

## عنوان مقاله:

Chromosome Number Variation Along with Modest Morphological and Biochemical Differentiation among Wild Cyclamen Accessions (Myrsinaceae) in Iran

## محل انتشار:

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## نویسندگان:

Afsaneh Yavari Kondori - *Department of Horticulture Science (Ornamental Plants), Science and Research Branch, Islamic Azad University, Tehran, Iran*

Roohangiz Naderi - *University of Tehran*

Mahmood Khosrowshali - *Department of Biotechnology and Plant Breeding, Science and Research Branch, Islamic Azad University, Tehran, Iran*

Kambiz Larijani - *Department of Chemistry, Science and Research Branch, Islamic Azad University, Tehran, Iran*

## خلاصه مقاله:

Cyclamen, a popular decorative plant, is commonly found in gardens and pots. As wild Cyclamens are endangered, a study was conducted to explore the genetic potential for wild Cyclamen, focusing on their morphology and chromosomal diversity among eight accessions. A total of ۲۳ phenotypic-biochemical traits were evaluated along with chromosome counting. The morphological measures showed a humble range of variation, particularly in the number of flowers, peduncle diameter, number of leaves, hypocotyl length, and hypocotyl weight, with the Kordkuy accession being the largest and the Deylaman region being the most seeded. Cyclamen chromosome counting indicated ۱۵ chromosomal levels, implying a significant chromosomal diversity among the accessions, with the Pasand accession exhibiting the highest level of chromosomal diversity (۱۴ chromosomal levels). Furthermore, only the Pasand accession had the greatest chromosomal level ( $2n = 48$ ) among the accessions. Additionally, describing the results based on the median, the fewest chromosome diversity was recorded for Kordkuy accession. On the whole, with the participation of all morphological, biochemical, and chromosomal level data, and with the help of principle components and cluster analyses, Cyclamen accessions were divided into two main clusters and a single accession. The Kordkuy accession was put alone and separated from other accessions. HCA analysis confirmed the separation of Kordkuy accession from other accessions, as expected from its superiority in most morphological traits. The findings of the present research can be used to improve Cyclamen breeding programs as well as evolutionary studies.

## کلمات کلیدی:

Cyclamen, Wild relatives, Phenotypic traits, Chromosomal variation, Cluster Analysis

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