NEW COMBINATION ON SOME VARIETIES OF *ELAEAGNUS UMBELLATA* SUBSP. *PARVIFOLIA* (WALL. EX ROYLE) SERVETTAZ

During the revisionary studies on the genus *Elaeagnus* it was found that *E. umbellata* Thunb. (1784) and *E. parvifolia* Wall. ex Royle (1836) are two distinct species. Schlechtendal (1857) also maintained this view but Servettaz (1908) treated *E. parvifolia* as a subsp. of *E. umbellata* and described some varieties under it. Momiyama & Hara (1973) have clearly stated that the Himalayan species *E. parvifolia* differs from *E. umbellata* on these points as stated below :

Buds and leaves with silvery, stellate scales. Perianth limb narrow, cylindrical with only silvery scales ; lobes pointed and 2/3 of limb. Anthers with connectives. Styles short, copiously stellate pilose. Disc not hairy ..	*Elaeagnus parvifolia* Wall. ex Royle
Buds and leaves with brownish scales. Perianth limb broad conical with brown hairs ; lobes 1/3 of limbs, rounded apex. Anthers sessile, pointed at apex. Styles long recurved. Disc hairy ..	*E. umbellata* Thunb.

Following this some new combinations have become necessary and proposed here.

Elaeagnus parvifolia Wall. ex Royle var. **nuda** (Serv.) Basu *comb. nov.*

Elaeagnus umbellata subsp. *parvifolia* (Wall. ex Royle) Serv. var. *nuda* Serv. in Beihe. Bot. Centralbl. (Abt. 2) 25 : 57. 1909.

E. parvifolia Wall. ex Royle var. **villosa** (Serv.) Basu *comb. nov.*

E. umbellata subsp. *parvifolia* (Wall. ex Royle) Serv. var. *villosa* Serv. l.c. 57.

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SOME NEW RECORDS OF THE GENUS *MALVA* L. (MALVACEAE) FROM INDIA

This paper records the occurrence of three taxa of the genus *Malva* L. from India for the first time. The specimens of these taxa were collected from north-western India and Rajasthan, deposited in the Central National Herbarium (CAL). Detailed analysis of these specimens showed that these are *Malva mohileviensis* Downar, *M. verticillata* L. var. *rafigii* S. Abedin and *M. parviflora* L. var. *microcarpa* (Pers.) Loscos.

A detailed description of these taxa are given below to facilitate easy identification.

1. **Malva mohileviensis** Downar in Bull. Soc. Mosc. 1 : 177. 1861 ; Iljin in Shish. & Borb., Fl. URSS 15 : 64. Pl. 3 f. 1. 1949 ; S. Abedin, Fl. W. Pak. 130 : 43. 1979.

Type : Described from vicinity of Mogilen (LE).

Annual herb upto *c.* 1.5 m high, stem somewhat purplish, young portion pubescent. Leaves 1.5-4.5 × 2-7 cm, suborbicular, 5-7 lobed, apex rounded, base cordate, margin crenate, sparsely simple hairy ; petiole 1.5-14.0 cm long, young portion pubescent with simple and stellate hairs, mature portion glabrescent. Stipules 3-5 × 2-3 mm, ovate-lanceolate. Flowers 3-8 in axillary fascicles ; pedicel 3-10 mm long. Epicalyx segments 3-4 × *c.* 1 mm, linear, ciliate at margin. Calyx *c.* 5 mm across, slightly accrescent, lobes connate upto middle and free above, *c.* 5 × 3-4 mm, deltoid, acute. Corolla about twice as long as the calyx ; petals obovate, retuse, pinkish. Staminal column 3-4 mm long, retrose hairy throughout. Schizocarp 5-7 mm across, glabrous ; mericarps 11-12, *c.* 2 mm long and broad, dorsally faintly reticulate. Seeds c. 1 mm long and broad.

Fls. & Frts. : January-March.

Distribution : India (Rajasthan) ; Pakistan, Japan, China, Russia and Europe.

Specimens examined : INDIA : Rajasthan : Jaipur, 3.3.66, *Sharma* 1460 (CAL-4 collections).

2. M. verticillata L. var. **rafiqii** S. Abedin, Fl. W. Pak. 130. 45. 1979. *Malva verticillata* var. *chinensis* sensu Hu, Fl. China fam. 153 p. 6, t. 15, f. 5. 1955 *non Malva chinensis* Mill. (1768).

Type : Pakistan, Hazara Dist., Kaghan valley, 20 miles from Gulmar farm on way to Babusar, 40 cm tall, flowers pinkish, *S. Abedin & M. Qaiser* 9101 (KUH).

