneficial for the sustainable growth of the region.

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