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Cover: A Warty Hammer Orchid *Drakaea livida* gets pollinated by a male thynnine wasp through 'sexual deception' — a colour pencil reproduction of photos by ron_n_beths (flickr.com) and Rod Peakall; Water colour reproduction of Flame Lily *Gloriosa superba* -- photo by Passakoran_14; and a bag worm and its architectural genius (source unknown). Art work by Pannagasri G.

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ARTICLE
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Checklist of floristic diversity of Mahadare Conservation Reserve, Satara, Maharashtra, India

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Abstract: Conservation reserves are protected areas that serve as buffer zones, connectors, and migratory corridors, safeguarding biodiversity by protecting critical habitats, wildlife pathways, and ecosystems. The documentation of floral diversity in such habitats is an important aspect to determine conservation priorities. The present paper enumerates flowering plants along with the faunal diversity of Mahadare Conservation Reserve in Satara District of Maharashtra and represents 392 plant taxa, belonging to 293 genera, and 87 families. Amongst these, 127 taxa are listed under IUCN Red List Category, 70 endemic, and two monotypic taxa were recorded. Though the area is a conservation reserve human interference for various natural products, agriculture, and many more, along with biological invasion of alien species, are current threats to the area. The present study will help to prioritize the conservation of plant species which lead to protecting the butterflies, mammals, birds, and other fauna in the Mahadare Conservation Reserve.

Keywords: Biodiversity, butterfly larval host plants, conservation reserve, endemism, floristics, frugivores, Western Ghats, wild edible.

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INTRODUCTION

The Satara District is situated in the Sahyadri ranges of the Western Ghats. The climate ranges from rainiest western region of Mahabaleshwar to driest eastern parts of Man and Khatav Tehsils. The eastern zone comes under Sahyadri ranges with high rainfall, lateritic plateaus with peculiar plateau flora rich in endemics, and ephemerals. The basin zone in district shows average climate, presence of basalt, alluvial soil, and has tremendous diversity in vegetation from dry deciduous, scrub patches to semi-evergreen and evergreen forests. The district encompasses Koyna Wildlife Sanctuary, Sahyadri Tiger Reserve, Mahadare Conservation Reserve, Jor-Jambhali Conservation Reserve, and Mayani Conservation Reserve. Amongst this, the Mahadare Conservation Reserve (hereafter Mahadare) has rich biodiversity as it is surrounded by semi-evergreen and deciduous forests.

Mahadare lies in the valley and so is a pressure zone due to mixed biodiversity of both semi-evergreen and deciduous forest. This stream arises from the river Krishna and flows down in Mahadare and its branches are spread almost perpendicular to it. This stream and its branches are filled with water for about 5–7 months (depends upon rainfall).

Recently, Maharashtra State Government declared Dare Khurd, i.e., Mahadare as Conservation Reserve in notification WLP No./ 06.22/CR-170/F-1 dt. 10 October 2022 under Section 36-A of Wildlife (Protection) Act 1972. The area has spread over 107.6 ha under Satara District Forest Division surrounded by Sambarwadi and Yavateshwar villages.

Floristics of some wildlife sanctuaries and national parks have been explored such as Nagzira (174 species) and Nawegaon (301 species) in Bhandara District have been published by Malhotra & Rao (1980, 1981). Dhore & Joshi (1988) compiled the 'Flora of Melghat Tiger Reserve' comprising 648 species and 'Tadoba National Park' (Chandrapur Dist.) comprising 667 species by Malhotra & Moorthy (1992). Herbaceous vegetation of threatened high altitude lateritic plateau ecosystems of the Western Ghats, southwestern Maharashtra, India. (Yadav & Lekhak 2010; Bhattarai et al. 2012).

There are 242 species of legumes recorded from hilly regions of Satara and Pune districts (Tosh et al. 1988). There are 90 flowering plant species reported from Satara District which are traditionally used for their nutritional potential as wild edible (Deshpande et al. 2019a). Satara District has been explored well for the floristic diversity, viz.: Kas Plateau (Bhattarai et al. 2012; Lekhak & Yadav 2012); Mahabaleshwar (Deshpande 1993); Bharsakhale (Deshpande et al. 2019b). The diversity of herbaceous vegetation on high altitude lateritic plateaus include four floristically rich localities in Satara (Chalakewadi, Thoseghar, Kas, Panchagani Tableland) in which maximum number of endemic species (41) were reported from Kas Plateau (Lekhak & Yadav 2012).

MATERIALS & METHODS

The plants were listed on the basis of repeated seasonal observations of the study region either in the flowering or fruiting stage. The specimens collected were identified by consultation of literature (Cooke 1901–1908; Deshpande 1993; Singh et. al 2001; Yadav & Sardesai 2002), correct plant names were cited from International Plant Name Index (IPNI 2025) and synonymy followed Plants of the World Online (POWO 2025). The birds and mammals were observed by repeated visits, citing, photography, pugmarks, dropping, calls by birds, and animals. The animals observed were identified by using (Ravikanthachari et al. 2018; Abdar 2013; Fraixedas et al. 2020) and were confirmed by using Avibase (2025) and Mammal Species of the World Online.

RESULTS

The Mahadare Conservation Reserve showed great diversity in floristic components. The area harbours a variety of plants such as orchids, grasses, legumes, wild edibles, ornamentals, parasites, along with rare, endangered, and threatened species. The conservation reserve harbours 392 taxa belonging to 287 genera and 84 families, among which, 74 are dicotyledonous, and 13 are monocotyledonous. The reported plants were categorized under IUCN Red List of Threatened Species (127 plants), endemic taxa (72), plant preferred by the butterflies (72), and common taxa (168). The IUCN Red Listed plants are represented in Table 1, wherein Table 2 provides the information of endemic plants of the study region. About 72 flowering plants of the study region have been found to be the host of butterflies (Table 3). Moreover, 168 commonly occurring flowering plants have been reported from the study region (Table 4). Photographs of few of the flowering plants have been provided in Image 1 and Image 2 The investigation confirmed Fabaceae (55 spp.) as dominant family followed by Poaceae (26 spp.), Malvaceae (25 spp.),

Table 1. Plant taxa which are listed under IUCN Red List of Threatened Species, Version 2024–25.

