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ADDITIONS TO THE FLORA OF UDAIPUR DISTRICT (SOUTH-EAST RAJASTHAN)

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ABSTRACT

In the present work, the writers have made a thorough study of the flora of zinc-deposit areas in the district of Udaipur. It records 73 species of dicots and 7 of monocots excluding grasses, new to this area. Several plant species are confined to the ore dumps of zinc around old mine workings. Among the notable zinc accumulators are *Impatiens balsamina* and *Melhania futteyporensis*.

INTRODUCTION

The district of Udaipur is situated between the parallels 23°49′ and 25°28′ N latitudes and 73°01′ and 75°49′ E longitudes at 587 metres above MSL. The region forms a part of the south-east Rajasthan and floristically is one of the richest parts of the state. The hilly tracts of the area form parts of the Aravalli range. It has a Tropical Monsoon Continental type of climate. During the study period (1975-1979), the average maximum and minimum temperatures were 42°C and 3.5°C, respectively and average annual rainfall 563.72 mm.

No detailed floristic explorations have been carried out in this region except some preliminary reports by Ramdeo (1965, 1969); Vyas (1965) and Vyas and Ramdeo (1964, 1965). During geobotanical and floristic surveys in the environs of Udaipur, particularly in the area of Zawar Mines, a number of plants which are new records for this area have been collected. These specimens have been deposited at Forest Research Institute, Dehra Dun (DD) and Geobotanical Herbarium, Department of Botany, School of Basic Sciences and Humanities, University of Udaipur, Udaipur (Rajasthan).

The following is the list of new records for this area arranged according to the system of Bentham and Hooker. Most of the plants have been collected from Zawar Mines except otherwise mentioned. The figures correspond to herbarium sheet number in Geobotanical Herbarium (GBH).

ENUMERATION

CLEOMACEAE

Cleome gynandra Linn. Syn. *Gynandropsis pentaphylla* (Linn.) DC.

Rare. Fl. & Fr.: August-October. GBH 32.

C. simplicifolia Hook. f. & Thoms.

Not common. Fl. & Fr.: August-October. GBH 30.

MALVACEAE

Abutilon ramosum Guill. Perr. et Rich.

Common. Fl. & Fr.: August-October. GBH 333.

Pavonia patens(Andr.) Chiov. Syn. *P. glechomifolia* Gareke

Common. Fl. & Fr.: July-October. GBH 177.

P. zeylanica (Linn.) Cav.

Common. Fl. & Fr.: Throughout the year. GBH 372.

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STERCULIACEAE

Melhania futteyporensis Munro ex Mast.

Preferentially confined to mineralized zones in Zawar Mines area. Fl. & Fr.: August-October. GBH 115.

TILIACEAE

Corchorus tridens Linn.

Very common. Fl. & Fr.: August-September. GBH 141.

Grewia hirsuta Vahl

Common. Fl. & Fr.: August-September, GBH 302.

Triumfetta pentandra A. Rich. Syn. *T. neglecta* Wt. et Arn.

Preferentially confined to mineralized zones in Zawar Mines area. Fl. & Fr.: August-September. GBH 170.

BALSAMINACEAE

Impatiens balsamina Linn.

More or less restricted to mineralized zones in Zawar Mines area. Fl. & Fr.: August-October. GBH 336.

VITACEAE

Cayratia trifolia (Linn.) Domin. Syn. *C. carnosa* (Lamk.) Gagnep. Syn. *Vitis trifolia* Linn.

Common. Fl. & Fr.: July-September. GBH 512.

MORINGACEAE

Moringa concanensis Nimmo ex Dalz. & Gibs.

Not common. Fl. & Fr.: October-December. GBH 272.

LEGUMINOSAE

Alysicarpus glumaceus (Vahl) DC. Syn. *A. rugosus* (Willd.) DC.

Rare. Fl. & Fr.: October. GBH 632.

A. longifolius Wt. et Arn.

Not common. Fl. & Fr.: September-October. GBH 587.

A. bupleurifolius DC.

Common. Fl. & Fr.: August-October. GBH 858.

A. monilifer DC.

Very common. Fl. & Fr.: August-November. GBH 777.

Atylosia platycarpa Benth.

Rare. Fl. & Fr.: August-October. GBH 850.

Crotalaria linifolia Linn. f.

Common. Fl. & Fr.: September-November. GBH 643.

Desmodium gangeticum DC.

Common. Fl. & Fr.: September-October. GBH 787.

