

Chromosome No. : $2n=68$ (vide Zeilinga, Bot. Nat. : 117. 1964).

Distrib. : INDIA (Sikkim, Uttar Pradesh, Himachal Pradesh), NEPAL, BHUTAN.

Specimens examined : E. Himalaya, Surial Bungalow compound, 1525 m, 30 May, 1947, K. Biswas 7485 (CAL-2 sheets); Sikkim, Lachung valley, Aug. 1892, G. A. Gamme s.n. (CAL); Uttar Pradesh, Meelam, 3,660 m, Strachey & Winterbottom 3 (K, photo!; det. Yü, Apr. 1950).

According to Klotz (l.c.) *Cotoneaster simonsii* Baker (= *C. symondsii* Th. Moore) is closely allied to *C. Khasiensis* Klotz, but it is distinguished by its irregular ramifications and more pubescent leaves, hypathium and calyx teeth. It is apparently a transition between *C. acuminatus* Lindley and *C. nitidus* Jacq. group.

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SPIRANTHES SINENSIS (PERSOON) AMES—A NEW RECORD OF ORCHID FROM EASTERN BHUTAN

A new record of orchid *Spiranthes sinensis* (Persoon) Ames, the only species of *Spiranthes* Richard from the Indian Subcontinent, has been reported from Eastern Bhutan. Certain interesting points on variability have been discussed.

The orchids of Bhutan are very little known. (Balakrishnan and Chowdhury 1966). An enumeration of the orchids of Bhutan has been given in Materials for the Flora of Bhutan by Subramanyam (1973). In an attempt to enrich the herbarium of the department the author could come across some interesting orchid specimens near Khangma, Tashigang district (Eastern Bhutan) which were identified as *Spiranthes*

sinensis (Persoon) Ames. Although a little mention of the collection of *S. australis* Lindl. from Bhutan by Griffith (Her. Ind. 19) has been given by Lindley (1840) but from Griffith's (1847) own report edited in the journal of travels in Assam, Burma, Bootan, Afghanistan and the neighbouring countries, it is crystal clear that he had collected *Spiranthes rubriflora* and not the *S. australis* Lindl. from a different locality near Chukka from South-west Bhutan. The subsequent publications like Hooker's Flora of British India and others also do not show any record of Griffith's collection. A thorough scrutiny of literatures on the Himalayan flora (Subramanyam 1973; Collett 1902; Polunin and

Stainton 1984; Banerji 1978; Hooker 1890) do not show any record of its being reported so far from this country. So, the author purports to bring it on record. Voucher specimen has been deposited in the college herbarium.

DESCRIPTION

Spiranthes sinensis (Persoon) Ames Orch. 2 : 53, 1908; Rao in Bull. Bot. Surv. India 2 : 415, 1960; *Neottia sinensis* Persoon Syn. Pl. 2 : 511, 1803; *S. australis* (R. Br.) Lindley in Bot. Reg. 10 : t. 823, 1824; in Gen. et Spec. Orch. 464, 1840; Hooker in Fl. Brit. Ind. 6 : 102, 1890; *S. lancea* auct. (Thumb. ex Sw.) non Baker, Bakh. & van Steenis in Blumea 6(2) : 361, 1950; *Ophrys lancea* Thumb. ex Sw. Vet. Akad. Handl. Stockh 21 : 1800.

A terrestrial leafy orchid. Rootstock fleshy, sometimes almost tuberous. Stem upto 8-45 cm erect. Leaves crowded near the base 0.5-1.5 cm., linear or inversely lance shaped, glabrous, 3-5-veined, margins entire. Flowers small, white, borne on a spiral, slender dense spike; spike 8-12 cm long. Bracts ovate, longer than ovary. Sepal 3-veined, 3.6 mm, spreading. Petals 3.4 mm, tips recurved. Lip oblong, 4.8 mm, adnate to the column, concave. Column short, 0.5 mm, pollinia 4, united in pairs.

Flowering & Fruiting : March to May, where as King and Pantling's (1898) specimen has two flowering seasons : (i) April-May (ii) August-September. Altitude-4000-8000 ft.

Distribution : Entire Himalayan belt : AFGHANISTAN, PAKISTAN, N. W. Himalaya, NEPAL, Eastern Himalaya (including Sikkim), BHUTAN (Khangma, Sadruddin-Coll. no. 19), N. E. India, extending to NEW ZEALAND, AUSTRALIA, SOUTH EAST ASIA, CHINA, KOREA, JAPAN, MANGOLIA and SIBERIA.