	Species	Family	Local name	IUCN Red List status / Importance	Habit
1	*Eranthemum roseum* R.Br.	Acanthaceae	Jangali Aboli	Least Concern	H
2	*Hygrophila auriculata* (Schumach.) Heine	Acanthaceae	Talimkhana	Least Concern	H
3	*Celosia argentea* L.	Amaranthaceae	Kurdu	Least Concern	H
4	*Mangifera indica* L.	Anacardiaceae	Amba	Data Deficient	T
5	*Anacardium occidentale* L.	Anacardiaceae	Kaju	Least Concern	T
6	*Semecarpus anacardium* L.f.	Anacardiaceae	Bibba	Least Concern	T
7	*Lannea coromandelica* (Houtt.) Merr.	Anacardiaceae	Shimati	Least Concern	T
8	*Annona squamosa* L.	Annonaceae	Sitaphal	Least Concern; Edible	T
9	*Pimpinella tomentosa* Dalz.	Apiaceae	Ran Jire	Vulnerable	H
10	*Holarrhena pubescens* Wall. ex G.Don	Apocynaceae	Pandhara Kuda, Indrajav	Least Concern	T
11	*Alstonia scholaris* (L.) R.Br.	Apocynaceae	Satvin	Least Concern	T
12	*Cascabela thevetia* (L.) Lippold	Apocynaceae	Bitti	Least Concern	T
13	*Calotropis procera* (Aiton) W.T.Aiton	Apocynaceae	Kshirparna, Rui, Aditya-pushpika	Least Concern	S
14	*Plumeria rubra* L.	Apocynaceae	Chapha	Least Concern	T
15	*Ceropegia oculata* Hook.	Apocynaceae	Mor Kharchudi	Low Risk	C
16	*Cynanchum sahyadricum* (Ansari & Hemadri) Liede & Khanum	Apocynaceae	-	Vulnerable	C
17	*Caryota urens* L.	Arecaceae	Tadi Palm	Least Concern	T
18	*Chlorophytum borivilianum* Santapau & R.R.Fern.	Asparagaceae	Safed Musali	Critically Endangered	E
19	*Agave americana* L.	Asparagaceae	Ghayapat	Least Concern	H
20	*Caesulia axillaris* Roxb.	Asteraceae	Gurguza	Least Concern	H
21	*Cyathocline purpurea* (Buch.-Ham. ex D.Don) Kuntze	Asteraceae	Gangotra	Least Concern	H
22	*Eclipta prostrata* (L.) L.	Asteraceae	Maka	Least Concern	H
23	*Opuntia elatior* Mill.	Cactaceae	Nivdung	Least Concern	H
24	*Trema orientalis* (L.) Blume	Cannabaceae	Khargol	Least Concern	T
25	*Celtis tetrandra* Roxb.	Cannabaceae	Brumaj	Least Concern	T
26	*Crateva adansonii* DC.	Capparaceae	Varun	Least Concorn	T
27	*Iphigenia stellata* Blatt.	Colchicaceae	Gulabi Bhui Chakra	Endangered	E
28	*Gloriosa superba* L.	Colchicaceae	Kal Lavi	Least Concern; Medicinal	C
29	*Commelina benghalensis* L.	Commelinaceae	Kena	Least Concern	H
30	*Commelina caroliniana* Walter	Commelinaceae	Asiatic dayflower	Least Concern	H
31	*Cyanotis fasciculata* (B.Heyne ex Roth) Schult. & Schult.f.	Commelinaceae	Nilwanti	Least Concern	H
32	*Stictocardia tiliifolia* (Desr.) Hallier f.	Convolvulaceae	Garvel	Least Concern	C
33	*Rivea hypocrateriformis* (Desr.) Choisy	Convolvulaceae	Phanji	Least Concern; Wild Edible	L
34	*Cordia dichotoma* G.Forst.	Cordiaceae	Bhokar	Least Concern	T
35	*Cuscuta reflexa* Roxb.	Cuscutaceae	Amarvel	Least Concern	C
36	*Diospyros paniculata* Dalz.	Ebenaceae	Tinduka, Tembhurni	Vulnerable	T
37	*Elaeagnus conferta* Roxb.	Elaeagnaceae	Nerli	Least Concern	L
38	*Euphorbia antiquorum* L.	Euphorbiaceae	Tridhar, Vjra Kantak	Least Concern	H
39	*Euphorbia neriifolia* L.	Euphorbiaceae	Gudha	Least Concern	H
40	*Homonoia riparia* Lour.	Euphorbiaceae	Sherani	Least Concern	H
41	*Mallotus philippensis* (Lam.) Müll. Arg.	Euphorbiaceae	Kunkuphal	Least Concern	T
42	*Cassia fistula* L.	Fabaceae	Bahava	Least Concern	T

	Species	Family	Local name	IUCN Red List status / Importance	Habit
43	*Senna siamea* (Lam.) H.S.Irwin & Barneby	Fabaceae	Kashid	Least Concern	T
44	*Delonix regia* (Bojer ex Hook.) Raf.	Fabaceae	Gulmohar	Least Concern	T
45	*Sesbania sesban* (L.) Merr.	Fabaceae	Shevari	Least Concern	T
46	*Bauhinia purpurea* L.	Fabaceae	Dev Kanchan	Least Concern	T
47	*Caesalpinia decapetala* (Roth) Alston	Fabaceae	Chilar	Least Concern	S
48	*Cullen corylifolium* (L.) Medik.	Fabaceae	Bavachi	Least Concern	H
49	*Dalbergia lanceolaria* L.f.	Fabaceae	Dondus	Least Concern	T
50	*Erythrina variegata* L.	Fabaceae	Pangari	Least Concern	T
51	*Gliricidia sepium* (Jacq.) Kunth ex Walp.	Fabaceae	Undirmari	Least Concern	T
52	*Indigofera trita* L.f.	Fabaceae	Asian indigo	Least Concern	H
53	*Mimosa pudica* L.	Fabaceae	Lajaloo	Least Concern	H
54	*Pongamia pinnata* (L.) Pierre	Fabaceae	Karanj	Least Concern	T
55	*Tamarindus indica* L.	Fabaceae	Chinch	Least Concern	T
56	*Acacia auriculiformis* A.Cunn. ex Benth.	Fabaceae	Australian Acacia	Least Concern	T
57	*Acacia leucophloea* (Roxb.) Willd.	Fabaceae	Hivar, Dev babhool	Least Concern	T
58	*Vachellia nilotica* (L.) P.J.H.Hurter & Mabb.	Fabaceae	Deshi Babhool	Least Concern	T
59	*Albizia lebbeck* (L.) Benth.	Fabaceae	Shirish	Least Concern	T
60	*Albizia procera* (Roxb.) Benth.	Fabaceae	Pandhara Shirish	Least Concern	T
61	*Albizia odoratissima* (L. f.) Benth.	Fabaceae	Kala Shirish	Least Concern	T
62	*Pithecellobium dulce* (Roxb.) Benth.	Fabaceae	Vilayati Chinch	Least Concern	T
63	*Pterocarpus marsupium* Roxb.	Fabaceae	Bivala	Near Threatened	T
64	*Vigna khandalensis* (Santapau) Sundararagh. & Wadhwa	Fabaceae	Badmoog, Khandala Wild Pea	Near Threatened	C
65	*Saraca asoca* (Roxb.) De Wilde	Fabaceae	Sita Ashok	Vulnerable	T
66	*Dalbergia latifolia* Roxb.	Fabaceae	Kala Rukh	Vulnerable	T
67	*Acacia ferruginea* DC	Fabaceae	Pandhara Khair	Vulnerable	T
68	*Tectona grandis* L.f.	Lamiaceae	Sagwan	Endangered	T
69	*Colebrookea oppositifolia* Sm.	Lamiaceae	Bhaman	Least Concern	H
70	*Lavandula bipinnata* Kuntze	Lamiaceae	Ghodegui	Least Concern	H
71	*Clerodendrum chinense* (Osbeck) Mabb.	Lamiaceae	Stick bush	Least Concern	S
72	*Vitex negundo* L.	Lamiaceae	Nirgudi	Least Concern	S
73	*Gmelina arborea* Roxb. ex Sm.	Lamiaceae	Shivan	Least Concern; Medicinal	T
74	*Utricularia striatula* Sm.	Lentibulariaceae	Chire papani, Striped Bladderwort	Least Concern	H
75	*Lagerstroemia indica* L.	Lythraceae	Jarul	Least Concern	T
76	*Woodfordia fruticosa* (L.) Kurz	Lythraceae	Dhayati	Least Concern	S
77	*Hiptage benghalensis* (L.) Kurz	Malpighiaceae	Madhu Malati	Least Concern	L
78	*Bombax ceiba* L.	Malvaceae	Shalamli	Least Concern	T
79	*Firmiana simplex* (L.) W.Wight	Malvaceae	Kaushi	Least Concern	T
80	*Kydia calycina* Roxb.	Malvaceae	Warang	Least Concern	T
81	*Thespesia populnea* (L.) Sol. ex Correa	Malvaceae	Parosa Pimpal	Least Concern	T
82	*Grewia abutilifolia* Vent. ex Juss.	Malvaceae	Kirmit	Least Concern	S
83	*Grewia asiatica* L.	Malvaceae	Falasa	Least Concern	S
84	*Grewia flavescens* Juss.	Malvaceae	Donkey Berry	Least Concern	S
85	*Grewia hirsuta* Vahl.	Malvaceae	Guda Sharkara	Least Concern	S
86	*Erinocarpus nimmonii* Grah.	Malvaceae	Chira	Vulnerable	T