D. procumbens (Mill.) Hitche. Syn. *D. spirale* DC.

Not common. Fl. & Fr.: August-October. Locality—Maton Mines. GBH 571.

Dolichos falcatus Klein. ex Willd.

Not common. Fl. & Fr.: August-September. Locality—Chirwa. GBH 650.

Galactia tenuiflora (Willd.) Wt. ex Arn.

Not common. Fl. & Fr.: September-October. GBH 719.

Goniogyna hirta (Willd.) Ali Syn. *Heylandia latebrosa* DC.

Not common. Fl. & Fr.: August-October. GBH 582.

Indigofera angulosa Edgew.

Rare. Fl. & Fr.: August-September. GBH 728.

Vigna trilobata (L.) Verdc. Syn. *Phaseolus trilobus* Ait.

Very common. Fl. & Fr.: October. GBH 815.

Smithia bigemina Dalz.

Not common. Fl. & Fr.: August-October. Locality—Gorana Dam. GBH 677.

S. conferta Sm.

Not common. Fl. & Fr.: August-October. Locality—Gorana Dam. GBH 681.

Trigonella corniculata Linn.

Very common. Fl. & Fr.: February. GBH 663.

Acacia pennata Willd.

Not common. Fl. & Fr.: June-August. GBH 924.

Cassia italica (Mill.) Lamk. ex Anders. Syn. *Cassia obtusa* Roxb.

Not common. Fl. & Fr.: August- January. Locality—Debari. GBH 705.

Cassia occidentalis Linn.
Common. Fl. & Fr.: August-September. GBH 889.

C. sophera Linn.
Not common. Fl. & Fr.: Rainy season. GBH 750.

C. pumila Lamk.
Common. Fl. & Fr.: August-September. GBH 1001.

CUCURBITACEAE

Mukia maderaspatana (Linn.) M. Roem. Syn. *M. scabrella* Arn. Syn. *Melothria maderaspatana* Cogn.
Not common. Fl. & Fr.: August-October. GBH 533.

Trichosanthes bracteata (Lam.) Voigt. Syn. *T. palmata* Roxb.
Rare. Fl. & Fr.: July-September. GBH 364.

ALANGIACEAE

Alangium salvifolium (Linn. f.) Wang. Syn. *A. lamarckii* Thwaites.
Common. Fl. & Fr.: February-March. GBH 191.

COMPOSITAE

Conyza bonariensis (L.) Cronq. Syn. *Erigeron bonariensis* L.
Common. Fl. & Fr.: September, February-March. GBH 865.

Flaveria trinervia (Spreng.) C. Mohr. Syn. *F. repanda* Lag.
Common. Fl. & Fr.: September-December. GBH 735.

Gnaphalium pensylvanicum Willd. Syn. *G. peregrinum* Fernald.
Not common. Fl. & Fr.: December-May. GBH 729.

Lagascea mollis Cav.
Common. Fl. & Fr.: Throughout the year. GBH 816.

Launaea asplenifolia (Willd.) Hook. f.
Common. Fl. & Fr.: September-March. GBH 884.

Oligochaeta ramosa (Roxb.) Wagenitz. Syn. *Amberboa ramosa* (Roxb.) Jafri. Syn. *Volutarella divaricata* Benth. et Hook. f.
Rare. Fl. & Fr.: October-March. Locality —Zawar Mines. GBH 674.

Parthenium hysterophorus Linn.
Not common. Fl. & Fr.: August-December. GBH 928.

Sclerocarpus africanus Jacq. ex Murr.
Common. Fl. & Fr.: August-September. GBH 703.

PERIPLOCACEAE

Hemidesmus indicus R. Br.
Rare. Fl. & Fr.: Throughout the year. Locality—Gorana Dam. GBH 517.

ASCLEPIADACEAE

Leptadenia pyrotechnica (Forsk.) Decne. Syn. *L. spartima* Wt.
Common in plains. Fl. & Fr.: August-September; February-March. Locality—Jeevakhera. GBH 395.

L. reticulata Wight & Arn.
Very common. Fl. & Fr.: April-July. GBH 967.

Marsdenia tenacissima (Roxb.) Moon.
Common. Fl. & Fr.: April-June. Locality —M. B. College Campus. GBH 891.

CONVOLVULACEAE

Convolvulus rottlerianus Choisy
Not common. Fl. & Fr.: October-November. GBH 700.