Annual or perennial herb 30-120 cm high, glabrescent. *Leaves* 3-12 × 2-10 cm, suborbicular, base cordate, 5-6 lobed, lobes roundish, acute or rounded at apex, margin crenate-serrate, both the surface densely to sparsely simple and stellate hairy, glabrous ; petiole 2-15 cm long, pubescent. *Stipules* 3-5 × 2-4 mm, lanceolate to deltoid, acuminate, hairy. *Flowers* 2-4 in axillary loose fascicles ; pedicel 6-15 mm long, unequal in each fascicle, stellate pubescent. *Epicalyx segments* 3-4 mm long, linear, simple hairy. Calyx *c.* 8 mm long, accrescent upto 15 mm, lobes deltoid-lanceolate, acute. *Corolla* slightly exceeding to twice the length of the calyx ; *petals* 7-8 mm long, oblong, lobed at apex, lobes rounded, purplish. *Staminal column* 3-4 mm long, glabrous or simple hairy above. *Schizocarp c.* 5 mm in diameter, discoid ; mericarps 10-12, reniform, laterally prominently radially veined, glabrous. *Seeds c.* 1.5 mm across, reniform, glabrous, brownish black.

Fls. & frts. : May-September.

Distribution : India : North West Himalaya ; Pakistan, China.

Specimen examined : INDIA : Uttar Pradesh ; Badrinath (Garhwal), 3200 m, 4.10. 1959, *Rau* 10432 (CAL, BSD) ; Hyong, Leh (Ladakh), 3500 m, 15.8.1975, *Viswanathan* 54698 (BSD).

3. M. parviflora L. var. **microcarpa** (Pers.) Loscos, Trat, Pl. Aragon 2 : 203. 1877 ; Borss. in Blumea 14 : 150. 1966. *Malva microcarpa* pers, Syn. 2 : 251. 1806 ; S. Abedin, Fl. W. Pak. 130 : 41. 1979.

Type : Herb. *Persoon* s.n. (L).

Annual, semi-erect herb 15-45 cm high, branched from the base, stem with scattered patent simple and stellate hairs, ultimately glabrescent. *Leaves* 1.5-7.0 cm across, suborbicular to reniform, often slightly 3-7 lobed, rounded or obtuse at apex, margin crenate-serrate, stellate hairy ; *petiole* 1-25 cm long with stellate and simple hairs on the upper side. *Stipules* 1-3 mm, lanceolate to deltoid, acuminate, hairy. *Flowers* solitary or paired or rarely more in loose fascicles ; pedicel 3-8 mm long, accrescent upto 10 mm. *Epicalyx segments* upto *c.* 5 mm

long, linear, simple hairy, caducous. *Calyx c.* 5 mm long, lobes *c.* 5 × 2 mm, ovate, acute, outside with minute stellate and simple hairs, glabrous inside. *Corolla* bluish-white ; petals 3-7 × 2-3 mm, obovate, glabrous or with few simple hairs. *Staminal column c.* 3 mm long, glabrous. *Schizocarp* 5-8 mm across ; mericarps 10, reniform from aside, trigonous with sharp angles, two margins on the back keeled, dorsally prominently reticulately veined, laterally prominently radially veined, glabrous. *Seeds* 1.5-2.0 mm across, reniform, glabrous, brownish-black.

Fls. & frts. : December-February.

Distribution : India : Rajasthan ; Pakistan, Malesia.

Specimen examined : INDIA : Rajasthan : Bilara (Jodhpur), 22.2.77, *Singh* 3501 (CAL) ; Khejari (Bailusra), 7.2.79, *Singh* 7027 (CAL).

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LINDSAEA CHIENII CHING : A FERN NEW TO INDIA

Recently, a specialised botanical exploration exclusively for Pteridophytes was undertaken in Manipur State in N. E. India during the month of August 1984. While studying the collections, a few interesting specimens of the genus *Lindsaea* Dryand. ex Smith were scrutinised in detail and identified as *L. chienii* Ching with the help of literature and by comparison with herbarium specimens from Burma and other countries housed in CAL herbarium. *L. chienii* was earlier known to occur only in China, Japan, Taiwan, Indo-China and Thailand. Recently, Dixit and Ghosh (1982) reported its occurrence for the first time from Burma and provided detailed description and illustrations. Based on the recent collection from Manipur in the year 1984, the species is reported here as a new record for India. Since detailed description and illustrations are already given by Dixit and Ghosh (l.c.), only the specimens are cited in the present note. This species is an addition to the twenty two taxa of the genus already recorded from India (cf. Dixit & Ghosh, 1982, 1983).

Lindsaea chienii Ching in Sinensia 1 : 4. 1929 ; Dixit & Ghosh in Bull. Bot. Surv. India 24 : 168, ff. 1-12. 1982.

Specimens examined : MANIPUR : Forest Road to Dilong, alt. 1400 m, 8.8.1984, *Ghosh* 16439, three specimens (CAL).

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