NOTES ON *HIBISCUS HIRTUS* LINN. (MALVACEAE)

Hibiscus hirtus Linn. is an endemic species reported from Kashmir to Tamil Nadu. It is an erect herb 60 cm to 2 m high, branching from the base and rooting in the crevices of rocks, on shallow soil in drier habitats or grows amidst herbaceous vegetation in moist situations. Its rose-pink

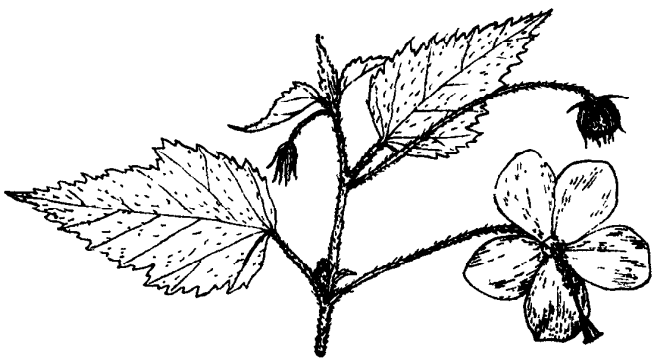

Fig. 1. A portion of stem with leaves, flowers, fruits, etc. of *Hibiscus hirtus* Linn. (× ½ nat. size)

flowers, 1·5-3·5 cm in diameter, are showy. This plant also yields a strong fibre (Fig. 1). In our efforts to build up a germ plasm bank for the genus *Hibiscus, H. hirtus* Linn. was introduced during 1970 in the Experimental Garden, Central Circle, Botanical Survey of India, Allahabad. The present communication records observations on the propagation, meiotic chromosome number and pollen fertility of this taxon.

Seedlings were raised through seeds in all months of the year. The days required to complete germination from the date of sowing, varied from 6-18 days. The maximum percentage of germination (about 60%) was obtained during September-October. The seeds retain their viability for more than one year. Plants can also be raised through stem cuttings and air-layerings. The flowering and seed-setting continued almost throughout the year. A record kept on the flowering and fruiting period of 1-year, 2-year and 3-year old plants, based on an average of 10 plants, in each set, showed that the opening of the flowers from the date of formation of flower buds, needed 21-24 days and for the mature seed-setting 33-37 days were required from the date of opening of the flower.

Meiotic chromosome behaviour was studied following the standard aceto-carmine technique. The haploid chromosome number (n) is 11. The sizes of the bivalent which showed end to end pairing at the late diakinesis/early metaphase, varied from 1·3μ-2μ This may suggest close homology among the pairing bivalents. The present report of n=11 is in agreement with that of 2n=22 for *Hibiscus phoenicious* Sensu Cav. non Linn. f. (1781) (*see* Skovsted, 1935, 1941) and is treated as a synonym of *H. hirtus* Linn. (*see* Borssum, 1966). The report of 2n=70 for *H. hirtus* Linn. (Sharma & Sharma, 1962) may perhaps best be treated as a polyploid form of the diploid reported here.

Pollen grains from fresh flowers were studied with warm aceto-carmine; 95% of pollen grains took up the stain indicating high fertility. The pollen grains measuring 130-150 μ were spheroidal, panporate with thick exine and prominently spinescent; spines each 20-30 μ long and the interporal distance varied from 50-80μ

R. B. Bose

Botanical Survey of India, Howrah

REFERENCES

Sharma, A. K. and A. Sharma. Polyploidy and chromosome evolution in *Hibiscus*. *La'Cellule* 62(3) : 283-300. 1962.

Skovsted, A. Chromosome numbers in Malvaceae I. *J. Genet* 31 (2) : 263-296. 1935.

——Chromosome numbers in Malvaceae II. *Compt. Rend. Trav. Carlsberg Physiol.* 23 (1A) : 195-242. 1941.

van Borssum Waalkers, J. Malesian Malvaceae Revised. *Blumea* 14(1) : 1-251. 1965.

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