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Checklist of angiosperm flora of Kuno National Park – a site for cheetah reintroduction in India

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Abstract. The presented checklist provides up-to-date information on the angiosperm diversity of Kuno National Park. A total of 359 angiosperm species of 260 genera and 72 families were recorded during our study. Dicotyledons are represented by 63 families, 219 genera, and 299 species while monocotyledons by 9 families, 41 genera and 60 species. Information on the family, plant habits, phenology, collection numbers, and IUCN status of the documented species are also given.

Key words: angiosperm, checklist, Kuno National Park, IUCN status

1. Introduction

Kuno National Park (KNP, c. 25°40'N 77°10'E) belongs to the Kuno Wildlife Division of Sheopur district of Madhya Pradesh in central India. Phytogeographically, it falls under northern tropical dry deciduous forest and covers 748 km^2 (Champion & Seth 1968). KNP was established in 1981 as a wildlife sanctuary and the State Government changed its status into a national park in December 2018. The name of the park is based on the river Kuno, which is the lifeline of the park, flowing almost in its middle. The western side of the river is dominated by moderately to steeply sloping hills, while the eastern side forms a valley having flatter terrain with medium slopes. KNP comprises 4 ranges, namely Palpur-East, Palpur-West, Dhorat, and Occhapura (Figs. 1-2). Since being designated the sanctuary status, KNP has attracted many researchers, as it harbours diverse flora and fauna. It has gained both national and international recognition after its selection as a site for the reintroduction of both the Asiatic lion (*Panthera leo* (Linnaeus, 1758)) and cheetah (*Acinonyx jubatus venaticus* (Griffith, 1821)). In September 2022 the first batch of cheetahs was introduced to Kuno National Park. The aim of this reintroduction was to restore the ecological balance, promote biodiversity, enhance wildlife tourism, wildlife research, and conservation efforts in India.

Floristic studies are often considered "simply" traditional research, but their relevance is not decreased even in the present era of molecular biology (Wagensommer 2023). The knowledge of the flora of any protected area is considered to be a prerequisite for the formulation of a management action plan, strategies for biodiversity conservation, and reduction of the anthropogenic pressure on any protected area (Heywood 2019). It also provides baseline data for future studies, e.g. of climate change, endemic, rare, endangered, and threatened (RET) plant species (Jiménez *et al.* 2016), as well as for designation of "Areas of International Importance" and identification of areas suitable for reintroduction of targeted animal and plant species, etc. Besides, the floristic richness of any area also determines the success story of reintroduction of animal species, as it affects the food chains and the predator prey relationship.

Keeping in mind the above facts and the unavailability of any comprehensive account of floristic diversity of Kuno National Park, the present study was performed to document the angiosperm flora of this area.

2. Materials and methods

In 2021-2024, we conducted 4 floristic surveys, in all 4 ranges of Kuno National Park: Palpur East, Palpur West, Occhapura, and Dhorat. Plants were collected from various localities to cover a wide range of habitats,

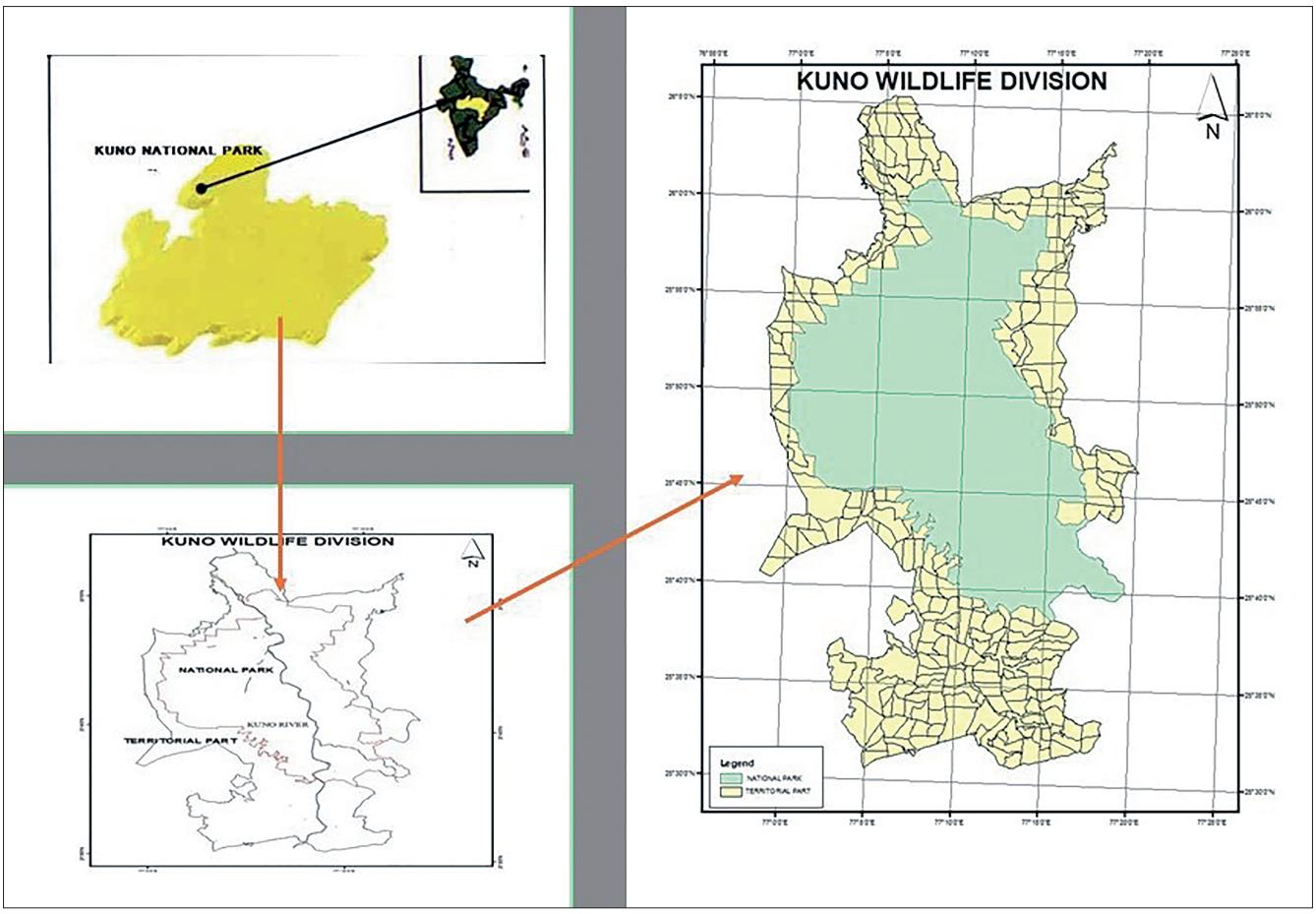

Fig. 1. Map of Kuno National Park according to its Management Plan (Office of Divisional Forest Officer, Kuno Wildlife Division Sheopur, Madhya Pradesh, India)

including forests, degraded lands, grasslands, other open habitats, ponds, riverbeds, and valleys. During the surveys in different seasons, specimens were collected in the flowering-fruiting stage and next processed according to standard methods adopted by the Botanical Survey of India (Bridson & Foman 1999). The plants were identified with the help of local floras, revisions, and monographs (Wood 1906; Hooker 1872-1897; Verma *et al.* 1993; Sikarwar & Kaushik 1995; Mudgal *et al.* 1997; Khanna *et al.* 2001; Singh *et al.* 2001), herbarium holdings, and herbarium consultation. The botanical names of the plant specimens were updated according to the Plants of the World Online (www.plantsoftheworldonline.org). The Angiosperm Phylogeny Group IV classification for families of flowering plants was followed while preparing the checklist. All the processed specimens were deposited in the herbarium of the Botanical Survey of India, Central Regional Center, Allahabad (BSA), for future reference and research

