Cytogenetical Studies on Section Dentati of Dianthus (Caryophyllaceae) from Turkey

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Aim of the study: The research has made contribution to the taxonomic revision of the genus Dianthus in Turkey.

Material and Methods: All samples were collected from wild populations from Turkey. Collected specimens were deposited in Gazi University. Root-tip meristems were provided from seed by germinating them on wet filter paper in Petri dishes at room temperature. Firstly root tips pretreated for 16 h in α-monobromonaphthalene at 4°C, fixed in 3:1 absolute alcohol/glacial acetic acid, then the root tips were hydrolyzed with 1 N HCl for 12 min at room temperature and stained with 2% aceto-orcein for 3 h at room temperature. Stained root tips were squashed in a drop of 45% acetic acid and permanent slides were made by mounting in Depex. The chromosomes were counted by Software Image Analyses (Bs200ProP) loaded on a personal computer.

Results: This study has been carried out to determinate chromosome number of seven taxa naturally grow in Turkey from Dentati section of Dianthus genus which takes part in Caryophyllaceae family. The main aim of the study is to contribute the karyological analysis of Dianthus taxa which has not been studied in terms of cytogenetics. The chromosome analysis was made by Software Image Analyses (Bs200ProP) loaded on a personal computer. This study will make a contribution for the revision of Dianthus genus. The number of chromosomes for Dianthus kastembeluisensis, D. erinaceus var. alpinus, D. roseoluteus, D. nihatii, D. armeria subsp. armeria, D. goekayi and D. preobrashenskii taxa which are included in Dentati section was determined as 2n = 30 via squash preparation.

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