	Species	Family	Local name	IUCN Red List status / Importance	Habit
87	*Azadirachta indica* A. Juss.	Meliaceae	Kadunimb	Least Concern	T
88	*Cipadessa baccifera* (Roxb. ex Roth) Miq.	Meliaceae	Ranbili	Least Concern	T
89	*Melia azedarach* L.	Meliaceae	Mahaneem	Least Concern	T
90	*Ficus racemosa* L.	Moraceae	Umber	Least Concern	T
91	*Moringa oleifera* Lam.	Moringaceae	Shevaga	Least Concern	T
92	*Syzygium cumini* (L.) Skeels	Myrataeae	Jambhool	Least Concern	T
93	*Eucalyptus globulus* Labill.	Myrtaceae	Nilgiri	Least Concern	T
94	*Nyctanthes arbor-tristis* L.	Oleaceae	Prajakt	Least Concern	S
95	*Ludwigia octovalvis* (Jacq.) P.H.Raven	Onagraceae	Pan Lavang	Least Concern	H
96	*Habenaria grandifloriformis* Blatt. & McCann	Orchidaceae	Chikar kanda	Nearly Threatened	H
97	*Breynia retusa* (Dennst.) Alston	Phyllanthaceae	Dal Phodi	Least Concern	T
98	*Phyllanthus emblica* L.	Phyllanthaceae	Amala	Least Concern	T
99	*Securinega leucopyrus* (Willd.) Müll.Arg.	Phyllanthaceae	Pandharphali	Least Concern	T
100	*Bridelia stipularis* (L.) Blume	Phyllanthaceae	Phatarpodi	Least Concern	T
101	*Phyllanthus leucopyrus* (Willd.) J.Koenig ex Roxb.	Phyllanthaceae	Pandharphali	Least Concern	T
102	*Cenchrus ciliaris* L.	Poaceae	Buffel grass	Least Concern	H
103	*Echinochloa colona* (L.) Link	Poaceae	Borur	Least Concern	H
104	*Eleusine indica* (L.) Gaertn.	Poaceae	Nandimukhi	Least Concern	H
105	*Eragrostis unioloides* (Retz.) Nees	Poaceae	-	Least Concern	H
106	*Paspalum distichum* L.	Poaceae	-	Least Concern	H
107	*Chionachne gigantea* (J. Koenig) Veldkamp	Poaceae	-	Least Concern	H
108	*Maesa lanceolata* Forssk.	Primulaceae	False Assegai	Least Concern	T
109	*Grevillea robusta* A.Cunn. ex R.Br.	Proteaceae	Silver oak	Least Concern	T
110	*Putranjiva roxburghii* Wall.	Putranjivaceae	Putranjiva	Least Concern	T
111	*Ziziphus mauritiana* Lam.	Rhamnaceae	Bor	Least Concern	S
112	*Ziziphus oenopolia* (L.) Mill.	Rhamnaceae	Burgi	Least Concern	S
113	*Catunaregam spinosa* (Thunb.) Tirveng.	Rubiaceae	Gela, Madanphal	Least Concern	T
114	*Clausena anisata* (Willd.) Hook.f. ex Benth.	Rutaceae	Horse Wood	Least Concern	S
115	*Murraya koenigii* (L.) Spreng.	Rutaceae	Kadhipatta	Least Concern	T
116	*Aegle marmelos* (L.) Correa	Rutaceae	Bel	Neat Threatened	T
117	*Glycosmis mauritiana* (Lam.) Tanaka	Rutaceae	Rum Berry	Not Evaluated	S
118	*Salix tetrasperma* Roxb.	Saliaceae	Jalvetas, Walunj	Least Concern	T
119	*Santalum album* L.	Santalaceae	Chandan	Vulnerable	T
120	*Cardiospermum halicacabum* L.	Sapindaceae	Kanphuti, Kapalphodi	Least Concern	H
121	*Schleichera oleosa* (Lour.) Oken	Sapindaceae	Kusum	Least Concern	T
122	*Mimusops elengi* L.	Sapotaceae	Bakool	Least Concern	T
123	*Solanum anguivi* Lam.	Solanaceae	Dorli	Least Concern	H
124	*Gnidia glauca* (Fresen.) Gilg	Thymelaeaceae	Datpadi	Least Concern	S
125	*Typha angustifolia* L.	Typhaceae	Pan Kanis	Least Concern	H
126	*Cyphostemma auriculatum* (Roxb.) P.Singh & B.V.Shetty	Vitaceae	Jangali Kajorni	Data Deficient	C
127	*Curcuma pseudomontana* J.Graham	Zingiberaceae	Ran Halad	Vulnerable	E

S—Shrub | C—Climber | T—Tree | H—Herb | E—Epimerals | L—Lianas.

Table 2. Endemic to Indian Subcontinent.

	Species	Family	Common name	Endemism	Habit	Accesion number
1	*Carvia callosa* (Nees) Bremek.	Acanthaceae	Karvy	Endemic to WG	MS	MERI-01
2	*Eranthemum roseum* R.Br.	Acanthaceae	Jangali Aboli	Endemic to WG	H	MERI-02
3	*Barleria cuspidata* Heyne ex Nees	Acanthaceae	Kate Koranti	Endemic to India	S	MERI-03
4	*Barleria involucrata* Nees	Acanthaceae	Jambhali Koranti	Endemic to Peninsular India	S	MERI-04
5	*Barleria terminalis* Nees.	Acanthaceae	Nili Koranti	Endemic to WG	S	MERI-05
6	*Miliusa tomentosa* Finet & Gagnep.	Annonaceae	Hoom	Endemic to India	T	MERI-06
7	*Pimpinella tomentosa* Dalz.	Apiaceae	Ran Jire	Endemic to Indian subcontinent	H	MERI-07
8	*Cynanchum sahyadricum* (Ansari & Hemadri) Liede & Khanum	Apocynaceae		Endemic to the Laccadive Islands in Maharashtra	C	MERI-08
9	*Ceropegia bulbosa* Roxb. var. *bulbosa*	Apocynaceae	Kharpudi	Endemic to India	C	MERI-09
10	*Ceropegia bulbosa var. lushii* (Graham) Hook.f.	Apocynaceae	Kharpudi	Endemic to India	C	MERI-10
11	*Ceropegia hirsuta* Hochstetter ex Decaisne	Apocynaceae	Hamana	Endemic to Peninsular India	C	MERI-11
12	*Ceropegia oculata* Hook.	Apocynaceae	Mor Kharchudi	Endemic to India	C	MERI-12
13	*Hemidesmus indicus* (L.) R.Br. ex Schult.	Apocynaceae	Anantmool	Endemic to SWG	C	MERI-13
14	*Arisaema murrayi* (J.Graham) Hook.	Araceae	Pandhara Sapkanda	Endemic to WG	E	MERI-14
15	*Scilla hyacinthina* (Roth) J.F.Macbr.	Asparagaceae	Khajkanda	Endemic to WG	H	MERI-15
16	*Chlorophytum borivilianum* Santapau & R.R.Fern.	Asparagaceae	Safed Musali	Endemic to NWG	E	MERI-16
17	*Tricholepis amplexicaulis* C.B.Clarke	Asteraceae	Dahan	Endemic to NWG	H	MERI-17
18	*Cyathocline purpurea* (Buch.-Ham. ex D.Don) O.Ktze. var. *bicolor* Santapau	Asteraceae	Gangotra	Endemic to NWG	H	MERI-18
19	*Pentanema indicum* (L.) Y.Ling	Asteraceae	Sonakadi	Endemic to Peninsular India	H	MERI-19
20	*Senecio bombayensis* N. P.Balakr.	Asteraceae	Sonaki	Endemic to India	H	MERI-20
21	*Tricholepis radicans* (Roxb.) Wight	Asteraceae	Mundagoose	Endemic to Western Peninsular India	H	MERI-21
22	*Dolichandrone falcata* Seem.	Bignoniaceae	Medhshingi	Endemic to India	T	MERI-22
23	*Heterophragma quadriloculare* (Roxb.) K.Schum.	Bignoniaceae	Waras	Endemic to Central & Peninsular India	T	MERI-23
24	*Radermachera xylocarpa* (Roxb.) Roxb. ex K.Schum.	Bignoniaceae	Khadshingi	Endemic to India	T	MERI-24
25	*Boswellia serrata* Roxb.	Burseraceae	Salai	Endemic to India	T	MERI-25
26	*Maytenus rothiana* (Walp.) Ramamoorthy	Celastraceae	Makar Khana	Endemic to Peninsular India	S	MERI-26
27	*Iphigenia stellata* Blatt.	Colchicaceae	Gulabi Bhui Chakra	Endemic to NWG	E	MERI-27
28	*Iphigenia magnifica* Ansari & R.S.Rao	Colchicaceae	Magnificent Grass Lily	Endemic to NWG	E	MERI-28
29	*Cyanotis fasciculata* (B.Heyne ex Roth) Schult. & Schult.f.	Commelinaceae	Nilwanti	Endemic to WG	H	MERI-29
30	*Commelina caroliniana* Walter	Commelinaceae	Asiatic dayflower	Restricted to India and North America'	H	MERI-30
31	*Argyreia boseana* Santapau & V.Patel	Convolvulaceae	Maralmathangi	Endemic to NWG	C	MERI-31
32	*Argyreia sericea* Dalz.	Convolvulaceae	Kesal Garvel	Endemic to Western Peninsula	C	MERI-32
33	*Argyreia cuneata* (Willd.) Ker Gawl.	Convolvulaceae	Mhalungi	Endemic to WG	S	MERI-33
34	*Cordia wallichii* G.Don	Cordiaceae	Bhokar	Endemic to South Western India	T	MERI-34