3. Result and discussion

In KNP, 359 species of angiosperms were recorded, classified as either wild or naturalized. These species are grouped in 260 genera and 72 families. Out of them, 63 families, 219 genera, and 299 species belong to dicotyledons and the other 9 families, 41 genera, and 60 species are monocotyledons. Among them, 235 species (65.46%) are herbs, including grasses and sedges, 65 (18.11%) are trees, 37 are climbers and creepers (10.31%), and 22 species are shrubs (6.13%). The ratio of monocotyledons to dicotyledons is 1:4.98 and of genus to species is l:1.38. The families represented by the largest numbers of species are the Fabaceae (53), Poaceae (39), Malvaceae (27), and Asteraceae (22), which together account for 39.28 % of all species (Fig. 3; Appendix 1).

The woody vegetation of KNP is dominated by *Senegalia catechu*, *Terminalia pendula*, *T. anogeissiana*, *Boswellia serrata*, *Vachellia leucopholea*, *V. nilotica*, *Diospyros melanoxylon*, and *Butea monosperma*, whereas grasslands by species of the genera *Themeda*, *Apluda,, Eragrostis, Heteropogon, Chrysopogon, Dichanthium, Cynodon, Cymbopogon*, and *Setaria.* Our observations indicate that the Dhorat range of KNP harbours the highest angiosperm diversity, followed by Occhapura, Palpur East, and Palpur West. The variation in diversity pattern is probably due to effects of earlier

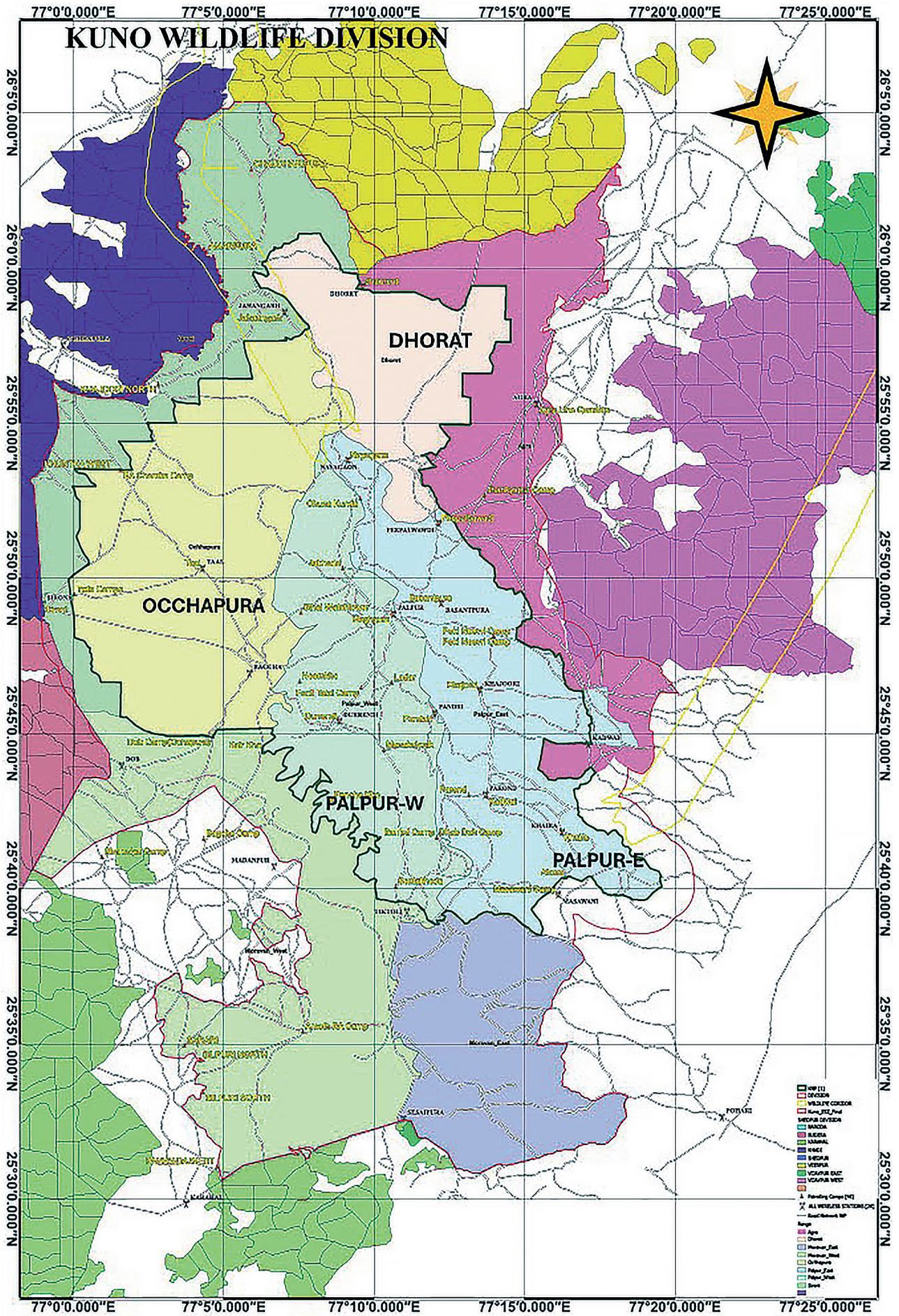

Fig. 2. Kuno National Park and its 4 ranges: Dhorat, Occhapura, Palpur East and Palpur West (Office of Divisional Forest Officer, Kuno Wildlife Division, Sheopur, Madhya Pradesh, India)