Hooker (1890) in FBI has mentioned that flowers secund, but I could not find in secund condition rather they were arranged on each side of the inflorescence axis in spiral fashion

which is also corroborated by the findings of Collett (1902) and Banerji (1978).

Spiranthes sinensis (Pers.) Ames, the only species of *Spiranthes* L. C. Richard from the Indian sub-continent, is a very variable plant especially in size of the flower, pubescence and colour which dramatically varies from red, pink, yellow to white depending upon altitude as reported by Lindley (1857) who has opined that the specimens of this species vary from hill to hill. Another reason of variation in colour has been assigned to seasonal change (King & Pantling 1898). According to King and Pantling flowers produced in spring are white, while those appearing in autumn are often pink but the present author has not been able to support this seasonal change as my specimens flowered only once in a year. Differences in stature, pubescence, colour, inflorescence character and extraordinary climatic condition for this species provide opportunity to propose the erection of many varieties or subspecies. Kitamura has separated sub. sp. *australis* on the basis of glabrescent spike. Coventry (1923) has reported it as perennial herb whereas the author's specimens were annual herbs only. According to Prain (1908) this species has been found near Chittagong floating in ponds at sea level. It is interesting to note that the habitat of this species has been found varying from aquatic to mountains through plains. So it can be concluded that *Spiranthes sinensis* (Pers.) Ames has very high adaptability.

The taxonomic account on *Herminium lanceum* (Thumb. ex Sw.) J. Vuyk by Raizada (1976) in Suppl. Flora of Upper Gangetic Plain is quite similar to that of *Spiranthes sinensis* (Pers.) Ames as compared by many floras (Hooker 1890, Banerji 1978 and Collett 1902). In a synonymy of *Herminium lanceum* (Thumb. ex Sw.) J. Vuyk. Raizada (1976) has included *S. lancea* auct. (Thumb. ex. Sw.) non Backer, Bakh & van Steenis., but as evident from literatures coupled with

study of illustrations, *S. sinensis* (Pers.) Ames and *H. lanceum* (Thumb. ex. Sw.) J. Vuyk. are two very distinct species and can not be treated as conspecific.

ACKNOWLEDGEMENTS

The author is thankful to the Principal, Sherubtse College, Kanglung for providing facilities and to Dr. S. Chowdhury, Reader in Botany, Gauhati University for necessary suggestions.

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MELHANIA BALAKRISHNANII (STERCULIACEAE) — A NEW SPECIES FROM TAMIL NADU, INDIA

A new species of *Melhania balakrishnanii* has been described with illustrations.

Melhania balakrishnanii K. Ravikumar, R. Ganesan et K. Ramamurthy *sp. nov.* A *M. Cannabina* Wight, habito prostrato; foliis orbicularis ad sub-orbicularis; floribus axillaribus et terminalibus, solitariis vel geminis; bracteolis oblongo-lanceolatis; lobis calycis *ca* 8 × 2.5 mm; eructibus globosis differt.

Holotypus: K. Ravikumar & R. Ganesan 86870 (CAL), isotypi in MH.

Herbs, prostrate, stout, stellate-tomentose; taproots up to 50 cm long, woody. Leaves alternate, orbicular to suborbicular, rarely ovate, cordate to truncate at base, obtuse to truncate at apex, 0.4-2.2 × 0.3-2.1 cm, irregularly crenate-dentate along margins, brownish tomentose above, greyish tomentose beneath,

with scattered, shiny, resinous glands on both surfaces; veins up to 4-paired, obscure; petioles 0.7-1.3 cm long, terete, tomentose. Stipules filiform, *ca* 2 mm long, caducous, tomentose, reddish-brown. Flowers axillary and terminal, solitary or in 2-flowered fascicle; peduncles *ca* 8 mm long, terete, tomentose; pedicels 2-4 mm long, terete, tomentose; bracts oblong-lanceolate, acute at apex, *ca* 9 × 2 mm, tomentose on both sides; bracteoles oblong-lanceolate, acute at apex, 7-9 × 1-2 mm, tomentose on both sides. Sepals 5, equal, ovate-lanceolate, acuminate at apex, *ca* 8 × 2.5 mm, ciliate along margins, yellow and glabrous inside, grey tomentose outside. Petals 5, obovate, cuneate at base, emarginate at apex, 6-7 × 4-5 mm, venose, shorter than sepals, bright yellow. Staminal cups up to 2 mm long, glabrous, yellow; stamens 5,