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The present report of floristic records provide available information on five species of vascular plants which were reported from the state of Rajasthan for the first time. These plants were collected during the field surveys conducted during 2014. All the specimens were taxonomically verified using existing floristic treatises listed ahead and herbarium consultation at Botanical Survey of India, Jodhapur (BSJO). The flora of Rajasthan is still very imperfectly studied, and the present botanical tour only contributes to some extent to the floristic diversity of Rajasthan State. Perusal of the old literature on the flora of Rajasthan (Sharma & Tyagi 1979; Shetty & Panday 1983; Singh 1983; Shetty & Singh 1987, 1991, 1993; Bhandari 1990; Sharma & Katewa 2007; Tiagi & Aery 2007; Tiwari et al. 2009) revealed that *Commicarpus boissieri*, *Geodorum recurvum*, *Maytenus senegalensis*, *Premna resinosa* and *Solanum elaeagnifolium* are new records for the state. For all the species, voucher specimens were deposited at the Foundation for Revitalisation of Local Health Traditions herbaria (FRLH).

Commicarpus boissieri (Heimerl) Cufod. (Image 1)

in Bulletin du Jardin Botanique National de Belgique 39 (Suppl.): xxi. 1969. (Nyctaginaceae).

Type: Baluchistan: Chuttok, S. Kalat, 1350 m, Stocks s.n. (K!).

Synonyms: *Boerhavia boissieri* Heimerl ex Vierh.; *Boerhavia plumbaginea* var. *viscosa* Asch. & Schweinf.;

SOME NEW RECORDS OF PLANTS FROM THE STATE OF RAJASTHAN, INDIA

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Boerhavia verticillata Poir.; *Commicarpus stellatus* (Wight) Berhaut

A decumbent to straggling perennial herb; stem and braches glabrous. Leaves ovate, subcordate to suborbiculate at base, 2–6 x 1–6 cm, obtuse, retuse or cuspidate at apex, often repand or sinuate, fleshy; petiole 0.7–2 cm long. Flowers 3–5 per node, c. 6.5mm long, in superposed umbels, campanulate. Involucral bracts 2–3 mm long, linear-lanceolate, puberulous, deciduous. Pedicel 0.5–1.2 cm long, slender. Perianth pink, violet or white, 2.5–4 mm long, lower part 1.5mm long, raphides present. Stamens (2-)3, sub-exserted; filament 5–5.5 mm long, slender. Ovary less than 1mm long, subglobose to ovoid; style as long as or longer than the filaments; stigma capitate. Anthocarp 5–7 mm long, turbinate, nodding, with a ring of large wart-like glands around the apex.

Specimen examined: 117468 (FRLH), 19.viii.2014, Shri Jogi Mataji Temple, Barmer, Rajasthan, 25°44'26.5"N & 071°23'8.9"E, 281.6m, coll. K. Ravikumar, N.

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Image 1. *Commicarpus boissieri* (Heimerl) Cufod.
A - Leaf; B - Voucher specimen; C - Flowers; D - Fruits

Balachandran and Umeshkumar Tiwari.

Flowering: August; Fruiting: September–October.

Distribution: Southern Iran, Pakistan and India.

Note: This species has been reported from western Panjab, Konkan, Sindh, Gujarat, Mysore and Hyderabad, Travancore and Carnatic (Hooker 1885). In Rajasthan this species was observed to be common in and around Shri Jogi Mataji Temple, Barmer under the shade of *Prosopis juliflora* (Sw.) DC. forest. *Commicarpus boissieri* (Heimerl) Cufod. is closely related to *Commicarpus verticillatus* (Poir.) Standl. (syn. *Boerhavia verticillata* Poir.), from which it differs in the flowers that are 5–7 mm long in verticils of 4–7; stamens rarely more than 3.

***Geodorum recurvum* (Roxb.) Alston (Image 2)**

in H. Trimen, Handb. Fl. Ceylon. 6: 276. 1931. (Orchidaceae).

Type: India, Circars, *Roxburgh* sine loc. (Corom Pl. t 39) (Iconotype).

Synonyms: *Limodorum recurvum* Roxb.; *Geodorum*

dilatatum R. Brown.