	Species	Family	Common name	Endemism	Habit	Accesion number
35	*Diospyros melanoxylon* Roxb.	Ebenaceae	Tendu, Temru	Endemic to Indian Subcontinent	T	MERI-35
36	*Diospyros paniculata* Dalz.	Ebenaceae	Tinduka, Tembhurni	Endemic to WG	T	MERI-36
37	*Crotalaria calycina* Schrank	Fabaceae	Silky Haired Rattlepod	Endemic to Indian subcontinent	H	MERI-37
38	*Paracalyx scariosus* (Roxb.) Ali	Fabaceae	Ran Ghevada	Endemic to Indian subcontinent	L	MERI-38
39	*Smithia setulosa* Dalz.	Fabaceae	Motha Kawala	Endemic to Indian subcontinent	H	MERI-39
40	*Galactia striata* (Jacq.) Urb.	Fabaceae	Slender Flowered Milkpea	Endemic to NWG	H	MERI-40
41	*Sphenostylis bracteata* (Baker) J.B.Gillett	Fabaceae	Ran Pavata	Endemic to NWG	C	MERI-41
42	*Alysicarpus pubescens* Y.W.Law	Fabaceae	Durangi Shevara	Endemic to Peninsular India	H	MERI-42
43	*Saraca asoca* (Roxb.) De Wilde	Fabaceae	Sita Ashok	Endemic to WG	T	MERI-43
44	*Vigna khandalensis* (Santapau) Sundararagh. & Wadhwa	Fabaceae	Badmoog, Khandala Wild Pea	Endemic to WG	H	MERI-44
45	*Moullava spicata* (Dalz.) Nicolson	Fabaceae	Wagati	Endemic to WG	S	MERI-45
46	*Pterocarpus marsupium* Roxb.	Fabaceae	Bivala	Endemic to Peninsular India	T	MERI-46
47	*Flacourtia latifolia* (Hook.f. & Thomson) T.Cooke	Flacourtiaceae	Tambat	Endemic to SWG	T	MERI-47
48	*Canscora diffusa* (Vahl) R.Br. ex Roem. & Schult.	Gentianaceae	Kilwar, Titawi	Endemic to peninsular NWG	H	MERI-48
49	*Leucas ciliata* Benth.	Lamiaceae	Burumbi	Endemic to India	H	MERI-49
50	*Pogostemon deccanensis* (Panigrahi) Press	Lamiaceae	Jambhali Manjiri	Endemic to WG	H	MERI-50
51	*Taxillus cuneatus* (B.Heyne ex Roth) Danser	Loranthaceae		Endemic to WG	H	MERI-51
52	*Erinocarpus nimmonii* Grah.	Malvaceae	Chira	Endemic to NWG	T	MERI-52
53	*Cipadessa baccifera* (Roxb. ex Roth) Miq.	Meliaceae	Ranbili	Endemic to WG	S	MERI-53
54	*Moringa oleifera* Lam.	Moringaceae	Shevaga	Endemic to India	T	MERI-54
55	*Jasminum malabaricum* Wight.	Oleaceae	Kusar	Endemic to WG	S	MERI-55
56	*Habenaria longicorniculata* J.Graham	Orchidaceae	Gudhi	Endemic	H	MERI-56
57	*Aerides maculosum* Lindl.	Orchidaceae	Draupadi Pushp	Endemic to WG	Ep	MERI-57
58	*Habenaria grandifloriformis* Blatt. & McCann	Orchidaceae	Chikar kanda	Endemic to Peninsular India	H	MERI-58
59	*Glochidion ellipticum* Wight	Phyllanthaceae	Bhoma	Endemic to WG	T	MERI-59
60	*Bridelia stipularis* (L.) Blume	Phyllanthaceae	Phatarpodi	Endemic to Peninsular India	T	MERI-60
61	*Phyllanthus emblica* L.	Phyllanthaceae	Amala	Endemic to WG	T	MERI-62
62	*Arundinella ciliata* Nees ex Miq.	Poaceae		Endemic to Peninsular India	H	MERI-62
63	*Putranjiva roxburghii* Wall.	Putranjivaceae	Putranjiva	Endemic to WG	T	MERI-63
64	*Delphinium malabaricum* (Huth) Munz	Ranunculaceae	Nilambari	Endemic to NWG	H	MERI-64
65	*Clematis gouriana* Roxb. ex DC.	Ranunculaceae	Morvel	Endemic to WG	C	MERI-65
66	*Ixora brachiata* Roxb.	Rubiaceae	Kurati	Endemic to WG	S	MERI-66
67	*Pavetta crassicaulis* Bremek.	Rubiaceae	Kathachampa	Endemic to WG	S	MERI-67
68	*Atalantia racemosa* Wight & Arn.	Rutaceae	Makad Limbu	Endemic to WG	T	MERI-68
69	*Clausena anisata* (Willd.) Hook.f. ex Benth.	Rutaceae	Horse Wood	Endemic to SWG	S	MERI-69
70	*Curcuma pseudomontana* J.Graham	Zingiberaceae	Ran Halad	Endemic to Eastern and Western Ghats	H	MERI-70

MS—Medium shrub | S—Shrub | C—Climber | T—Tree | H—Herb | Ep—Epiphyte | E—Epimerals.

Table 3. Plants preferred by butterflies (Larval host plants).

	Name of the plant species	Family
1	*Eranthemum roseum* R.Br.	Acanthacae
2	*Barleria prionitis* L.	Acanthaceae
3	*Strobilanthes callosus* Nees	Acanthaceae
4	*Hygrophila auriculata* (Schumach.) Heine	Acanthaceae
5	*Justicia adhatoda* L.	Acanthaceae
6	*Strobilanthes ixiocephala* Benth.	Acanthaceae
7	*Achyranthes aspera* L.	Amaranthaceae
8	*Amaranthus viridis* L.	Amaranthaceae
9	*Mangifera indica* L.	Anacardiaceae
10	*Annona squamosa* L.	Annonaceae
11	*Miliusa tomentosa* Finet & Gagnep.	Annonaceae
12	*Monoon longifolium* (Sonn.) B.Xue & R.M.K.Saunders	Annonaceae
13	*Ceropegia hirsuta* Wight & Arn.	Apocynaceae
14	*Ceropegia oculata* Hook.	Apocynaceae
15	*Tylophora indica* (Burm.f.) Merr.	Apocynaceae
16	*Wattakaka volubilis* (L.f.) Stapf	Apocynaceae
17	*Caryota urens* L.	Arecaceae
18	*Cocos nucifera* L.	Arecaceae
19	*Phoenix acaulis* Roxb.	Arecaceae
20	*Asclepias curassavica* L.	Asclepiadaceae
21	*Calotropis gigantea* (L.) W.T.Aiton	Asclepiadaceae
22	*Calotropis procera* (Aiton) W.T.Aiton	Asclepiadaceae
23	*Capparis zeylanica* L.	Capparidaceae
24	*Terminalia catappa* L.	Combretaceae
25	*Bryophyllum pinnatum* (Lam.) Oken	Crassulaceae
26	*Dioscorea alata* L.	Dioscoreaceae
27	*Dioscorea wallichii* Hook.f.	Dioscoreaceae
28	*Diospyros melanoxylon* Roxb.	Ebenaceae
29	*Bridelia stipularis* (L.) Blume	Euphorbiaceae
30	*Mallotus philippensis* (Lam.) Müll. Arg.	Euphorbiaceae
31	*Ricinus communis* L.	Euphorbiaceae
32	*Desmodium triflorum* (L.) DC.	Fabacaee
33	*Acacia catechu* (L.f.) Willd.	Fabaceae
34	*Acacia concinna* (Willd.) DC.	Fabaceae
35	*Acacia nilotica* (L.) Willd. ex Delile	Fabaceae
36	*Acacia torta* (Roxb.) Craib	Fabaceae
37	*Cassia fistula* L.	Fabaceae
38	*Crotalaria hebecarpa* (DC.) Rudd	Fabaceae
39	*Dalbergia lanceolaria* L.f.	Fabaceae
40	*Derris indica* (Lam.) Bennet	Fabaceae
41	*Mucuna pruriens* (L.) DC.	Fabaceae
42	*Senna obtusifolia* (L.) H.S.Irwin & Barneby	Fabaceae
43	*Sesbania bispinosa* (Jacq.) W.Wight	Fabaceae
44	*Tamarindus indica* L.	Fabaceae
45	*Zornia gibbosa* Span.	Fabaceae
46	*Flacourtia indica* (Burm.f.) Merr.	Flacourtiaceae
47	*Dendrophthoe falcata* (L.f.) Ettingsh.	Loranthaceae
48	*Loranthus longiflorus* Desr.	Lorathaceae
49	*Magnolia champaca* (L.) Baill. ex Pierre	Magnoliaceae
50	*Hiptage benghalensis* (L.) Kurz	Malphighiaceae
51	*Abutilon pannosum* (G.Forst.) Schltdl.	Malvaceae
52	*Hibiscus tiliaceus* L.	Malvaceae
53	*Sida rhombifolia* L.	Malvaceae
54	*Triumfetta rhomboidea* Jacq.	Malvaceae
55	*Ficus benghalensis* L.	Moraceae
56	*Ficus racemosa* L.	Moraceae
57	*Aerides maculosum* Lindl.	Orchidaceae
58	*Oxalis corniculata* L.	Oxalidaceae
59	*Argemone mexicana* L.	Papaveraceae
60	*Plumbago zeylanica* L.	Plumbaginaceae
61	*Bambusa vulgaris* Schrad. ex J.C. Wendl. var. *vulgaris*	Poaceae
62	*Oryza sativa* L.	Poaceae
63	*Maesa lanceolata* Forssk.	Primulaceae
64	*Punica granatum* L.	Punicaceae
65	*Ziziphus jujuba* Mill.	Rhamnaceae
66	*Ziziphus rugosa* Lam.	Rhamnaceae
67	*Catunaregam spinosa* (Thunb.) Tirveng.	Rubiaceae
68	*Ixora coccinea* L.	Rubiaceae
69	*Atalantia racemosa* Wight & Arn.	Rutaceae
70	*Grewia tiliifolia* Vahl	Tiliaceae
71	*Curcuma pseudomontana* J.Graham	Zingiberaceae
72	*Zingiber neesanum* (J.Graham) Ramamoorthy	Zingiberaceae