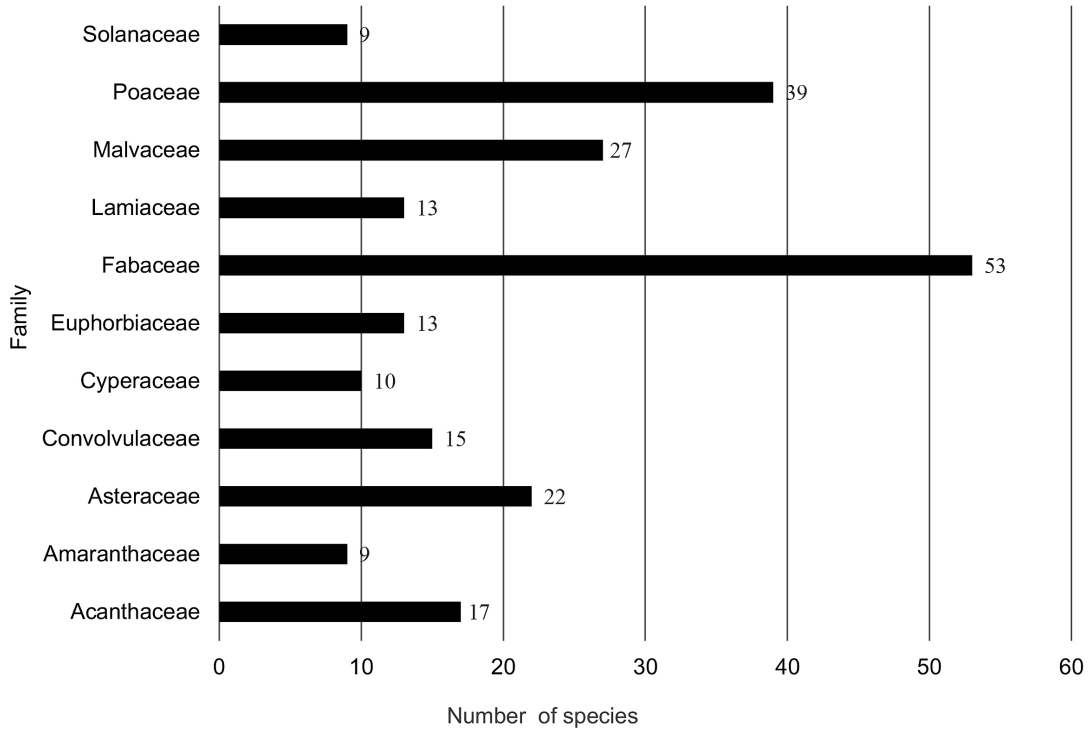

Fig. 3. The dominant plant families and number of species representing them in Kuno National Park

human settlements. In this study we also identified wild relatives (WR) of a number of economically important plant species: okra (WR: *Abelmoschus moschatus*, *A. tuberculatus*), maize (WR: *Coix lacryma-jobi*), bittergourd (WR: *Momordica charantia*, *M. dioica*), etc. Thus, our data and information present on herbarium sheets of the mentioned plant species will be useful for researchers who are searching for wild germplasms of cultivated plant species (Maxted & Kell 2009). Besides, the checklist provides information on the phenology of the listed plant species, so it will be useful both for researchers who are working on reproductive biology of selected species and for the collection of propagules needed for propagation and conservation of plant species (Perrino & Wagensommer 2022).

IUCN categorization (IUCN 2025) indicates that among the listed plant species, 3 are data deficient (DD), 135 are of least concern (LC), 1 is near threatened (NT), 1 is endangered (EN), and 2 are critically endangered (CR). The remaining 217 species are not included/ available (n.a.) in the IUCN database (Appendix 1). Consortia of conservation biologists contend that the IUCN classification is vital for all plants, as it offers a uniform approach for estimating and communicating the extinction risk confronted by plant species around the globe (Brummitt & Bachman 2010; Barik *et al.* 2018). The data are essential for conservation initiatives, policymaking, and scientific investigations.

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Critical revision of the article: A. K. Verma
Final approval of article: A. K. Verma

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Appendix 1. List of angiosperm species recorded from Kuno National Park, Madhya Pradesh, India

Name of Species	Family	Habit	Flowering-fruiting	Collection no.	IUCN category
Abelmoschus moschatus Medik.	Malvaceae	Herb	IX-XI	80166	n.a.
Abelmoschus tuberculatus Pal & Singh	Malvaceae	Herb	X-XI	80583	n.a.
Abrus precatorius L.	Fabaceae	Climber	II-VI	80347	n.a.
Abutilon indicum (L.) Sweet	Malvaceae	Herb	VIII-III	80616	n.a.
Abutilon persicum (Burm.f.) Merr.	Malvaceae	Herb	X-III	80161	n.a.
Acacia nilotica (L.) Willd. ex Delile	Fabaceae	Tree	III-IV	80330	n.a.
Acanthospermum hispidum DC.	Asteraceae	Herb	VII-XI	80188	n.a.
Achyranthes aspera L.	Amaranthaceae	Herb	X-I	80587	n.a.
Aegle marmelos (L.) Corrêa	Rutaceae	Tree	IV-XI	80338	n.a.
Aeschynomene aspera L.	Fabaceae	Shrub	VIII-XII	80226	LC
Aeschynomene indica L.	Fabaceae	Herb	VIII-XII	80761	n.a.
Ageratum conyzoides L.	Asteraceae	Herb	X-III	80785	n.a.
Ageratum houstonianum Mill.	Asteraceae	Herb	X-XII	80736	n.a.
Ailanthus excelsa Roxb.	Simaroubaceae	Tree	I-IV	80612	n.a.
Albizia lebbeck (L.) Benth.	Fabaceae	Tree	IV-X	80334	n.a.
Albizia procera (Roxb.) Benth.	Fabaceae	Tree	IX-IV	80382	LC
Alloteropsis cimicina (L.) Stapf	Poaceae	Grass	VII-XI	80534	n.a.
Alternanthera sessilis (L.) DC.	Amaranthaceae	Herb	Throughout Year	80629	n.a.
Alysicarpus hamosus Edge	Fabaceae	Herb	VIII-XI	80234	n.a.
Alysicarpus monilifer (L.) DC.	Fabaceae	Herb	VIII-IX	80597	n.a.
Alysicarpus ovalifolius (Schumach.) J.Léonard	Fabaceae	Herb	X-XI	80598	n.a.
Alysicarpus pokleanus Gholami & A.K.Pandey	Fabaceae	Herb	IX-X	80568	n.a.
Amaranthus spinosus L.	Amaranthaceae	Herb	Throughout Year	80212	n.a.
Amaranthus viridis L.	Amaranthaceae	Herb	VII-II	80602	n.a.
Ammannia baccifera L.	Lythraceae	Herb	XI-IV	80630	n.a.
Ampelocissus latifolia (Roxb.) Planch.	Vitaceae	Climber	V-XI	80732	n.a.
Anagallis arvensis L.	Primulaceae	Herb	XII-III	80792	n.a.
Andrachne telephioides L.	Phyllanthaceae	Herb	VI-III	80281	n.a.
Anisomeles indica (L.) Kuntze	Lamiaceae	Herb	VIII-III	80728	LC
Annona squamosa L.	Annonaceae	Tree	III-X	80373	LC
Apluda mutica L.	Poaceae	Grass	IX-XI	80513	n.a.
Argemone mexicana L.	Papaveraceae	Herb	III-X	80239	n.a.
Aristolochia indica L.	Aristolochiaceae	Climber	IX-III	80703	n.a.
Asparagus racemosus Willd.	Asparagaceae	Climber	VIII-VI	80295	n.a.
Asphodelus tenuifolius Cav.	Asphodelaceae	Herb	II-IV	80257	n.a.
Azadirachta indica A.Juss.	Meliaceae	Tree	III-VI	80326	LC
Bacopa monnieri (L.) Wettst.	Plantaginaceae	Herb	VII-IV	80637	LC
Balanites aegyptiaca (L.) Delile	Zygophyllaceae	Tree	X-VIII	80171	LC
Baliospermum solanifolium (Burm.) Suresh	Euphorbiaceae	Herb	I-X	80355	LC
Barleria cristata L.	Acanthaceae	Herb	IX-IV	80711	n.a.
Barleria prionitis L.	Acanthaceae	Shrub	IX-IV	80180	LC
Bauhinia racemosa Lam.	Fabaceae	Tree	X-IV	80627	n.a.
Bauhinia variegata L.	Fabaceae	Tree	X-IV	80382	LC
Blepharis maderaspatensis (L.) B.Heyne ex Roth	Acanthaceae	Herb	IX-III	80529	n.a.
Blumea hieraciifolia (Spreng.) DC.	Asteraceae	Herb	II-IV	80782	n.a.
Blumea virens DC.	Asteraceae	Herb	II-IV	80356	n.a.
Boerhavia diffusa L.	Nyctaginaceae	Creeper	VI-XII	80249	n.a.
Boerhavia procumbens Banks ex Roxb.	Nyctaginaceae	Creeper	IX-VI	80106	n.a.
Bombax ceiba L.	Bombacaceae	Tree	XII-IV	80323	LC
Bonnaya ciliata (Colsm.) Spreng.	Linderniaceae	Herb	I-V	80554	LC
Boswellia serrata Roxb.	Burseraceae	Tree	II-IV	80610	n.a.
Bothriochloa pertusa (L.) A.Camus	Poaceae	Grass	Throughout Year	80697	n.a.
Butea monosperma (Lam.) Kuntze	Fabaceae	Tree	VIII-XI	80268	LC
Caesulia axillaris Roxb.	Asteraceae	Herb	IX-XI	80775	LC
Cajanus scarabaeoides (L.) Thouars	Fabaceae	Climber	IX-II	80766	LC

