

and four laterals, the sterile ones, one lower longer and three upper. In two flowers the fertile and sterile stamens are five each, two lower longer and three lateral fertile, while one lower longer, one lateral and three upper sterile.

The flowers of *Cassia sophera* show more variations than those of *C. occidentalis*. Of the thirty flowers examined, in twenty eight flowers the number of stamens is ten. Of the remaining two, there are eleven stamens in one flower, the other has six petals. The sixth petal appears to be one of the modified upper sterile stamen (Fig. 13). In fig. 13 it will be also seen that the two anthers are on a common filament. This may be either due to the fusion of the filaments of one of the lateral stamens and one of the upper ones, which has become fertile, or it may be due to fusion between the two laterals, in which case, then, one of the upper sterile is missing. The former interpretation seems more appropriate to us [c. f. (b) below].

In twenty eight flowers with ten stamens the following variations are noted:

(a) In twenty flowers there are six fertile and four sterile stamens and their arrangement is the same as described in *C. occidentalis* above.

(b) Seven flowers showed fertile and sterile stamens seven and three respectively, the fertile stamens being two lower longer, four laterals and one upper and the sterile ones, one lower longer and two upper.

(c) In one flower five and half stamens are fertile and four and half sterile; here one of the laterals has only half anther fertile, the other half modified

into a petaloid structure (Fig. 12); otherwise arrangement is the same as described in (a).

In the flower with eleven stamens, the number of fertile and sterile stamens is seven and four respectively, two lower longer and five lateral fertile, one lower longer and three upper sterile.

From the above observations it may be concluded that in most of the flowers of both the species there are ten stamens, but the number of fertile and sterile stamens is not constant as mentioned by Cooke and de Wit. Such variable characters, as far as possible, may not be used in the keys.

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#### NOTES ON SOME NEW DISTRIBUTION RECORDS FOR NORTH INDIA

***Alternanthera ficoidea*** (Linn.) R. Br. ex R. & S. (Amaranthaceae).

A native of Brazil, first described from Bombay (Shrivastava & Santapau, *J. Bomb. Nat. Hist. Soc.* 52 : (4), 957, 1954-55) and recently recorded from Mysore [Ramaswamy, *Bull. Bot. Surv. India* 6 (1) : 7, 1964]. This is the first record for Northern India.

Dehra Dun. Near Tapkeshwar, gregariously growing along roadside, flowers whitish, throughout the year, fruit setting is extremely rare, C. R. Babu 35432, 7 Oct. 1964; 34695, 1 Jan. 1965.

***Astragalus scorpiurus*** Bunge (Leguminosae).

This is the first report from Upper Gangetic Plain. Distributed mostly in drier parts of Punjab, N. W. F. Province, W. Pakistan, Baluchistan, Afghanistan [Ali, *Kew Bull.* 13 (2) : 305, 1958].

Dehra Dun, Rispana. Rare in grassy places along river bed, flowers deep purple tinged with pink and changing to bluish on drying. Baker (Hooker, *Fl. Brit. Ind.* 2 : 119, 1876), however, described flowers as yellowish tinged with rose purple, April—May, C. R. Babu 35206, 18 April, 1965.

***Ixeris sagittarioides*** (Cl.) Stebbins (Compositae).

This is the first report from Upper Gangetic Plain. Distributed along higher elevations of Himalayas (Hooker, *Fl. Brit. Ind.* 3 : 410, 1881).

Dera Dun, Rispana. Fairly common along ravines and in the undergrowth of *Shorea* forest, flowers yellow, April-May, C. R. Babu 35207, 18 April, 1965.

***Lepidium virginicum*** Linn. (Cruciferae).

A native of North America and a new introduc-

tion into India, probably during the early part of this century. It is characterised by the possession of incised cauline leaves, flowers with 4 petals which are as long as or slightly longer than the sepals and accumbent cotyledons. An examination of the specimens in the Herbarium (F.R.I. & B.S.I., N.C.) reveals that most of the specimens collected from various localities in Simla, Nainital, etc., and named as *L. ruderales* Linn. actually belong to this species. *L. ruderales* with entire cauline leaves, mostly apetalous flowers and with incumbent cotyledons is a species of temperate western Tibet (Hooker, Fl. Brit. Ind. 1: 160, 1872).