Asteraceae (22 spp.), and Acanthaceae (21 spp.). *Grewia* (6 spp.) *Barleria, Crotalaria, Ipomoea*, (5 spp. each), *Acacia, Argyreia, Albizzia, Ceropegia, Iphigenia, Solanum* (4 spp. each), *Abutilon, Commelina, Datura, Diospyros, Euphorbia, Haplanthodes, Indigofera, Phyllanthus, Sida, Vigna, Ziziphus* (3 spp. each) are among the most diverse genera reported from study region. Moreover, 27 genera are represented by two species while 233 genera have single taxa in the study region. The diversified vegetation with respect to habits such as annual, perennial, herbs, shrubs, trees, climbers, liana, monocarpic ephemeral, epiphytic, and parasites have been reported. About 12 mammals and 32 bird species have been recorded from the study region (Tables 5 & 6).

Table 4. Enumeration of common plant taxa in the study area.

	Species	Family	Common name	Status / Importance	Habit
1	*Andrographis paniculata* (Burm.f.) Wall.	Acanthaceae	Chirayat	Medicinal	H
2	*Asystasia violacea* Dalz.	Acanthaceae	Neelkantha	Weed	H
3	*Barleria cristata* L.	Acanthaceae	Pandhari Koranti	Wild Ornamental	S
4	*Dicliptera foetida* Blatt.	Acanthaceae	Jivani		H
5	*Haplanthodes neilgherryensis* R.B.Majumdar	Acanthaceae	Kateri Jakara		H
6	*Haplanthodes plumosa* Panigrahi & G.C.Das	Acanthaceae	Jakara		H
7	*Haplanthodes verticillatus* R.B.Majumdar	Acanthaceae	Kale Kirayat		H
8	*Justicia betonica* L.	Acanthaceae	Gulabi Adulasa		H
9	*Lepidagathis cristata* Willd.	Acanthaceae	Bhui Gend		H
10	*Lepidagathis cuspidata* Nees	Acanthaceae	Kate adulasa		H
11	*Neuracanthus sphaerostachyus* Dalz.	Acanthaceae	Golgonda		H
12	*Peristrophe paniculata* (Forssk.) Brummitt	Acanthaceae	Rankirayat, Pittapapada		H
13	*Thunbergia fragrans* Roxb.	Acanthaceae	Chimine	Wild Ornamental	C
14	*Alternanthera philoxeroides* (Mart.) Griseb.*	Amaranthaceae	Bech Kusal	Weed	H
15	*Crinum latifolium* L.	Amaryllidaceae	Sudarshana	Ornamental	E
16	*Spondias pinnata* (L.f.) Kurz	Anacardiaceae	Ambada	Wild edible	T
17	*Anona reticulata* L.*	Annonaceae	Ramphal	Edible	T
18	*Carissa carandas* L.	Apocynaceae	Karvand	Wild edible	S
19	*Cryptolepis buchananii* R.Br. ex Roem. & Schult	Apocynaceae	Kavali, Krishna Sariva	Weed	C
20	*Wrightia tinctoria* (Roxb.) R.Br.	Apocynaceae	Kala Kuda	Medicinal	T
21	*Phoenix sylvestris* (L.) Roxb.	Arecaceae	Shindi		T
22	*Protasparagus racemosus* Oberm.	Asparagaceae	Shatawari	Medicinal	C
23	*Adenostemma lavenia* (L.) Kuntze	Asteraceae	Jangali Jeera		H
24	*Artemisia nilagirica* (C.B.Clarke) Pamp.	Asteraceae	Dhor Davana		H
25	*Bidens biternata* (Lour.) Merr. & Sherff	Asteraceae	Chirchitta		H
26	*Blumea axillaris* (Lam.) DC.	Asteraceae	Kukundar		H
27	*Conyza stricta* Willd.	Asteraceae	Bat Davana	Weed	H
28	*Echinops echinatus* Roxb.	Asteraceae	Kate Chendu, Brahma Dandi		H
29	*Gynura bicolor* (Roxb. ex Willd.) DC.	Asteraceae	Kusumbi		H
30	*Gynura nitida* DC	Asteraceae	Kusumbi		H
31	*Kleinia grandiflora* (Wall. ex DC.) N.Rani	Asteraceae	Vandar Roti		H
32	*Launaea procumbens* (Roxb.) Ramayya & Rajagopal	Asteraceae	Pathari	Wild edible	H
33	*Pentanema cernuum* (Dalz.) Y.Ling	Asteraceae	Sonasari		H
34	*Siegesbeckia orientalis* L.	Asteraceae	Katampu		H
35	*Sonchus oleraceus* L.	Asteraceae	Dudhi		H
36	*Tridax procumbens* L.	Asteraceae	Ekdandi	Medicinal	H
37	*Vernonia divergens* (DC.) Edgew.	Asteraceae		Weed	H
38	*Impatiens walleriana* Hook.f.	Balsaminaceae	Sultan's Balsam		H
39	*Trichodesma indicum* (L.) Lehm.	Boraginaceae	Adhapuspi		H
40	*Cassine glauca* (Rottb.) Kuntze	Celastraceae	Motha Bhutya		T
41	*Cleome gynandra* L.	Cleomaceae	Pandhari Tilwan		H
42	*Iphigenia indica* (L.) A.Gray ex Kunth	Colchicaceae	Jambhale bhui chakra		E
43	*Iphigenia pallida* Baker	Colchicaceae	Bhui chakra		E
44	*Combretum albidum* G.Don	Combretaceae	Piluki		L
45	*Combretum indicum* (L.) DeFilipps	Combretaceae	Lal Chameli		L
46	*Terminalia arjuna* (Roxb. ex DC.) Wight & Arn.	Combretaceae	Arjun	Medicinal	T