Name of Species	Family	Habit	Flowering-fruiting	Collection no.	IUCN category
Calotropis procera (Aiton) W.T.Aiton	Apocynaceae	Shrub	III-VI	80332	LC
Cannabis sativa L.	Cannabaceae	Herb	III-X	80309	n.a.
Canscora diffusa (Vahl) R.Br. ex Roem. & Schult.	Gentianaceae	Herb	X-V	80199	n.a.
Capparis decidua (Forssk.) Edgew.	Capparaceae	Tree	III-VII	80282	LC
Cardiospermum halicacabum L.	Sapindaceae	Climber	II-VIII	80150	LC
Carissa carandas L.	Apocynaceae	Shrub	III-VII	80363	n.a.
Casearia tomentosa Roxb.	Salicaceae	Tree	III-X	80395	n.a.
Cassia fistula L.	Fabaceae	Tree	III-VIII	80337	LC
Cebatha pendula (J.R.Forst. & G.Forst.) Kuntze	Menispermaceae	Herb	III-VIII	80398	n.a.
Celosia argentea L.	Amaranthaceae	Herb	XII-III	80757	LC
Cenchrus pedicellatus (Trin.) Morrone	Poaceae	Grass	Throughout Year	80753	LC
Ceriscoides turgida (Roxb.) Tirveng.	Rubiaceae	Small Tree	III-XI	80344	n.a.
Chamaecrista absus (L.) H.S.Irwin & Barneby	Fabaceae	Herb	VIII-XI	80569	LC
Chamaecrista pumila (Lam.) V.Singh	Fabaceae	Herb	VII-XI	80545	n.a.
Chenopodium album L.	Amaranthaceae	Herb	XII-III	80631	n.a.
Chloris barbata Sw.	Poaceae	Grass	IX-XII	80550	n.a.
Chloris virgata Sw.	Poaceae	Grass	IX-XI	80178	n.a.
Chrozophora plicata (Vahl) A.Juss. ex Spreng.	Euphorbiaceae	Herb	II-VI	80613	n.a.
Cissampelos pareira L.	Menispermaceae	Climber	VIII-XII	80374	n.a.
Cissus repanda (Wight & Arn.) Vahl	Vitaceae	Climber	II-VIII	80378	n.a.
Citrus limona (L.) Burm f.	Rutaceae	Small Tree	III-IV	80787	n.a.
Cleome viscosa L.	Cleomaceae	Herb	Throughout Year	80209	n.a.
Clerodendrum phlomidis L.f.	Lamiaceae	Climber	VIII-III	80638	LC
Cocculus hirsutus (L.) W.Theob.	Menispermaceae	Climber	XI-V	80325	n.a.
Cocculus pendulus (J.R.Forst. & G.Forst.) Diels	Fabaceae	Climber	III-VIII	80398	n.a.
Coix lacryma-jobi L.	Poaceae	Grass	IX-XII	80754	LC
Colebrookea oppositifolia Sm.	Lamiaceae	Herb	IV-VIII	80357	LC
Coleus strobilifer (Roxb.) A.J.Paton	Lamiaceae	Herb	II-III	80727	n.a.
Commelina attenuata Vahl	Commelinaceae	Herb	IX-I	80223	n.a.
Commelina benghalensis L.	Commelinaceae	Herb	VIII-I	80588	LC
Commelina longifolia Lam.	Commelinaceae	Herb	VIII-XI	80589	n.a.
Commicarpus chinensis (L.) Heimerl	Nyctaginaceae	Shrub	III-XII	80293	n.a.
Commiphora wightii (Arn.) Bhandari	Burseraceae	Tree	VI-IV	80620	CR
Convolvulus arvensis L.	Convolvulaceae	Climber	XII-II	80345	n.a.
Convolvulus prostratus Forssk.	Convolvulaceae	Herb	IX-XII	80264	n.a.
Corchorus tridens L.	Malvaceae	Herb	VIII-III	80516	n.a.
Cordia dichotoma G.Forst.	Boraginaceae	Tree	III-VI	80690	LC
Cordia macleodii (Griff.) Hook.f. & Thomson	Boraginaceae	Tree	III-V	80353	n.a.
Crateva magna (Lour.) DC.	Capparaceae	Tree	VIIV	80688	n.a.
Crotalaria juncea L.	Fabaceae	Herb	VII-VIII	80397	n.a.
Cucumis maderaspatanus L.	Cucurbitaceae	Climber	VII-I	80731	n.a.
Cucumis trigonus Roxb.	Cucurbitaceae	Creeper	VII-XI	80710	n.a.
Cuscuta reflexa Roxb.	Convolvulaceae	Climber	IX-XII	80245	LC
Cyamopsis tetragonoloba (L.) Taub.	Fabaceae	Herb	IV-XII	80572	n.a.
Cyanthillium cinereum (L.) H.Rob.	Asteraceae	Herb	IX-XI	80511	n.a.
Cyathocline purpurea (Buch.-Ham. ex D.Don) Kuntze	Asteraceae	Herb	Throughout Year	80135	LC
Cymbopogon martinii (Roxb.) Wats.	Poaceae	Grass	IX-II	80141	n.a.
Cynodon dactylon (L.) Pers.	Poaceae	Grass	Throughout Year	80676	n.a.
Cyperus difformis L.	Cyperaceae	Sedge	VII-IV	80156	LC
Cyperus iria L.	Cyperaceae	Sedge	VIII-II	80594	LC
Cyperus michelianus subsp. pygmaeus (Rottb.) Asch. & Graebn.	Cyperaceae	Sedge	VIII-XI	80796	LC
Cyperus tenuispica Steud.	Cyperaceae	Sedge	II-VIII	80672	LC
Dalbergia sissoo Roxb. ex DC.	Fabaceae	Tree	II-VI	80307	LC
Datura innoxia Mill.	Solanaceae	Herb	IV-VII	80146	n.a.
Dichanthium annulatum (Forssk.) Stapf	Poaceae	Grass	Throughout Year	80286	n.a.
Dichanthium aristatum (Poir.) C.E.Hubb.	Poaceae	Grass	VIII-XI	80694	n.a.

