

عنوان مقاله:

A New Chromosome Number Report in *Stachys* L. Species by Use of Karyological Analysis

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خلاصه مقاله:

The somatic chromosome numbers and karyotype features of seven populations representing three species of *Stachys* L. (Lamiaceae), which are naturally distributed across Iran, were described. The results confirm the presence of different basic chromosome numbers including $x = 15$ and 17 within the genus. All the studied taxa were diploid and the chromosome counts of two species including *S. benthamiana* and *S. setifera* ($2n = 34$) are reported for the first time, while the chromosome number of *S. byzantina* ($2n = 30$) is confirmed. The chromosomes in the studied taxa of *Stachys* were generally small, as the longest chromosome length was detected on *S. setifera* ($18.713 \mu\text{m}$), whereas *S. setifera* (23354) demonstrated the shortest length ($1.46 \mu\text{m}$). The karyotypes were symmetrical composing of metacentric chromosomes as indicated by their mean arm ratio (AR) that ranged between 1.11 in *S. setifera* (23354) and 1.29 in *S. byzantina* (37985), so it was classified as class 1A according to Stebbins' categories. Based on the values of total form percentage (TF%, 47.1%), Arano index of karyotype asymmetry (AsK%, 52.5%), symmetry index (S%, 94.0%) and differences of range relative length (DRL, 0.36), *S. setifera* (23354) had the most inter-and intra-chromosomal symmetric karyotype. Also, *S. byzantina* (37985) had the most inter-and intra-chromosomal asymmetric karyotype based on the values of TF% (42.0%), AsK% (56.1%), and relative length of chromosome (RL%, 6.6%). The results of cluster analysis based on chromosomal parameters divided the taxa into two main groups using the Ward (method. Group I included taxa with $x = 17$ and group II contained *S. byzantina* ($x = 15$)).

کلمات کلیدی:

Asymmetry index, Chromosome numbers, Karyotype, *Stachys*

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