	Species	Family	Common name	Status / Importance	Habit
47	*Terminalia chebula* Retz.	Combretaceae	Hirada	Medicinal	T
48	*Commelina forskaolii* Vahl.	Commelinaceae	Kanpet		H
49	*Cyanotis tuberosa* (Roxb.) Schult. & Schult.f.	Commelinaceae	Aabhali		H
50	*Tonningia axillaris* (L.) Raf.	Commelinaceae	Bechaka		H
51	*Argyreia elliptica* (Roth) Choisy	Convolvulaceae	Kedari		C
52	*Camonea umbellata* (L.) A.R.Simões & Staples	Convolvulaceae	Motiya		C
53	*Evolvulus alsinoides* (L.) L. *	Convolvulaceae	Shankhapushpi		H
54	*Ipomoea capillacea* (Kunth) G.Don*	Convolvulaceae	Water spinach		C
55	*Ipomoea carnea* Jacq. *	Convolvulaceae	Besharam		S
56	*Ipomoea hederifolia* L. *	Convolvulaceae	Lal Pungali, Ganesh vel		C
57	*Ipomoea muricata* (L.) Jacq.*	Convolvulaceae	Bhingari		C
58	*Ipomoea nil* (L.) Roth. *	Convolvulaceae	Neelpushpi, Kalanjani		C
59	*Ipomoea obscura* (L.) Ker Gawl.*	Convolvulaceae	Vachagandha, Pivali Bhowari		C
60	*Porana malabarica* C.B.Clarke*	Convolvulaceae	Bhovari		C
61	*Rivea ornata* (Roxb.) Choisy	Convolvulaceae	Sanjvel, Kalmi Lata		L
62	*Kalanchoe pinnata* (Lam.) Pers.	Crassulaceae	Panphuti	Medicinal	H
63	*Coccinia grandis* (L.) Voigt*	Cucurbitaceae	Tondali	Medicinal; Wild edible	C
64	*Diplocyclos palmatus* (L.) C.Jeffrey	Cucurbitaceae	Shivlingi	Medicinal	C
65	*Momordica dioica* Roxb. ex Willd.	Cucurbitaceae	Kartooli	Wild edible	C
66	*Solena amplexicaulis* (Lam.) Gandhi	Cucurbitaceae	Gometi		C
67	*Trichosanthes tricuspidata* Lour.	Cucurbitaceae	Kavandal		C
68	*Kyllinga triceps* var. *ciliata* Boeckeler	Cyperaceae	Shwetnirvisha		H
69	*Dioscorea dodecaneura* Vell.	Dioscoreaceae	Kadu karanda	Wild edible	C
70	*Diospyros nigrescens* (Dalz.) C.J.Saldanha*	Ebenaceae	Rakta roda		T
71	*Euphorbia hirta* L. *	Euphorbiaceae	Dudhani	Weed	H
72	*Jatropha gossypifolia* L.*	Euphorbiaceae	Ratanjyoti	Ornamental	S
73	*Abrus precatorius* L.*	Fabaceae	Gunja	Medicinal	C
74	*Alysicarpus tetragonolobus* Edgew.	Fabaceae	Lal Shevara		H
75	*Bauhinia vahlii* Wight & Arn.	Fabaceae	Aapta		T
76	*Clitoria ternatea* L. var. *pilosula* Wall. ex Baker	Fabaceae	Pandhari Gokarna	Endemic; Ornamental	C
77	*Clitoria ternatea* L. var. *ternatea**	Fabaceae	Nili Gokarna	Medicinal; Ornamental	C
78	*Crotalaria juncea* L.	Fabaceae	Sun Hemp		H
79	*Crotalaria pallida* Aiton	Fabaceae	Jangali Tag		H
80	*Crotalaria spectabilis* Roth	Fabaceae	Dingala		H
81	*Derris trifoliata* Lour.	Fabaceae	Karanjvel		L
82	*Desmodium gangeticum* (L.) DC.	Fabaceae	Salvan, Ranganjya		H
83	*Entada rheedei* Spreng.	Fabaceae	Garambi	Medicinal	L
84	*Erythrina suberosa* Roxb.	Fabaceae	Pangari	Wild Ornamental	T
85	*Grona triflora* (L.) H.Ohashi & K.Ohashi	Fabaceae	Ran Methi		H
86	*Hultholia mimosoides* (Lam.) Gagnon & G.P.Lewis	Fabaceae	Vishakhmantha		T
87	*Indigofera cassioides* Rottler ex DC.	Fabaceae	Unhali		H
88	*Indigofera cordifolia* B.Heyne ex Roth	Fabaceae	Godhadi		H
89	*Vigna sublobata* (Roxb.) Bairig., Panda, B.P.Choudhury & Patnaik	Fabaceae	Jangali Udid, Vel Moong	Wild edible	C
90	*Vigna vexillata* (L.) A.Rich.	Fabaceae	Halunda, Jangali Moong	Wild edible	C
91	*Heliotropium indicum* L.	Heliotropiaceae	Bhurundi		H

	Species	Family	Common name	Status / Importance	Habit
92	*Curculigo orchioides* Gaertn.	Hypoxidaceae	Kali Musali		E
93	*Hypoxis aurea* Lour.	Hypoxidaceae	Son tara		E
94	*Anisomeles indica* (L.) Kuntze	Lamiaceae	Gopali		H
95	*Anisomeles malabarica* (L.) R.Br. ex Sims	Lamiaceae	Mahadron		H
96	*Callicarpa tomentosa* Lam.	Lamiaceae	Priyangu, Hesur		T
97	*Coleus strobilifer* (Roxb.) A.J.Paton	Lamiaceae	Panmanjiri, Karpurvallii		H
98	*Hyptis suaveolens* (L.) Poit.	Lamiaceae	Darp tulas	Weed	H
99	*Lavandula lawii* Wight*	Lamiaceae	Nivali		H
100	*Leonotis nepetifolia* (L.) R.Br.	Lamiaceae	Deepmaal, Granthiparni		H
101	*Orthosiphon pallidus* Royle ex Benth.	Lamiaceae	Jyoti, Shwet Kutheraka		H
102	*Rotheca serrata* (L.) Steane & Mabb.	Lamiaceae	Bharangi	Wild edible	H
103	*Salvia plebeia* R.Br.	Lamiaceae	Samudraphala shati		H
104	*Vitex trifolia* L.	Lamiaceae	Nirgundi	Medicinal	S
105	*Cinnamomum verum* J.Presl.*	Lauraceae	Dalchini	Medicinal	T
106	*Macrosolen capitellatus* (Wight & Arn.) Danser	Loranthaceae	Lahan Bandgul	Parasite	H
107	*Abutilon indicum* (L.) Sweet	Malvaceae	Bala	Medicinal	S
108	*Abutilon persicum* (Burm.f.) Merr.	Malvaceae	Ran Petari		S
109	*Corchorus olitorius* L.	Malvaceae	Banpaat		H
110	*Grewia multiflora* Juss.	Malvaceae	Kawari		S
111	*Helicteres isora* L.	Malvaceae	Muradsheng	Medicinal	S
112	*Hibiscus tetraphyllus* Roxb. ex Hornem.	Malvaceae	Native Rosella		S
113	*Malvastrum coromandelianum* (L.) Garcke	Malvaceae	False Mallow		S
114	*Sida acuta* Burm.f.*	Malvaceae	Bala, Chikana	Medicinal	H
115	*Sida cordifolia* L.*	Malvaceae	Bala, Chikana	Medicinal	H
116	*Sterculia urens* Roxb.	Malvaceae	Bhutya	Medicinal	T
117	*Thespesia lampas* (Cav.) Dalz. & A.Gibson	Malvaceae	Gulbhendi, Ran bhendi	Ornamental	T
118	*Urena sinuata* L.*	Malvaceae	Rankapashi, Nagbala		H
119	*Commicarpus chinensis* (L.) Heimerl	Nyctaginaceae	Punarnava		H
120	*Buchnera hispida* Buch.-Ham. ex D.Don	Orbanchaceae	Karanjee	Parasite	H
121	*Rhamphicarpa longiflora* Wight ex Benth.	Orbanchaceae	Tutari		H
122	*Sopubia delphinifolia* D.Don	Orbanchaceae	Dudhali		H
123	*Striga densiflora* (Benth.) Benth.	Orbanchaceae	Agya	Parasite	H
124	*Biophytum umbraculum* Welw.	Oxalidaceae	Lajwanti, Jalpushpa		H
125	*Passiflora foetida* L.	Passifloraceae	Vel Ghani	Ornamental	C
126	*Sesamum orientale* L.*	Pedaliaceae	Safed Til		H
127	*Glochidion velutinum* Wight	Phyllanthaceae			T
128	*Phyllanthus amarus* Schumach. & Thonn.	Phyllanthaceae	Bhui Awali, Bhumyaamalaki		T
129	*Apluda mutica* L.*	Poaceae			H
130	*Chloris barbata* Sw.	Poaceae	Gondvel		H
131	*Chloris virgata* Sw.*	Poaceae	Feather fingergrass		H
132	*Chrysopogon fulvus* (Spreng.) Chiov.*	Poaceae			H
133	*Coix lacryma-jobi* L.	Poaceae	Ran Jondhala	Ornamental	H
134	*Cynodon dactylon* (L.) Pers.*	Poaceae	Harali	Medicinal	H
135	*Dactyloctenium aegyptium* (L.) Willd.	Poaceae	Duck Grass		H
136	*Dendrocalamus strictus* (Roxb.) Nees*	Poaceae	Kalak		T
137	*Dichanthium annulatum* (Forssk.) Stapf	Poaceae	Shed grass		H
138	*Digitaria ciliaris* (Retz.) Koeler*	Poaceae	Bamboo grass		H