Plants up to 30cm tall. Pseudobulbs tuberous, ovoid, borne on a short rhizome and sometimes forming clusters, up to 2.5cm in diam., few noded, usually partially covered in fibrous sheaths. Leaves up to 3, well developed at anthesis, elliptic-oblong to elliptic, 13–30 × 5–10 cm, apex acute or shortly acuminate; petiole-like stalk enclosed in several sheaths and forming a pseudostem 8–18 cm. Inflorescence 10–20 cm, much shorter than leaves; peduncle with 2 or 3 tubular, membranous sheaths; rachis pendulous, 3–4 cm, densely 8–20 flowered; floral bracts linear-lanceolate, membranous, apex acute. Flowers not opening widely, white, lip with purplish streaks and a yellowish callus at center. Sepals narrowly oblong, apex acuminate; lateral sepals slightly wider than dorsal sepal. Petals obovate-oblong, 9–11 × ca. 3.5mm, apex obtuse or acute; lip broadly oblong-ovate, unlobed, lateral margins erect, apical margins slightly crisped, apex obtuse and usually slightly emarginate; disk with a central callus composed

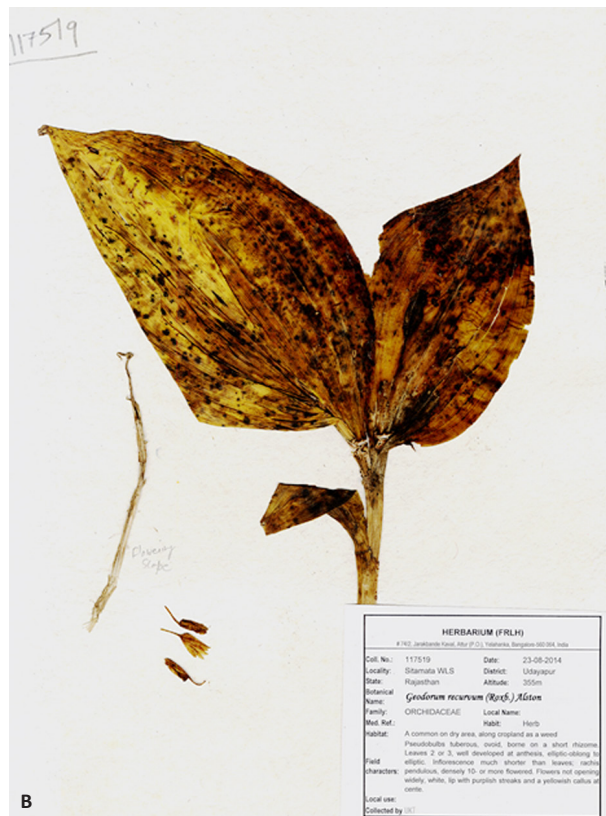


Image 2. *Geodorum recurvum* (Roxb.) Alston
A - Habit with flowers; B - Voucher specimen

of 2 or 3 fleshy, crest like longitudinal ridges extending from midway along lip almost to apex. Column 3–3.5 mm, with a short column foot.

Specimen examined: 117519 (FRLH!), 23.viii.2014, Rajasthan- Near Valmiki Ashram, Sitamata Wildlife Sanctuary, Pratapgarh 27°04'4.4"N & 074°25'11.5"E,

357m, Umeshkumar Tiwari & S.K. Sharma.

Flowering: August; Fruiting: September.

Distribution: Tropical and subtropical Asia (India, Cambodia, China, Myanmar, Thailand, Vietnam).

Note: In India this is reported from Madhya Pradesh, Chhattisgarh, Maharashtra, Jharkhand and Odisha.

Maytenus senegalensis (Lam.) (Image 3)

Exell. Boletim da Sociedade Broteriana, sér. 2 26: 223. 1952. (Bol. Soc. Brot., sér. 2). (Celastraceae).

Type: Angola, BM000838871 (BM!)

Synonyms: *Catha montana* (Roth ex Roemer & Schultes) G. Don; *Celastrus montanus* Roth ex Roemer & Schultes; *Celastrus senegalensis* Lam.; *Gymnosporia montana* (Roth ex Roemer & Schultes) Benth.; *Gymnosporia senegalensis* (Lam.) Loes.

