

ENUMERATION OF THE PLANTS OF LOWER CHAMBAL VALLEY RAVINES, MADHYA PRADESH

D. S. AGARKAR

Govt. Science College, Gwalior

ABSTRACT

Little is known about the vegetation of this region; therefore, the present study has been undertaken by the author. A total number of 125 species have been enumerated.

INTRODUCTION

The need for a Flora of Madhya Pradesh has been greatly felt by many. Though numerous local Flora for the different parts have appeared recently, little seems to have been done on the Flora of Chambal ravines. The author has, therefore, undertaken this work. The present study is based on several excursions made during 1967-69. The herbarium sheets are deposited in the Botany Dept., Govt. Science College, Gwalior.

GEOGRAPHY

The lower Chambal valley ravine area lies between $25^{\circ} 15'$ and $26^{\circ} 45'$ N lat. and $75^{\circ} 30'$ and 78° E long. It comprises the districts of Morena and Bhind. The area is sandwiched between the Chambal River on the West, North-West and North and, hilly forested area towards South. The ravine area is narrower towards Sheopur and becomes broader towards Bhind district, giving it the shape of an elephant trunk.

The gross Chambal ravine area of Morena and Bhind district is about 16.7 lakh acres. The height above mean sea level varies from 500-800 feet, having a gradual slope from South-West to North-West to East. The drainage of the region is effected by the rivers Chambal, Parbati, Sank, Asan, Kuwari, Kuno, Aheli, Vaisuli and Sindh and their tributaries. The area round about these rivers and rivulets is eroded to an appreciable extent giving a typically 'bad land' topography. The water table varies from 10 to 80 feet.

VEGETATION

The vegetation shows xerophytic features due to arid climatic conditions and is chiefly dominated by thorny shrubs like, *Capparis decidua* (Forsk.) Edgew., *Acacia leucophloea* Willd., *Flacourtia indica* (Burm. f.) Merr., *Balanites aegyptiaca*

Delile., *Prosopis juliflora* DC. and *Salvadora persica* Linn. Other dominant plants are *Viola cinerea* Boiss., which occurs abundantly on slopes, *Fagonia cretica* Linn., *Blepharis molluginifolia* Pers., *Eragrostis ciliaris* (Linn.) R. Br., *Aristida adscensionis* Linn. and *Apluda mutica* Linn. At some places specially in the Noorabad ravines pure stands of *Aerva javanica* Juss. are seen, *Abutilon hirtum* (Lamk.) Sweet. also occurs in pure stands in the ravines near Dholpur. Other plants commonly found are *Cleome brachycarpa* Vahl ex DC., *Corchorus depressus* (Linn.) Stocks., *Indigofera oblongifolia* Forsk., *I. linnaei* Ali., *Tephrosia pumila* Pers., *Zizyphus mauritiana* Lamk., *Pentstemon cynanchoides* R. Br., *Daemia perularia* (Forsk.) Decne., *Calotropis procera* R. Br., *Cynodon dactylon* (L.) Pers., *Eragrostis pilosa* (L.) Beauv., *E. cilianensis* All. and *Sporobolus diander* Beauv.

The river beds are chiefly dominated by small herbs like *Sutera glandulosa* Roth, *Vandelia multiflora* G. Don, *Ammania baccifera* L., *Polygonum plebejum* R. Br., *Cyperus pygmalus* Benth., *C. haspan* Linn., *C. iria* Linn., *Fimbristylis polychaetoides* R. Br., *F. dichotoma* Vahl, *F. dispacea* Vahl.

ENUMERATION

MENISPERMACEAE

Cocculus hirsutus (L.) Diels.

Frequent. DS. 584.

PAPAVERACEAE

Argemone mexicana Linn.

Frequent. DS. 585.

CAPPARIDACEAE

Capparis decidua (Forsk.) Edgew.

Very common. DS. 588.

Capparis sepiaria Linn.

Rare. DS. 589.

Cleome viscosa Linn.

Common on road sides only. DS. 586.

***C. brachycarpa** Vahl ex DC.

Common in Noorabad ravines. DS. 587.

VIOLACEAE

***Viola cinerea** Boiss.

Abundant on slopes. DS. 590.

FLACOURTIACEAE

Flacourtia indica (Burm. f.) Merr.

Frequent. DS. 591.

POLYGALACEAE

Polygala chinensis Linn.

Frequent. DS. 592.

MALVACEAE

Abutilon indicum Sweet.

Frequent. DS. 594.

A. hirtum (Lamk.) Sweet.

Fairly common, occurs in pure stands. DS. 595.

Hibiscus micranthus Linn.

Rare. DS. 596.

Sida spinosa Linn.

Frequent. DS. 593.

FILIACEAE

Corchorus aestuans Linn. non Forsk.

Frequent. DS. 598.