Name of Species	Family	Habit	Flowering-fruiting	Collection no.	IUCN category
Dichrostachys cinerea (L.) Wight & Arn.	Fabaceae	Small Tree	VI-I	80285	LC
Digera muricata (L.) Mart.	Amaranthaceae	Herb	VII-IV	80185	n.a.
Dimeria ornithopoda Trin.	Poaceae	Grass	IX-II	80555	LC
Diospyros melanoxylon Roxb.	Ebenaceae	Tree	VII-IV	80299	DD
Dipcadi serotinum (L.) Medik.	Asparagaceae	Herb	I-IV	80315	n.a.
Diplocyclos palmatus (L.) C.Jeffrey	Cucurbitaceae	Climber	VII-I	80183	n.a.
Distimake aegyptius (L.) A.R.Simões & Staples	Convolvulaceae	Climber	VIII-I	80522	n.a.
Distimake quinquefolius (L.) A.R.Simões & Staples	Convolvulaceae	Climber	I-IV	80364	n.a.
Drimia indica (Roxb.) Jessop	Asparagaceae	Herb	III-V	80704	n.a.
Ecbolium ligustrinum (Vahl) Vollesen	Acanthaceae	Herb	II- IV	80274	n.a.
Echinochloa colonum subsp. *edulis* (Honda) Banfi & Galasso	Poaceae	Grass	VIII-IV	80575	LC
Echinops echinatus Roxb.	Asteraceae	Herb	III-V	80247	n.a.
Eclipta prostrata (L.) L.	Asteraceae	Herb	Throughout Year	80788	LC
Ehretia aspera Willd.	Boraginaceae	Tree	III-V	80302	DD
Ehretia laevis Roxb.	Boraginaceae	Tree	III-V	80614	DD
Eleocharis geniculata (L.) Roem. & Schult.	Cyperaceae	Sedge	VIII-XI	80636	LC
Eleusine indica (L.) Gaertn.	Poaceae	Grass	VIII-XI	80530	LC
Elytraria acaulis (L.f.) Lindau	Acanthaceae	Herb	IV-XI	80105	n.a.
Enicostema axillare (Poir. ex Lam.) A.Raynal	Gentianaceae	Herb	VIII-X	80275	LC
Enteropogon dolichostachyus (Lag.) Keng	Poaceae	Grass	IX-III	80177	n.a.
Eragrostis cilianensis (All.) Vignolo ex Janch.	Poaceae	Grass	IX-X	80720	n.a.
Eragrostis coarctata Stapf	Poaceae	Grass	VIII-X	80262	LC
Eragrostis gangetica (Roxb.) Steud.	Poaceae	Grass	IX-XI	80263	LC
Eragrostis japonica (Thunb.) Trin.	Poaceae	Grass	IX-I	80678	LC
Eragrostis tenella (L.) P.Beauv. ex Roem. & Schult.	Poaceae	Grass	VII-X	80577	n.a.
Eragrostis unioloides (Retz.) Nees ex Steud.	Poaceae	Grass	IX-III	80719	n.a.
Eragrostis viscosa (Retz.) Trin.	Poaceae	Grass	IX-XI	80200	n.a.
Eranthemum pulchellum Andrews	Acanthaceae	Herb	II-XI	80352	n.a.
Eriocaulon quinquangulare L.	Eriocaulaceae	Herb	IX-IV	80600	n.a.
Eucrypta chrysanthemifolia (Benth.) Greene	Boraginaceae	Herb	III-V	80794	n.a.
Eulaliopsis binata (Retz.) C.E.Hubb.	Poaceae	Grass	VI-VIII	80697	n.a.
Euphorbia heterophylla Desf.	Euphorbiaceae	Herb	IX-X	80585	LC
Euphorbia hirta L.	Euphorbiaceae	Herb	IX-X	80140	n.a.
Euphorbia hypericifolia L.	Euphorbiaceae	Herb	IX-XI	80520	n.a.
Euphorbia nivulia Buch.-Ham.	Euphorbiaceae	Shrub	III-V	80349	n.a.
Euphorbia prostrata Aiton	Euphorbiaceae	Herb	III-VI	80144	CR
Euphorbia thymifolia L.	Euphorbiaceae	Herb	Throughout Year	80574	n.a.
Evolvulus alsinoides (L.) L.	Convolvulaceae	Herb	X-III	80789	n.a.
Evolvulus alsinoides var. *linifolius* (L.) Kuntze	Convolvulaceae	Herb	X-III	80507	n.a.
Evolvulus nummularius (L.) L.	Convolvulaceae	Herb	XI-IV	80321	n.a.
Ficus benghalensis L.	Moraceae	Tree	Throughout Year	80696	LC
Ficus palmata Forssk.	Euphorbiaceae	Shrub	II-VII	80603	LC
Ficus racemosa L.	Moraceae	Tree	II-V	80319	LC
Ficus religiosa L.	Moraceae	Tree	IV-IX	80346	LC
Fimbristylis bisumbellata (Forssk.) Bubani	Cyperaceae	Sedge	VIII-IV	80255	LC
Fimbristylis miliacea (L.) Vahl	Cyperaceae	Sedge	XI-III	80125	n.a.
Fimbristylis ovata (Burm.f.) J.Kern	Cyperaceae	Sedge	VIII-V	80675	LC
Fimbristylis quinquangularis (Vahl) Kunth subsp. *quinquangularis*	Cyperaceae	Sedge	VIII-III	80125	LC
Flacourtia indica (Burm.f.) Merr.	Salicaceae	Grass	III-X	80606	LC
Flacourtia jangomas (Lour.) Raeusch.	Salicaceae	Tree	VI-VII	80609	n.a.
Gaillardia aristata Pursh	Asteraceae	Herb	III-IV	80604	n.a.
Glinus lotoides L.	Molluginaceae	Herb	Throughout Year	80217	LC
Gloriosa simplex L.	Colchicaceae	Climber	VI-XI	80706	n.a.
Grangea maderaspatana (L.) Poir.	Asteraceae	Herb	II-III	80251	LC
Grewia flavescens Juss.	Malvaceae	Shrub	II-XII	80767	LC