A small tree; young branches often spiny, bearing leaves and flowers. Leaves grey, coriaceous, glabrous, very variable, obovate, oblanceolate or linear-spathulate, obtuse, entire or crenulate, decurrent at the base, 0.5–4.5 x 0.4–2 cm; petioles c. 3mm long. Flower small in axillary, dichotomous or fasciculate cymes on short branchlets, often forming terminal, elongate panicles. Pedicels filiform; bracts small, lanceolate, acute. Calyx lobes broadly elliptic-oblong, ciliate. Petals oblong. Disc fleshy, many lobed. Ovary glabrous, orbicular; style deeply 2–3-cleft. Capsules globose, 4–5 mm broad, bivalved, purple. Seeds chestnut brown; arillode orange.

Specimen examined: 117402 (FRLH!), 15.viii.2014, Rajasthan- Naval-ghar, Jhunjunu 27°26'0.4"N & 075°14'0.5"E, 418m, coll. K. Ravikumar, N. Balachandran and Umeshkumar Tiwari.

Flowering: August; Fruiting: October.

Distribution: Tropical and subtropical Africa and Asia.

Note: In India Genus *Maytenus* is represented by 18 species. This species was reported from Punjab, Uttar Pradesh, Bihar, Madhya Pradesh, Gujarat, Maharashtra, Karnataka and Andhra Pradesh and Tamil Nadu (Singh et al. 2000). This is very common in dryer areas.

Premna resinosa (Hochst.) Schauer subsp. *resinosa* (Image 4)

in A.D.C., Prodr. 11:367. 1847. (Verbenaceae).

Type: Sudan-Mt. Cordofani Arasch-Cool, Kotschy, 21/10/1839, 198 (Iso-syntype, K!).

Synonyms: *Holochiloma resinum* Hochst. Fl. 24:371. 1841.

Undershrub, 1–1.5 m tall, woody at base. Leaves ovate or ovate-elliptic, obtuse or acute at apex, older leaves entire at margin, young or flowering twig leaves crenate; young braches sometime villous. Inflorescence