	Species	Family	Common name	Status / Importance	Habit
139	*Dimeria connivens* Hack.	Poaceae			H
140	*Dinebra retroflexa* (Vahl) Panz.	Poaceae	Kangar		H
141	*Eragrostis pilosa* (L.) P.Beauv.	Poaceae			H
142	*Heteropogon contortus* (L.) P. Beauv. ex Roem. & Schult.*	Poaceae			H
143	*Panicum maximum* Jacq.	Poaceae			H
144	*Pseudanthistiria heteroclita* (Roxb.) Hook.f.	Poaceae			H
145	*Sorghum bicolor* (L.) Moench	Poaceae			H
146	*Sporobolus diandrus* (Retz.) P.Beauv.*	Poaceae			H
147	*Themeda triandra* Forssk.	Poaceae			H
148	*Polygala persicariifolia* DC	Polygalaceae			H
149	*Polygonum auriculatum* Meisn.	Polygonaceae			H
150	*Maesa lanceolata* Forssk.	Primulaceae	False Assegai	Least Concern	T
151	*Ziziphus caracutta* Roxb.*	Rhamnaceae	Ghat bor	Wild edible	S
152	*Meyna laxiflora* Robyns	Rubiaceae	Myna	Wild edible	T
153	*Mitragyna parvifolia* (Roxb.) Korth.	Rubiaceae	Kadamb	Ornamental	T
154	*Viscum monoicum* Roxb. ex DC.	Santalaceae		Parasite	H
155	*Madhuca longifolia* (J.Koenig ex L.) J.F.Macbr.	Sapotaceae	Moha	Endemic; Medicinal	T
156	*Verbascum chinense* (L.) Santapau	Scrophulariaceae	Kutaki, Bhootkeshi		H
157	*Smilax ovalifolia* Roxb.	Smilacaceae	Ghotwel		T
158	*Datura ferox* L.	Solanaceae	Kala Dhotra	Medicinal	H
159	*Datura innoxia* Mill.*	Solanaceae	Pandhara Dhotra	Medicinal	H
160	*Datura quercifolia* Kunth *	Solanaceae	Chinese thorn apple		H
161	*Nicandra physalodes* (L.) Gaertn.*	Solanaceae	Shoo fly plant		H
162	*Solanum nigrum* L. *	Solanaceae	Black nightshade		H
163	*Solanum torvum* Sw.*	Solanaceae	Turkey Berry		S
164	*Solanum virginianum* L.*	Solanaceae	Kantakee		H
165	*Withania somnifera* (L.) Dunal	Solanaceae	Ashwagandha	Medicinal	H
166	*Holoptelea integrifolia* Planch.	Ulmaceae	Papadi	Wild edible; Ornamental	T
167	*Lantana camara* L.	Verbenaceae	Ghaneri		H
168	*Ampelocissus latifolia* (Roxb.) Planch.	Vitaceae	Wild Grape		H

S—Shrub | C—Climber | T—Tree | H—Herb | E—Epimerals | L—Liana | *—non-native plant to the study area.

DISCUSSION

The Mahadare accounts for total 392 plant species, of which, 127 taxa are categorised under IUCN Red List of Threatened Species, and 70 are endemic to Western Ghats, Indian Peninsula, and Sri Lanka. Amongst these 72 plant species serve as larval host plants (LHP). Because of availability of LHP Mahadare is home for many endemic butterfly species which makes it the first butterfly conservation reserve in India (Dhale et al. 2024). The flora supports frugivorous mammals (12 species) and birds (32 species). There are 168 commonly occurring taxa which comprises plants of medicinal importance, edible value, and ornamental potential. Along with this the area is invaded by some weeds which may become threat to native flora and fauna. Before the study region has been declared as the conservation reserve, many anthropogenic activities such as overgrazing, farming activities, fires, picnic or tours, sewage disposal by hotels caused considerable threat to the flora and fauna. Since declaration of the conservation reserve, there is ban on any man-made activities as well as collection of the plantlets from the Mahadare.

The area supports variety of wild edible and wild ornamental species which can be domesticated and utilised to provide the economic stability to the local people. The wild relatives of cultivated legumes such as *Vigna khandalensis* have been reported from the study region. Such legumes need to be assessed for its nutritional, phytochemical, and biological properties

Table 5. List of frugivorous mammals in study area

	Scientific name	Family	Common name
1	*Bos gaurus*	Bovidae	Indian Gaur
2	*Tetracerus quadricornis*	Bovidae	Four-horned Antelope / Chousingha / Malsada
3	*Semnopithecus entellus*	Cercopithecidae	Hanuman Langur
4	*Macaca mulatta*	Cercopithecidae	Rhesus Macaque
5	*Muntiacus muntjac*	Cervidae	Barking Deer / Indian Muntjac
6	*Hystrix indica*	Hystricidae	Indian Crested Porcupine
7	*Lepus nigricollis*	Leporidae	Indian Hare
8	*Bandicota indica*	Muridae	Bandicoot Rat
9	*Cynoteropus brachyotis*	Pteropodidae	Short-nosed Fruit Bat
10	*Funambulus palmarum*	Sciuridae	Three-striped Palm Squirrel
11	*Ratufa indica*	Sciuridae	Indian Giant Squirrel
12	*Sus scorfa*	Suidae	Indian Wild Boar

and subsequently domestication practices need to be implicated. Lack of awareness about the unique diversity, threats, and deficit planning for prioritization the conservation endemic species especially supporting the butterflies are the major risk factors in near future. Presently efforts were made by Mahadare Ecological Research Institute for creating awareness among the local people and visitors, enlisting the butterfly, spiders, and birds in the region as well as collaboration with the forest department regarding the developmental activities and planning for conservation of plant species. Preparing checklist of flowering plants of any particular region supports the designing the conservation management of that region.

The habitat is ecotone hence it is rich in floral and faunal diversity. The flowering plant population express multi-storeyed habitat which provides favourable conditions for survival of wide range of animals including butterflies, birds, insects, mammals, moths, spiders, amphibians, and fishes. The animals and plants exhibit complex food web as well as notable prey-predator relationship. The Mahadare accounts for total 393 plant species of which 127 taxa are categorised under IUCN Red List of Threatened Species and 70 are endemic to Western Ghats and India. Amongst these 72 plant species serves as Larval Host Plants (LHP). The flora supports frugivorous mammals (12 species) and birds (32 species). The floristic components are vital for survival and diversification of fauna as they provide food in the form of nectar, fruits, leaves, sites for breeding, and nesting. Because of availability of LHP, Mahadare is home for many endemic butterfly species which makes it first Butterfly Conservation Reserve in India.

Though the habitat supports diversity of native floristics components, anthropogenic activities lead to invasion of exotic weeds, which leads to destruction of natural habitat for animals, allelopathy, land, and water degradation, resulting in loss of native biodiversity, and damaging the environment. Nowadays, the forest department is undertaking gradual irradiation program for exotic plants especially *Gliricidia* by replacing them with native trees.

The area supports variety of wild edible & ornamental species which can be domesticated, and utilised to provide economic stability to the local people. Lack of awareness about the unique diversity, threats, and deficit planning for prioritization of the conservation of endemic species, especially supporting the butterflies are the major risk factors in near future. Presently efforts were made by Mahadare Ecological Research Institute (MERI) for creating awareness among the local people and visitors, enlisting the butterfly, spiders, and birds in the region as well as collaboration with the forest department regarding the developmental activities and planning for conservation of plant species. The present investigation will be helpful for prioritising threatened species for the department of forests, scientific studies of ecotone habitat diversity by conservationists, biologists, anthropologists, and amateurs. The conservation reserve can also provide labour and income source by demonstrating ecotourism, education, and in situ conservation.

Table 6. List of frugivorous birds in study area.