Dehra Dun. Rispana. Very common along roadside, waste places and a weed of gardens and lawns; flowers white, March—September, C. R. Babu 3244, 15 July, 1964; 35216, 20 April, 1965.

**Dipteracanthus beddomei** (Cl.) Santapau (Acanthaceae).

Described from Central India [Hooker, Fl. Brit. Ind. 4: 412, 1884; Haines, Bot. Bih. & Oris. (Rep.

ed.) 2: 707, 1961]. This is the first record outside Central India.

Dehra Dun. Rispana. Not uncommon among bushes on slopes, flowers pale purple, October–November, C. R. Babu 35456, 11 November, 1964.

**Soliva anthemifolia** R. Br. (Compositae).

Perhaps a recent introduction to our country, recorded for the first time from Northern districts of U. P. [Bhattacharyya, Bull. Bot. Surv. India 5 (3 & 4): 375–376, 1963]. The present report indicates a further extension of its distribution and in Dehra Dun it appears to be naturalized and approaching the status of a constituent element of the local weed flora.

Dehra Dun. Rispana. Abundant in dried up puddles, grassy places and as a weed on cultivated ground, heads greenish yellow, December–June, C. R. Babu 32001, 15 December, 1964.

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#### GYMNOSPORIA PUBERULA AND G. KONKANENSIS OF TALBOT

While examining some specimens of Celastraceae in the Poona Herbarium, some sheets of *Turraea villosa* Benn. (fruiting material) of Meliaceae which were wrongly identified as *Gymnosporia puberula* Laws. of Celastraceae attracted my attention. A critical study has made it clear that some of these Talbot's specimens identified by Dr. D. Prain as *G. puberula*, actually are *Turraea villosa*. Talbot accepted this identification; and then described his new species *G. konkanensis* (For. Fl. Bombay 1: 280, 1909).

From study of type material of *G. puberula* and *G. konkanensis*, it is evident that *G. konkanensis* Talb. is conspecific with *G. puberula* Laws.

Cooke in his *Fl. Pres. Bombay* 1: 232, 1902, cites Talbot's sheets from Ainsghat in North Kanara under *G. puberula*; but these and all the sheets labelled *Gymnosporia puberula* in Cooke's and Talbot's Herbaria are actually *Turraea villosa*.

Thus it is clear that Talbot's description of *Gymnosporia puberula* as well as Cooke's description of the above species need correction. As the plant under discussion has been transferred to *Maytenus molina*, the correct name of the present plant seems to be *Maytenus puberula* (Laws.) Loes. The two plants, *Maytenus puberula* and *Turraea villosa* may be cited thus:

**Maytenus puberula** (Laws.) Loes. in Engl. & Prantl. Nat. Pfam. ed. 2, 20b: 136, 1942. *Gymnosporia puberula* Laws. in Hook. f. Fl. Brit. Ind. 1:

619, 1875. *G. konkanensis* Talbot, For. Fl. Bomb. 1: 280, 1909.

**Turraea villosa** Benn. Pl. Jav. Bar. 182, 1840. *Gymnosporia puberula* Talbot, l.c. 278, 1909 p.p.; Cooke, l.c. p.p., Lawson, 1875.

*Sheets examined*: Available in B.S.I., Poona.

**Maytenus puberula** (Laws.) Loes. Manoli forest. Thana Dist., Talbot s.n., on 1-7-1907 (*Lectotype* of *G. konkanensis* Talb., a part of the sheet is reproduced in fig. 165 of his *For. Fl.* 1909); Thana Talbot 5155, in Aug. & Sept. 1907 (Five sheets. Fruits from these sheets are reproduced in fig. 165 l.c. Mr. W. A. R. Smith from Kew indicates that on two sheets of this field number available at Kew, Talbot's name is crossed out and replaced by another name Dr. Gustasp, who might be the collector of these specimens. There is, however, no such entry on the sheets at Poona); Deodal forest, Bassin, Thana Dist., Ryan 1022, on 5-7-1903; Parel forest, Bassin, Thana Dist., Ryan 1024, on 9-7-1903.

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