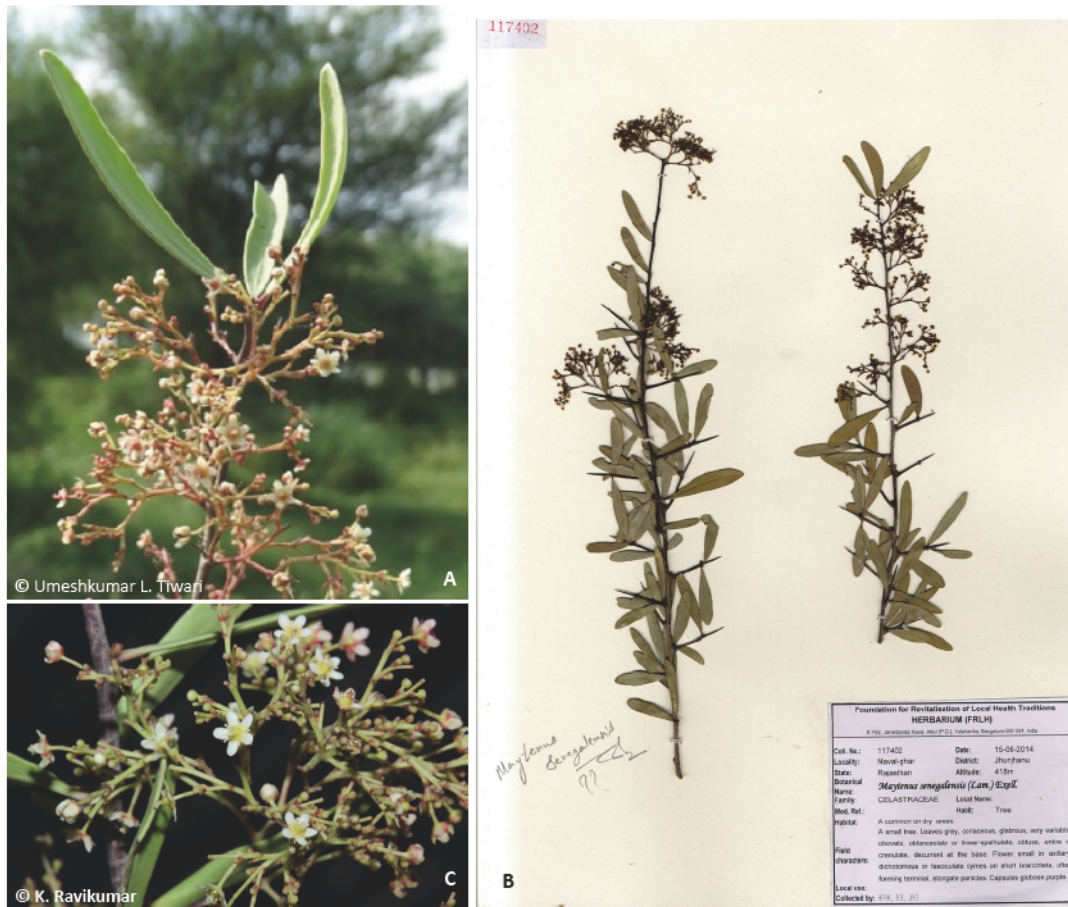


Image 3. *Maytenus senegalensis* (Lam.) Exell.

A - Inflorescence stalk with leaves; B - Voucher specimen; C - Close up of flowers.

of small pedunculate corymbose panicles or few flowered cymes; peduncle ca. 1cm long, bract linear or subulate, 1–2 mm long, pubescent. Flower very small; pedicels 1–2 mm long or subsessile. Calyx cupular, faintly five toothed or entire, ca. 2x3 mm, pubescent outside. Corolla infundibular, tube barbate, ca. 5x2 mm, 2-lipped, four lobed, cream coloured; lobes unequal. Stamen 4, didynamous; filiform, glabrous, included. Drup obovate or subglobose, ca. 3x2 mm, orange red when mature.

Flowering: August; Fruiting: September–October.

Distribution: Tropical and subtropical Africa and Asia.

Specimen examined: 117498 (FRLH!), 20.viii.2014, Rajasthan-Sirohi, on way to Jodhpur from Raniwada, 24°45'36"N & 072°09'30.7"E, 139m, coll. K. Ravikumar, N. Balachandran and Umeshkumar Tiwari; 7822 (BLAT!), s.d., Gujarat-Barda forest, Santapau.

Note: In India Genus *Premna* is represented by 31 species (Rajendran & Daniel 2002). This species was reported from Gujarat (Deshpande 1961; Shah 1978) as a new record for India. After that it was not collected from elsewhere in India. This is very common in dryer

rock and hilly areas.

Solanum elaeagnifolium Cav. (Image 5)

Icones Descriptions Plantarum 3: 22–23, pl. 243. 1794 [1795]. (Solanaceae).

Type: Cult. In hortu bot. Matrit.ex America (MA!).

A perennial branched herb up to 1m tall. Stem and branches dense stellate-tomentose, prickly. Prickles sparse, acicular, 2–5 mm long, yellow. Leaves alternate, 1.5–11x3.0 cm, ovate-lanceolate to lanceolate, repand-sinuate, base cuneate to oblique. Flowers 1–5 in number, violet-blue to purplish, in extra-axillary cymes. Pedicel up to 20 mm long. Calyx ± 5 mm long deeply 5-lobed, enlarging in fruit. Corolla 20–25 mm broad. Anthers yellow. Filaments 3 mm long. Berry globose, 11–12 mm broad, yellow. Seed sub-reniform, c. 3 mm long.

Fl. & Fr.: July–August.

Distribution: Native to temperate America, naturalised in India.

Specimen examined: 117404 (FRLH!), 15.08.2014, Rajasthan-Jhunjhunu, 28°06'5.50"N & 075°22'39.1"E,



Image 4. *Premna resinosa* (Hochst.) Schauer subsp. *resinosa*
A - Inflorescence stalk with leaves; B - Voucher specimen

339m, coll. K. Ravikumar, N. Balachandran and Umeshkumar Tiwari.

Note: *Solanum*, a member of family Solanaceae, is a large and diverse genus of annual and perennial plants containing nearly 2000 species of which 37 are native to Asia. In India Genus *Solanum* is represented by 45 species (Hooker 1885). *Solanum elaeagnifolium* is native to northeastern Mexico and southwestern USA. In India, till now it was known as a weed growing in Tamil Nadu and Karnataka. In this paper it is for the first time reported from Rajasthan State.

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Image 5. *Solanum elaeagnifolium* Cav.
A - Habit with flowers; B - Voucher specimen

