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Chromosome Numbers of Genus *Geranium* (Geraniaceae) from Turkey

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Aim of the study: This study comprises a comprehensive examination concerned with taxa belong to *Geranium* genus naturally spreading on Turkey. The main aim of this study is to complate the lack of karyological studies in terms of cytogenetics.

Material and Methods: All samples were collected from wild populations from Turkey. Collected specimens were deposited in Uşak University. All chromosome observations were carried out on root tips. 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. For karyotype analysis the photographs enlarged 10 ×100 were taken using a microscope with a camera attachment. The karyotypes were measured by Software Image Analyses (Bs200ProP) loaded on a personal computer. Ideograms of these taxa were arranged in decreasing length.

Results: The previous karyological studies are on the determination of somatic chromosome numbers for *Geranium* genus. A detail information related to chromosome morphologies of taxa of *Geranium* genus will be firstly provided via this study.It follows from the literatures that chromosome numbers of the genus vary like 2n=18, 22, 24, 26, 28, 30, 32, 34, 36, 40, 46, 48, 52, 56, 54, 58, 64, 68, 84, 112. The genus comprises *Geranium moschatum, Geranium robertianum, Geranium platypetalum, Geranium molle* subsp. *molle, Geranium molle* subsp. *bruitium, Geranium sylvaticum, Geranium collinum, Geranium columbinum, Geranium finitimum, Geranium petri-davisii, Geranium sanguineum, Geranium ibericum* subsp. *ibericum, Geranium ibericum* subsp. *jubatum, Geranium divaricatum, Geranium asphodeloides, Geranium palustre, Geranium bohemicum, Geranium ponticum, Geranium rotundifolium, Geranium lucidum, Geranium purpureum, Geranium gracile, Geranium dissectum, Geranium subcaulescens, Geranium pyrenaicum, Geranium psilostemon* taxa. *Geranium molle* subsp. *bruitium* and*Geranium asphodeloides* taxa have 2n=26 chromosome number while this number was detected as 2n=20 for *Geranium moschatum* and *Geranium lucidum* taxa. The chromosome number of *Geranium platypetalum, Geranium molle* subsp. *molle, Geranium sylvaticum, Geranium collinum, Geranium petri-davisii, Geranium rotundifolium t*axa were 2n=28. Somatic chromosome number of *Geranium columbinum* taxon was 2n=18 while *Geranium dissectum* taxon has 2n=22. *Geranium sanguineum* taxon was detected to somatic chromosome of 2n=84.

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