Name of Species	Family	Habit	Flowering-fruiting	Collection no.	IUCN category
Grewia tiliifolia Vahl	Malvaceae	Small Tree	II-XII	80343	n.a.
Grona triflora (L.) H.Ohashi & K.Ohashi	Fabaceae	Herb	IX-IV	80322	n.a.
Gypsophila vaccaria (L.) Sm.	Caryophyllaceae	Herb	IX-XII	80548	n.a.
Hackelochloa granularis (L.) Kuntze	Poaceae	Grass	VIII-XI	80543	n.a.
Hardwickia binata Roxb.	Fabaceae	Tree	X-IV	80269	LC
Helicteres isora L.	Malvaceae	Shrub	VII-XII	80288	n.a.
Heliotropium ovalifolium Forssk.	Boraginaceae	Herb	IX-VI	80214	LC
Heliotropium supinum L.	Boraginaceae	Herb	VIII-III	80280	LC
Heteropogon contortus (L.) P.Beauv. ex Roem. & Schult.	Poaceae	Grass	IX-I	80503	n.a.
Heteropogon melanocarpus (Elliott) Benth.	Poaceae	Grass	IX-III	80725	n.a.
Hibiscus caesius Garcke	Malvaceae	Herb	IX-XII	80218	n.a.
Hibiscus lobatus (Murray) Kuntze	Malvaceae	Herb	VII-I	80747	n.a.
Hibiscus micranthus L.f.	Malvaceae	Herb	IX-I	80193	n.a.
Hibiscus vitifolius L.	Malvaceae	Herb	X-III	80235	n.a.
Holarrhena pubescens Wall. ex G.Don	Apocynaceae	Tree	II-VI	80361	LC
Holoptelea integrifolia (Roxb.) Planch.	Ulmaceae	Tree	I-IV	80311	n.a.
Hybanthus enneaspermus (L.) F.Muell.	Violaceae	Herb	VIII-II	80790	EN
Hydrilla verticillata (L.f.) Royle	Hydrocharitaceae	Herb	V-X	80695	LC
Hygrophila serpyllum (Nees) T.Anderson	Acanthaceae	Herb	XII-IV	80305	n.a.
Indigofera cordifolia B.Heyne ex Roth	Fabaceae	Herb	VIII-X	80746	n.a.
Indigofera tinctoria L.	Malvaceae	Herb	IX-II	80382	n.a.
Indigofera trita L.f.	Fabaceae	Herb	IX-II	80220	LC
Indigofera tsiangiana Metcalf	Fabaceae	Herb	IX-II	80118	n.a.
Ipomoea aitonii Lindl.	Convolvulaceae	Climber	VIII-XI	80733	n.a.
Ipomoea carnea Jacq.	Convolvulaceae	Herb	Throughout Year	80331	n.a.
Ipomoea eriocarpa R.Br.	Convolvulaceae	Herb	IX-I	80745	n.a.
Ipomoea muricata (L.) Jacq.	Convolvulaceae	Climber	VIII-I	80210	n.a.
Ipomoea pes-tigridis L.	Convolvulaceae	Climber	VIII-X	80537	n.a.
Ipomoea sindica Stapf	Convolvulaceae	Climber	VIII-XI	80508	n.a.
Ischaemum rugosum Salisb.	Poaceae	Grass	VIII-XI	80717	LC
Jatropha curcas L.	Euphorbiaceae	Shrub	VIII-VI	80367	LC
Jatropha gossypiifolia L.	Euphorbiaceae	Shrub	IV-IX	80333	LC
Justicia adhatoda L.	Acanthaceae	Herb	XII-III	80618	LC
Kydia calycina Roxb.	Malvaceae	Tree	VIII-XI	80375	LC
Lagascea mollis Cav.	Asteraceae	Herb	II-III	80308	n.a.
Lannea coromandelica (Houtt.) Merr.	Anacardiaceae	Tee	III-V	80611	n.a.
Lantana camara L.	Verbenaceae	Shrub	III-XI	80562	n.a.
Lathyrus aphaca L.	Fabaceae	Herb	II-IV	80601	n.a.
Launaea procumbens (Roxb.) Ramayya & Rajagopal	Asteraceae	Herb	II-IV	80313	n.a.
Lepidagathis cristata Willd.	Acanthaceae	Herb	IX-III	80175	n.a.
Lepidagathis hamiltoniana Wall.	Acanthaceae	Herb	XI-II	80770	n.a.
aspera (Willd.) Link	Lamiaceae	Herb	IX-II	80687	n.a.
Leucas cephalotes (Roth) Spreng.	Lamiaceae	Herb	VIII-IV	80121	n.a.
Leucas nutans (Roth) Spreng.	Lamiaceae	Herb	VIII-IX	80760	n.a.
Limnophila indica (L.) Druce	Plantaginaceae	Herb	Throughout Year	80317	LC
Limonia acidissima L.	Rutaceae	Tree	II-IV	80677	n.a.
Lindenbergia indica (L.) Vatke	Orobanchaceae	Herb	X-IV	80157	LC
Lindernia crustacea (L.) F.Muell.	Linderniaceae	Herb	I-V	80540	LC
Ludwigia hyssopifolia (G.Don) Exell	Onagraceae	Herb	Throughout Year	80129	LC
Ludwigia octovalvis (Jacq.) P.H.Raven	Onagraceae	Herb	Throughout Year	80576	LC
Ludwigia perennis L.	Onagraceae	Herb	VIII-V	80591	LC
Lysiloma latisiliquum (L.) Benth.	Fabaceae	Tree	VIII-III	80335	LC
Lysimachia arvensis (L.) U.Manns & Anderb.	Primulaceae	Herb	II-IV	80792	n.a.
Madhuca longifolia var. *latifolia* (Roxb.) A. Chev.	Sapotaceae	Tree	II-VI	80336	n.a.
Maerua oblongifolia (Forssk.) A.Rich.	Capparaceae	Climber	III-VI	80642	n.a.
Magnolia champaca (L.) Baill. ex Pierre	Magnoliaceae	Tree	I-V	80366	LC
Mallotus philippensis (Lam.) Müll.Arg.	Euphorbiaceae	Tree	IV-IX	80351	LC