Evolvulus alsinoides Linn.
var. **decumbens** (R. Br.) Ooststr.
Common. Fl. & Fr.: August-October. GBH 379.
var. **hirsutus** (Lamk.) Ooststr.
Not common. Fl. & Fr.: July-October. GBH 618.
var. **alsinoides** Ooststr.
Common. Fl. & Fr.: September-October. GBH 551.

Ipomoea sindica Stapf.
Common. Fl. & Fr.: August-October. GBH 373.

I. sinensis (Desr.) Choisy. Syn. *I. calycina* Clarke.
Common. Fl. & Fr.: October. GBH 387.

Ipomoea coptica (Linn.) Roth ex Roem. *et* Schult. Syn. *I. dissecta* Willd.

Not common. Fl. & Fr.: October. GBH 346.

SOLANACEAE

Lycium barbarum Linn.

Common. Fl. & Fr.: October-January. GBH 1055.

Solanum elaeagnifolium Cav.

Rare. Fl. & Fr.: July-October. Locality —Meera Girls College, GBH 499.

SCROPHULARIACEAE

Striga angustifolia (Don) Sald. Syn. *S. euphrasioides* (Vahl) Benth.

Common. Fl. & Fr.: October. GBH 657.

S. densiflora Benth.

Common. Fl. & Fr.: August-November. GBH 525.

Veronica agrestis Linn.

Not common. Fl. & Fr.: January-February. Locality—Agriculture Farm. GBH 451.

PEDALIACEAE

Pedalium murex Linn.

Not common. Fl. & Fr.: August-October. Locality—Kewra-ke-nal. GBH 662.

ACANTHACEAE

Dipteracanthus patulus (Jacq.) Nees

Common. Fl. & Fr.: July-September. GBH 1036.

Hemigraphis latebrosa Nees

Common, growing among rock crevices. Fl. & Fr,: Throughout the year. GBH 712.

VERBENACEAE

Lantana indica Roxb.

Not common as *Lantana camara.* Fl. & Fr.: September-January. GBH 886.

LABIATAE

Lavandula bipinnata (Roth) O. Ktze. Syn. *L. burmanni* Benth.

Common. Fl. & Fr.: October-November. GBH 999.

Nepeta hindostana (Roth) Haines. Syn. *N. ruderalis* Buch.-Ham.

Common. Fl. & Fr.: August-October. GBH 64.

Plectranthus mollis (Ait.) Spreng. Syn. *P. incanus* Link.

Common. Fl. & Fr.: August-October. GBH 51.

Pogostemon benghalensis (Burm. f.) O. Ktze. Syn. *P. plectranthoides* Desf.

Rare. Fl. & Fr.: August-October. Locality—Gorana Dam. GBH 68.

Salvia aegyptiaca Linn.

Common. Fl. & Fr.: October. GBH 66.

EUPHORBIACEAE

Croton bonplandianum Baill.

Common. Fl. & Fr.: Almost the year round. Locality—Pratapnagar. GBH 715.

Euphorbia chamaesyce Linn. Syn. *E. prostrata* Ait.

Common. Fl. & Fr.: August-October. GBH 485.

E. clarkeana Hook. f.

Common. Fl. & Fr.: August-October. GBH 569.

E. geniculata Orteg.

Common. Fl. & Fr.: September-November. GBH 692.

Kirganelia reticulata (Poir.) Baill. Syn. *Phyllanthus reticulatus* Poir.

Common. Fl. & Fr.: Major parts of the year. GBH 535.

AMARYLLIDACEAE

Crinum defixum Ker.-Gawl.

Rare. Fl. & Fr.: After Rains. GBH 453.

LILIACEAE

Chlorophytum tuberosum Baker

Common. Fl. & Fr.: July. GBH 131.

COMMELINACEAE

Commelina forskalaei Vahl

Not common. Fl. & Fr.: August-November. GBH 640.

Commelina undulata R. Br. Syn. *C. obliqua* Buch.-Ham. Syn. *C. kurzii* C. B. Clarke.
Not common. Fl. & Fr.: August-September. GBH 486.

Cyanotis cristata (Linn.) D. Don
Not common. Fl. & Fr.: August-October. GBH 667.

CYPERACEAE

Cyperus alulatus Kern
Not common. Fl. & Fr.: September. GBH 424.

Fimbristylis miliacea (L.) Vahl. Syn. *F. littoralis* Gaud. Syn. *F. quinquangularis* (Vahl) Kunth.
Common. Fl. & Fr.: October. GBH 740.

F. ovata (Burm. f.) Kern. Syn. *F. monostachya* (L.) Hassk.
Common. Fl. & Fr.: October. GBH 641.

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