***C. depressus** (Linn.) Stocks.

Fairly common in Noorabad ravines. DS. 599.

Triumfetta rhomboidea Jacq.

Frequent. DS. 597.

ZYGOPHYLLACEAE

Fagonia cretica Linn.

Very common. DS. 601.

Tribulus terrestris Linn.

Frequent. DS. 600.

SIMARUBACEAE

Balanites aegyptiaca Delile.

Frequently seen. DS. 602.

RHAMNACEAE

Zizyphus mauritiana Lamk.

Common. DS. 603.

PAPILIONACEAE

Alysicarpus monilifer DC.

Common. DS. 614.

***A. glumaceous** (R.) Schindl.

Frequent. DS. 615.

Crotalaria medicaginea Lamk.

Frequent. DS. 604.

Desmodium triflorum DC.

Common in river beds. DS. 616.

Indigofera linifolia Retz.

Frequent on slopes. DS. 609.

I. cordifolia Heyne ex Roth

Rarely seen. DS. 610.

I. linnaci Ali.

Common. DS. 611.

***I. trita** Linn. f.

Frequent. DS. 612.

Rhynchosia minima (L.) DC.

Rare. DS. 605.

Tephrosia purpurea Pers.

Common in road side ravines. DS. 606.

T. pumila Pers.

Common on slopes. DS. 607.

T. strigosa (Dalz.) Sant. & Mahesh.

Frequent. DS. 608.

Zornia gibbosa Span.

Rarely seen. DS. 613.

CAESALPINIACEAE

Cassia obtusifolia Linn.

Frequent. DS. 617.

MIMOSAE

Acacia nilotica (L.) Del.

Frequent. DS. 620.

A. leucophloea Willd.

Common. DS. 621.

Dichrostachys cinerea Wt. & Arn.

Frequently seen. DS. 619.

Prosopis juliflora DC.

Common. DS. 618.

LYTHRACEAE

Ammannia baccifera Linn.

Common in river beds. DS. 622.

CACTACEAE

Opuntia elatior Mill.

Rarely seen.

AIZOACEAE

Trianthema decandra Linn.

Rarely seen. DS. 623.

RUBIACEAE

Borreria pusilla (Wall.) DC.

Frequent. DS. 624.

COMPOSITAE

Echinops echinatus Roxb.

Frequent. DS. 633.

Eclipta prostrata Linn.

Common in river beds. DS. 631.

Gnaphalium indicum Linn.

Common in river beds. DS. 627.

Pulicaria crispa Schultz-Bip.

Frequent. DS. 629.

Sphaeranthus indicus Linn.

Frequent. DS. 626.

Tridax procumbens Linn.

Common. DS. 632.

Vernonia cinerea Linn.

Frequent. DS. 625.

Vicoa indica (Willd.) DC.

Rare. DS. 628.

Volutarella ramosa Roxb.

Rare. DS. 634.

Xanthium strumarium Linn.

Common. DS. 630.

SALVADORACEAE

Salvadora persica Linn.

Common towards Ambah. DS. 635.

APOCYNACEAE

Carissa spinarum Linn.

Frequent. DS. 637.

ASCLEPIADACEAE

Calatropis procera R. Br.

Common. DS. 638.

Leptadenia pyrotechnica (Forsk.) Decne.

Few bushes could be observed.

Pentatropis cynanchoides R. Br.

Fairly common. DS. 639.

Pergularia daemia (Forsk.) Chiov.

Frequent. DS. 640.

GENTIANACEAE

Enicostema hyssopifolium (Willd.) Verdoorn.

Frequent. DS. 641.

BORAGINACEAE

Heliotropium indicum Linn.

Rare. DS. 642.

Trichodesma amplexicaule Roth

Rare. DS. 643.

CONVOLVULACEAE

Convolvulus microphyllus Sieb. ex Spreng.

Common. DS. 645.

Evolvulus alsinoides Linn.

Frequent. DS. 644.

Ipomeoa fistulosa Mart. ex Choisy DC.

Frequent. DS. 647.

***I. nil** (L.) Roth

Frequent on road side ravines. DS. 646.

SOLANACEAE

Physalis minima Linn.

Near road side ravines. DS. 649.

Solanum surattense Burm. f.

Rarely seen. DS. 648.

Withania somnifera Dunal.

Near road side ravines. DS. 650.

SCROPHULARIACEAE

Bacopa monnieri (L.) Pennell.

Frequent in river beds. DS. 652.

Kickxia ramosissima Wall.

Frequently seen. DS. 651.

Lindenbergia indica (L.) Kuntze

Frequent. DS. 653.

***Sutera glandulosa** Roth

Fairly common in river beds. DS. 654.

***Vandellia multiflora** G. Don

Common in river beds. DS. 655

***V. erecta** Benth.

Frequent. DS. 656.