Name of Species	Family	Habit	Flowering-fruiting	Collection no.	IUCN category
Mecardonia procumbens (Mill.) Small	Plantaginaceae	Herb	III-V	80259	n.a.
Medicago lupulina L.	Fabaceae	Herb	I-II	80781	LC
Medicago polymorpha L.	Fabaceae	Herb	I-II	80793	LC
Melanocenchris jacquemontii Jaub. & Spach	Poaceae	Grass	IX-XI	80705	n.a.
Melhania futteyporensis Munro ex Mast.	Malvaceae	Herb	VIII-XII	80221	n.a.
Melia azedarach L.	Meliaceae	Tree	III-IV	80324	LC
Melochia corchorifolia L.	Malvaceae	Herb	Throughout Year	80713	LC
Mentha spicata L.	Lamiaceae	Herb	II-VI	80799	LC
Merremia emarginata (Burm.f.) Hallier f.	Convolvulaceae	Creeper	X-III	80743	LC
Mesosphaerum suaveolens (L.) Kuntze	Lamiaceae	Herb	Throughout Year	80772	n.a.
Mimosa rubicaulis Lam.	Fabaceae	Shrub	VIII-II	80729	n.a.
Mitragyna parvifolia (Roxb.) Korth.	Rubiaceae	Tree	IX-I	80608	n.a.
Momordica charantia L.	Cucurbitaceae	Climber	VII-X	80182	n.a.
Momordica dioica Roxb. ex Willd.	Cucurbitaceae	Climber	VII-X	80528	n.a.
Moringa concanensis Nimmo ex Dalzell & A.Gibson	Moringaceae	Tree	IV-X	80297	n.a.
Morus alba L.	Moraceae	Small Tree	I-V	80298	LC
Mucuna pruriens (L.) DC.	Fabaceae	Climber	IX-II	80379	LC
Murdannia vaginata (L.) G.Brückn.	Commelinaceae	Herb	VIII-X	80599	LC
Naringi crenulata (Roxb.) Nicolson	Rutaceae	Tree	II-IV	80624	LC
Neolamarckia cadamba (Roxb.) Bosser	Rubiaceae	Tree	V-VII	80564	n.a.
Nepeta hindostana (B.Heyne ex Roth) Haines	Lamiaceae	Herb	I-IV	80258	n.a.
Nicotiana tabacum L.	Solanaceae	Herb	XII-IV	80573	n.a.
Nyctanthes arbor-tristis L.	Oleaceae	Shrub	IV-VI	80244	LC
Ocimum americanum L.	Lamiaceae	Herb	I-IV	80208	n.a.
Oldenlandia corymbosa L.	Rubiaceae	Herb	IX-IV	80164	LC
Oligochaeta divaricata (DC.) K.Koch	Asteraceae	Herb	II-IV	80215	n.a.
Opuntia dillenii (Ker Gawl.) Haw.	Cactaceae	Shrub	VIII-XI	80570	n.a.
Ottelia alismoides (L.) Pers.	Hydrocharitaceae	Herb	X-III	80318	LC
Ouret lanata (L.) Kuntze	Amaranthaceae	Herb	VII-IV	80519	LC
Oxalis corniculata L.	Oxalidaceae	Herb	X-VII	80166	n.a.
Parkinsonia aculeata L.	Fabaceae	Shrub	IX-IV	80365	LC
Parthenium hysterophorus L.	Asteraceae	Herb	II-IV	80777	n.a.
Pavonia zeylonica (L.) Cav.	Malvaceae	Herb	X-XI	80110	n.a.
Pergularia daemia (Forssk.) Chiov.	Apocynaceae	Climber	III-XI	80133	LC
Peristrophe bicalyculata (Retz.) Nees	Acanthaceae	Herb	X-II	80102	n.a.
Perotis indica (L.) Kuntze	Poaceae	Grass	Throughout Year	80715	n.a.
Phalaris minor Retz.	Poaceae	Grass	I-III	80261	n.a.
Phyla nodiflora (L.) Greene	Verbenaceae	Herb	Throughout Year	80312	LC
Phyllanthus emblica L.	Phyllanthaceae	Small Tree	III-XII	80296	LC
Phyllanthus urinaria L.	Phyllanthaceae	Herb	VII-XI	80547	n.a.
Phyllanthus virgatus G.Forst.	Phyllanthaceae	Herb	VIII-XI	80539	n.a.
Physalis angulata L.	Solanaceae	Herb	I-IV	80969	LC
Physalis pruinosa L.	Solanaceae	Herb	IX-XII	80136	LC
Plumbago zeylanica L.	Plumbaginaceae	Herb	X-III	80615	n.a.
Polygala erioptera DC.	Polygalaceae	Herb	VIII-X	80107	n.a.
Polygonum plebeium R.Br.	Polygonaceae	Herb	IX-III	80252	LC
Polypogon monspeliensis (L.) Desf.	Poaceae	Grass	I-III	80795	LC
Pongamia pinnata (L.) Pierre	Fabaceae	Tree	III-II	80622	LC
Potentilla indica (Andrews) Th.Wolf	Rosaceae	Herb	IV-XII	80254	n.a.
Potentilla supina L.	Rosaceae	Herb	XI-III	80698	LC
Prosopis juliflora (Sw.) DC.	Fabaceae	Tree	II-X	80329	LC
Prunella vulgaris L.	Lamiaceae	Herb	I-V	80526	LC
Pterocarpus marsupium Roxb.	Fabaceae	Tree	IX-IV	80623	NT
Pulicaria undulata (L.) C.A.Mey.	Asteraceae	Herb	II-IV	80784	n.a.
Pupalia lappacea (L.) Juss.	Amaranthaceae	Herb	VIII-III	80370	LC
Ranunculus sceleratus L	Ranunculaceae	Herb	XI-IV	80372	LC
Rhynchosia bracteata Benth. ex Baker	Fabaceae	Herb	XI-III	80241	n.a.