	Scientific name	Family	Common name	IUCN Red List	Migratory status (for India)	Schedule	Feeding guild
1	*Galerida cristata*	Alaudidae	Crested Lark	LC	R	Sch II	O
2	*Ocyceros birostris*	Bucerotidae	Indian Grey Hornbill	LC	R	Sch II	F
3	*Lalage melanoptera*	Campephagidae	Black-headed Cuckooshrike	LC	RM	Sch II	O
4	*Coracias benghalensis*	Coraciidae	Indian Roller	LC	R	Sch II	O
5	*Cuculus micropterus*	Cuculidae	Indian Cuckoo	LC	RM	Sch II	O
6	*Clamator coromandus*	Cuculidae	Chestnut-winged Cuckoo	LC	R	Sch II	O
7	*Eudynamys scolopaceus*	Cuculidae	Asian Koel	LC	R	Sch II	O
8	*Centropus sinensis*	Cuculidae	Greater Coucal	LC	R	Sch II	O
9	*Dicrurus macrocercus*	Dicruridae	Black Drongo	LC	R	Sch II	O
10	*Dicrurus leucophaeus*	Dicruridae	Ashy Drongo	LC	RM	Sch II	O
11	*Dicrurus caerulescens*	Dicruridae	White-bellied Drongo	LC	R	Sch II	O
12	*Psilopogon hemacephalus*	Megalaimidae	Coppersmith Barbet	LC	R	Sch II	F
13	*Psilopogon zeylanicus*	Megalaimidae	Brown-headed Barbet	LC	R	Sch II	F
14	*Psilopogon viridis*	Megalaimidae	White-cheeked Barbet	LC	R	Sch II	F
15	*Oriolus kundoo*	Oriolidae	Indian Golden Oriole	LC	RM	Sch II	O
16	*Gymnoris xanthocollis*	Passeridae	Yellow-throated Sparrow	LC	R	Sch II	O
17	*Passer domesticus*	Passeridae	House Sparrow	LC	R	Sch II	O
18	*Psittacula krameria*	Psittaculidae	Rose-ringed Parakeet	LC	R	Sch II	F
19	*Psittacula cyanocephala*	Psittaculidae	Plum-headed Parakeet	LC	R	Sch II	F
20	*Loriculus vernalis*	Psittaculidae	Vernal Hanging Parrot	LC	R	Sch II	F
21	*Pycnonotus cafer*	Pycnonotidae	Red-vented Bulbul	LC	R	Sch II	O
22	*Pycnonotus jocosus*	Pycnonotidae	Red-whiskered Bulbul	LC	R	Sch II	O
23	*Sturnia pagodarum*	Sturnidae	Brahminy Starling	LC	R	Sch II	O
24	*Acridotheres tristis*	Sturnidae	Common Myna	LC	R	Sch II	O
25	*Acridotheres fuscus*	Sturnidae	Jungle Myna	LC	R	Sch II	O
26	*Corvus splendens*	Sturnidae	House Crow	LC	R	Sch II	O
27	*Corvus macrorhynchos*	Sturnidae	Large-billed Crow	LC	R	Sch II	O
28	*Dumetia hyperythra*	Timaliidae	Tawny-bellied Babbler	LC	R	Sch II	O
29	*Pomatorhinus horsfieldii*	Timaliidae	Indian Scimitar Babbler	LC	R	Sch II	O
30	*Argya striata*	Timaliidae	Jungle Babbler	LC	R	Sch II	O
31	*Upupa epops*	Upupidae	Eurasian Hoopoe	LC	RM	Sch II	O
32	*Tephrodornis pondicerianus*	Vangidae	Common Woodshrike	LC	R	Sch II	O

LC—Least Concern | R—Resident | RM—Resident & Migratory | Sch—Protected under Wildlife Protection Act Schedule II | F—Frugivorous | O—Omnivorous.

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Image 1. A—*Abutilon persicum* | B—*Acacia nilotica* | C—*Albizzia lebbeck* | D—*Anacardium occidentale* | E—*Bombax ceiba* | F—*Barleria prionitis* | G—*Ceropegia bulbosa* | H—*Colebrookia oppositifolia* | I—*Erinocarpus nimmonii* | J—*Firmiana colorata* | K—*Helicteres isora* | L—*Impatiens balsamina*. © Sunil H. Bhoite.

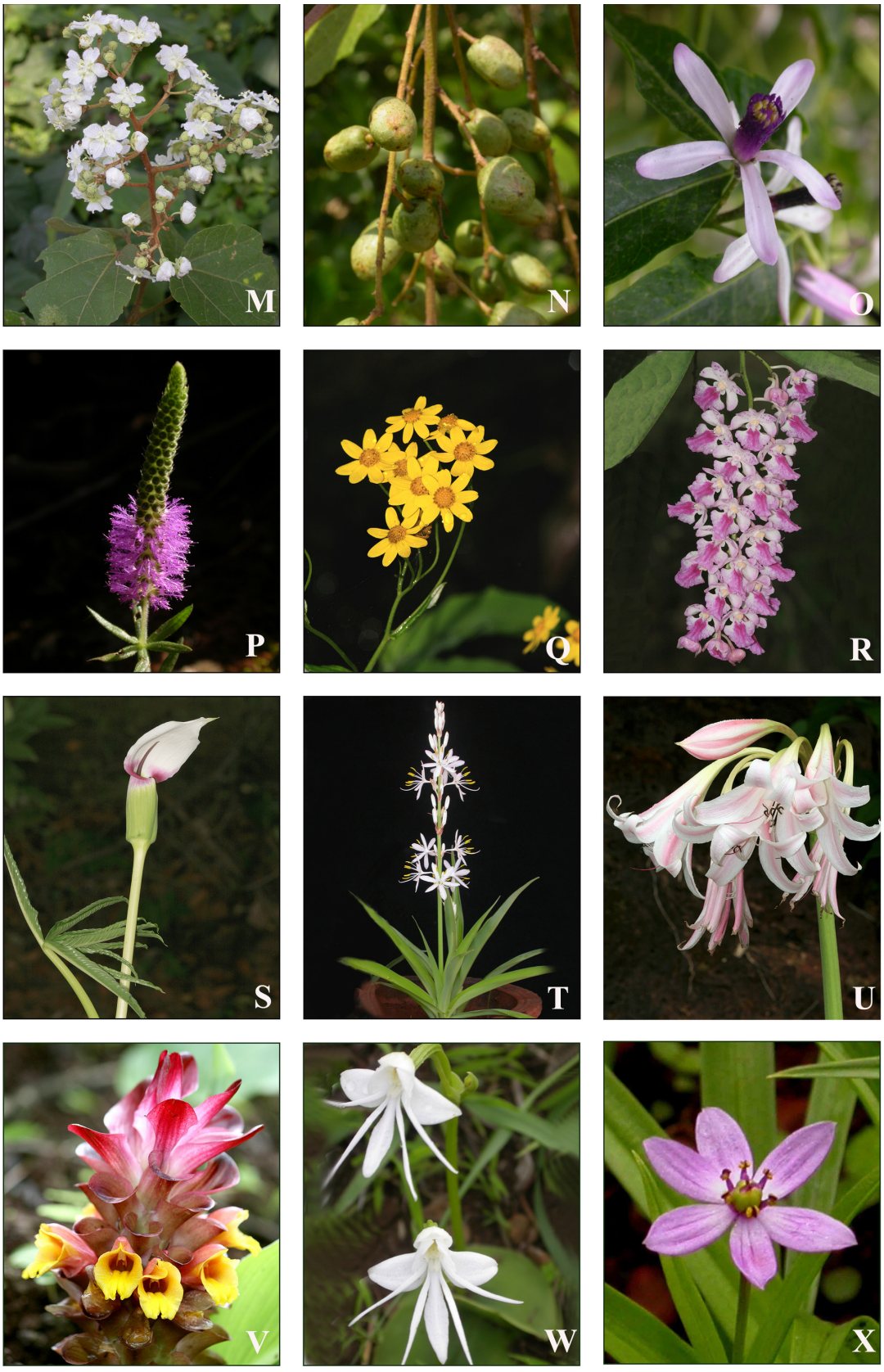

Image 2. M—*Kydia calycina* | N—*Lannea coromandeliana* | O—*Melia azadirach* | P—*Pogostemon deccanensis* | Q—*Senecio bombayensis* | R—*Arides maculosum* | S—*Arisaema murrayi* | T—*Chlorophytum borivilianum* | U—*Crinum latifolium* | V—*Curcuma pseudomontana* | W—*Habenaria grandifloriformis* | X—*Iphigenia stellata*. © Swapnaja M. Deshpande.

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