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Abstract

Chromosome numbers are reported here for 11 species of the Lamiaceae belonging to 6 genera. Two of the species, *Satureja paradoxa* and *Thymus schimperi,* are endemic to Ethiopia. Chromosome preparations were made from root tip cells after pretreatment with colchicine or 8-hydroxyquinoline or cold treatment in ice water. Maceration was done in 4% cellulase + 4% pectinase solution at 36-37^{0}C for about one hour which was followed by airdry slide preparation. Chromosomes were stained with Giemsa in Sorensen's phosphate buffer (pH=6.8). The following 2n chromosome numbers were observed for the studied eleven species: *Ajuga integrifolia,* 2n=64; *Ocimum basilicum* var. *basilicum*, 2n=50; *O. lamiifolium,* 2n=42; *Plectranthus caninus*, 2n=30; *P. ornatus*, 2n=30; *P. punctatus*, 2n=56; *P. pseudomarrubioides*, 2n=64; *Salvia nilotica*, 2n=32; *Satureja paradoxa*, 2n=32; *S. simensis*, 2n=22; and *Thymus schimperi*, 2n=30. The chromosome numbers were determined from somatic mitotic chromosomes at early prophase to metaphase stages. Polyploidy is evident in most of the species. Variable basic chromosome numbers for species of the same genus were observed. Detailed studies of chromosome morphology were not possible because of the small size of the chromosomes. Notes on the taxonomy and distribution of each of the genera and species under this study are provided. It was recommended that further cytogenetical studies of many species of the family occurring in Ethiopia are required for better understanding of the phylogenetic and evolutionary relationships of the genera and species.