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Rhynchosia minima (L.) DC.	Fabaceae	Climber	VII-IV	80764	LC
Ricinus communis L.	Euphorbiaceae	Tree	IX-V.	80284	n.a.
Rorippa cochlearioides (Roth) Al-Shehbaz & Jonsell	Brassicaceae	Herb	III-IV	80253	n.a.
Rostellularia procumbens (L.) Nees	Acanthaceae	Herb	IX-XII	80191	n.a.
Rostellularia quinqueangularis (J.Koenig ex Roxb.) Nees	Acanthaceae	Herb	IX-XII	80124	LC
Ruellia patula Jacq.	Acanthaceae	Herb	IX-III	80287	LC
Ruellia pseudopatula Ensermu	Acanthaceae	Herb	IX-III	80248	n.a.
Rumex dentatus L.	Polygonaceae	Herb	I-IV	80633	LC
Rungia elegans Dalzell & A.Gibson	Acanthaceae	Herb	XI-III	80765	n.a.
Rungia pectinata (L.) Nees	Acanthaceae	Herb	XI-III	80763	n.a.
Schleichera oleosa (Lour.) Oken	Sapindaceae	Tree	III-VIII	80350	LC
Schoenoplectus lacustris (L.) Palla	Cyperaceae	Sedge	XII-III	80320	LC
Scoparia dulcis L.	Plantaginaceae	Herb	IX-II	80660	n.a.
Senegalia catechu (L.f.) P.J.H.Hurter & Mabb.	Fabaceae	Tree	VII-IV	80751	LC
Senna obtusifolia (L.) H.S.Irwin & Barneby	Fabaceae	Herb	VII-XI	80189	LC
Senna siamea (Lam.) H.S.Irwin & Barneby	Fabaceae	Tree	Throughout Year	80362	LC
Senna tora (L.) Roxb.	Fabaceae	Herb	II-X	80773	n.a.
Senna uniflora (Mill.) H.S.Irwin & Barneby	Fabaceae	Herb	IX-XI	80139	n.a.
Sesbania bispinosa (Jacq.) W.Wight	Fabaceae	Shrub	IX-I	80582	LC
Seseli diffusum (Roxb. ex Sm.) G.Hend. & Hume	Apiacaea	Herb	IV-VI	80297	n.a.
Setaria pumila (Poir.) Roem. & Schult.	Poaceae	Grass	VIII-XI	80544	n.a.
Setaria verticillata (L.) P.Beauv.	Poaceae	Grass	VIII-X	80532	n.a.
Sida acuta Burm.f	Malvaceae	Herb	VIII-VI	80716	n.a.
Sida cordata (Burm.f.) Borss.Waalk.	Malvaceae	Herb	Throughout Year	80776	n.a.
Sida cordifolia L.	Malvaceae	Herb	Throughout Year	80158	LC
Sida ovata Forssk.	Malvaceae	Herb	IX-XII	80176	n.a.
Sida rhombifolia L.	Malvaceae	Herb	IX-IV	80187	n.a.
Solanum incanum L.	Solanaceae	Shrub	XI-VI	80181	LC
Solanum lycopersicum L.	Solanaceae	Herb	Throughout Year	80303	n.a.
Solanum nigrum L.	Solanaceae	Herb	IX-II	80170	n.a.
Solanum villosum L.	Solanaceae	Herb	IX-II	80314	n.a.
Solanum virginianum L.	Solanaceae	Herb	XII-VI	80240	n.a.
Sonchus asper (L.) Hill	Asteraceae	Herb	XII-IV	80800	n.a.
Sorghum halepense (L.) Pers.	Poaceae	Grass	VII-IV	80237	n.a.
Spergularia flaccida (Madden) I.M.Turner	Caryophyllaceae	Herb	I-III	80786	n.a.
Spermacoce articularis L.f.	Rubiaceae	Herb	IX-IV	80196	n.a.
Spermacoce hispida L.	Rubiaceae	Herb	IX-IV	80514	n.a.
Sphaeranthus indicus L.	Asteraceae	Herb	XI-III	80626	n.a.
Sphagneticola calendulacea (L.) Pruski	Asteraceae	Herb	X-XII	80723	n.a.
Spigelia anthelmia L.	Loganiaceae	Climber	I-XII	80738	n.a.
Sterculia urens Roxb.	Malvaceae	Tree	XII-V	80771	n.a.
Stylosanthes humilis Kunth	Fabaceae	Herb	IX-XII	80730	n.a.
Tabernaemontana divaricata (L.) R.Br. ex Roem. & Schult.	Apocynaceae	Shrub	Throughout Year	80605	LC
Tamarindus indica L.	Fabaceae	Tree	V-VIII	80310	LC
Tephrosia tinctoria (L.) Pers.	Fabaceae	Herb	X-II	80202	LC
Tephrosia villosa (L.) Pers.	Fabaceae	Herb	X-II	80714	LC
Terminalia anogeissiana Gere & Boatwr.	Combretaceae	Tree	VIII-III	80607	n.a.
Terminalia bellirica (Gaertn.) Roxb.	Combretaceae	Tree	IV-V	80625	LC
Terminalia pendula (Edgew.) Gere & Boatwr.	Combretaceae	Tree	VIII-III	80542	n.a.
Tetrapogon tenellus (J.Koenig ex Roxb.) Chiov.	Poaceae	Grass	VII-XI	80551	n.a.
Themeda caudata (Nees ex Hook. & Arn.) A.Camus	Poaceae	Grass	IX-XI	80505	n.a.
Themeda quadrivalvis (L.) Kuntze	Poaceae	Grass	VIII-XII	80122	n.a.
Themeda triandra Forssk.	Poaceae	Grass	X-XI	80567	n.a.
Torenia crustacea (L.) Cham. & Schltdl.	Linderniaceae	Herb	I-V	80540	LC
Tribulus terrestris L.	Zygophyllaceae	Herb	X-III	80778	LC

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Trichosanthes cucumerina L.	Cucurbitaceae	Climber	V-VIII	80184	n.a.
Trichosanthes tricuspidata Lour.	Cucurbitaceae	Climber	VII-X	80559	n.a.
Tridax procumbens L.	Asteraceae	Herb	Throughout Year	80273	n.a.
Trigastrotheca pentaphylla (L.) Thulin	Molluginaceae	Herb	Throughout Year	80718	n.a.
Triumfetta pentandra A.Rich.	Malvaceae	Herb	X-I	80517	n.a.
Triumfetta rhomboidea Jacq.	Malvaceae	Herb	X-I	80506	n.a.
Typha angustifolia L.	Typhaceae	Herb	Throughout Year	80316	LC
Urena lobata L.	Malvaceae	Herb	VIII-XI	80376	LC
Vachellia leucophloea (Roxb.) Maslin, Seigler & Ebinger	Fabaceae	Tree	VIII-IV	80360	LC
Verbascum coromandelianum (Vahl) Hub.-Mor.	Scrophulariaceae	Herb	II-III	80277	n.a.
Veronica anagallis-aquatica L.	Plantaginaceae	Herb	XI-IV	80631	LC
Vicia sativa L.	Poaceae	Herb	XII-IV	80783	LC
Vigna radiata var. *sublobata* (Roxb.) Verdc.	Fabaceae	Creeper	IX-XII	80229	LC
Vigna umbellata (Thunb.) Ohwi & H.Ohashi	Fabaceae	Creeper	IX-XII	80230	n.a.
Vitex negundo L.	Lamiaceae	Shrub	VI-XII	80130	LC
Waltheria indica L.	Malvaceae	Herb	VIII-II	80504	LC
Woodfordia fruticosa (L.) Kurz	Lythraceae	Shrub	I-V	80791	LC
Xanthium strumarium L.	Asteraceae	Shrub	X-XII	80131	n.a.
Zaleya pentandra (L.) C.Jeffrey	Aizoaceae	Herb	I-V	80272	n.a.
Ziziphus mauritiana Lam.	Rhamnaceae	Tree	X-V	80377	LC
Ziziphus nummularia (Burm.f.) Wight & Arn.	Rhamnaceae	Tree	X-V	80740	LC
Ziziphus oenopolia (L.) Mill.	Rhamnaceae	Tree	V-XI	80768	LC
Ziziphus xylophyrus (Retz.) Willd	Rhamnaceae	Small Tree	IV-XII	80561	n.a.
Zornia gibbosa Span.	Fabaceae	Herb	VIII-III	80546	n.a.

Explanations: CR – critically endangered, EN – endangered, NT – near threatened, LC – least concern, DD – data deficient, n.a. – not available in IUCN database; I-XII Months