ACANTHACEAE

Adhatoda vesica Nees

Common on road side ravines. DS. 664.

Andrographis echoides Nees

Rare. DS. 660.

Blepharis molluginifolia Pers.

Common. DS. 657.

B. maderaspatensis (L.) Heyne ex Roth

Rare. DS. 658.

Dicliptera micranthes Nees

Rare. DS. 663.

Dipteracanthus tuberosa Linn.

Rarely seen. DS. 659.

Justicia quinquangularis Koen. ex Roxb.

Frequent on river beds. DS. 661.

Peristrophe bicalyculata Nees

Common. DS. 662.

Rungia pectinata (L.) Nees

Frequent. DS. 665.

VERBENACEAE

Clerodendrum phlomidis Linn.

Rarely seen. DS. 667.

Phyla nodiflora (L.) Greene

Common near river beds. DS. 666.

LABIATAE

Leucas aspera Spreng.

Rarely seen. DS. 668.

Orthosiphon pallidus Royle

Rare. DS. 669.

NYCTAGINACEAE

Boerhaavia diffusa Linn.

Common. DS. 670.

B. rependa Willd.

Rare on road side only. DS. 671.

AMARANTACEAE

Achyranthes aspera Linn.

Common. DS. 673.

***Acrua javanica** Juss.

Common, occurs in pure stands. DS. 676.

Alternanthera sessilis R. Br.

Common near river beds. DS. 675.

Amaranthus viridis Linn.

Rare. DS. 677.

Digera muricata (L.) Mart.

Common near road side. DS. 672.

Pupalia lappacea Juss.

Common. DS. 674.

CHENOPODIACEAE

Chenopodium album Linn.

Frequent in river beds. DS. 678.

C. murale Linn.

Rare. DS. 679.

POLYGONACEAE

Polygonum plebejum R. Br.

Common. DS. 680.

Rumex dentatus Linn.

Frequent. DS. 681.

EUPHORBIACEAE

Crozophora rotleri A. Juss.

Frequent. DS. 684.

Euphorbia hirta Linn.

Common. DS. 682.

E. hypericifolia Linn.

Frequent. DS. 683.

LILIACEAE

Asparagus recemosus Willd.

Frequent. DS. 685.

Asphodelus tenuifolius Cav.

Rare on road side. DS. 686.

COMMELINACEAE

Commelina benghalensis Linn.

Frequent on road side. DS. 687.

C. forskalii Vahl

Rare. DS. 688.

CYPERACEAE

Cyperus iria Linn.

Frequent in river beds. DS. 689.

C. rotundus Linn.

Common. DS. 690.

C. haspan Linn.

Fairly common. DS. 691.

***C. pygmalus** Benth.

Common near rivers. DS. 692.

Fimbristylis polytrichoides R. Br.

Frequent. DS. 693.

F. dipsacea Vahl

Frequent. DS. 694.

GRAMINEAE

Apluda mutica Linn.

Common. DS. 705.

Aristida adscensionis Linn.

Common. DS. 701.

Bothriochloa pertusa (L.) A. Camus.

Frequent. DS. 704.

Cynodon dactylon (L.) Pers.

Common. DS. 699.

***Eleusine verticillata** Roxb.

Frequent. DS. 700.

Eragrostis pilosa (L.) Beauv.

Frequent. DS. 695.

***E. cilianensis** Link.

Common. DS. 696.

***E. ciliaris** (Linn.) R. Br.

Common. DS. 697.

Saccharum munja Roxb.

Frequent. DS. 706.

Setaria glauca (L.) Beauv.

Frequent. DS. 702.

Sporobolus diander Beauv.

Common. DS. 698.

Vetiveria zizanoides Nash.

Frequent. DS. 703.

DISCUSSION

The floristic pattern of the area is typical of scrub type, chiefly dominated by thorny shrubs of *Cap-
paris decudua* (Forsk) Edgew., *Carissa spinarum*
Linn., *Balanites aegyptiaca* Delile., *Flacourtia indica*
(Burm. f.) Merr., *Prosopis juliflora* DC., *Acacia leuco-
phloea* Willd., and *Zizphus mauritiana* Lamk.
Fagonia cretica Linn. and *Viola cinerea* Boiss. are
abundantly found in the Noorabad ravines, other
associates being *Blepharis molluginifolia* Pers.,
Corchorus depressus (Linn.) Stocks., *Aerua javanica*

Juss. which occurs in isolated patches, and *Eragrostis ciliaris* (Linn.) R. Br. Pure stands of *Abutilon hirtum* (Lamk.) Sweet. are seen which are confined only to Dholpur ravines. In general the Flora is much similar to that of Greater Gwalior (Agarkar and Tuteja, 1965), however, some of the plants, marked with an asterisk are confined to the ravines only.

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