

B chromosome accumulation in *Dipcadi serotinum* (L.) Medik

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The plant species *Dipcadi serotinum* L. Medik ($2n = 8$) is characterized by a non-bimodal asymmetric karyotype, with three heterobrachial chromosomal pairs of increasing size, and a smaller hyperheterobrachial one (Ruiz Rejón et al., 1978). This karyotype could be the result of a chromosomal reduction from an initial polyploid condition ($2n = 12$). The presence of a variable number of accessory chromosomes (B-chromosomes) is also common in different populations of this species. These B-chromosomes can be considered as a by-product of the evolution of the standard karyotypes (Camacho et al., 2000). In this work, the frequency of B-chromosomes in *D. serotinum* and its relation to the fitness have been analyzed. Out of 50 individuals studied from La Cabrera, Madrid, 64% showed the presence of B-chromosomes, ranging from 0 B (36%) to 7 Bs (4%). This high value of B-chromosome indicates that this species might have a certain degree of tolerance to the presence of these extra chromosomes. For the same population, we have also shown that pollen viability decreases in individuals carrying B-chromosomes. Thirty-seven years ago, Ruiz Rejón et al. (1981) found almost one third of the current frequency of chromosomes B (24.24%) in the same population. The high number of chromosomes Bs detected today may be the result of a process of accumulation generated by the meiotic impulse (Jones 1991), which occurs in the parasitic or egoistic model (Shaw & Hewitt 1990), where equilibrium is the result of increase in the number of its frequency and the detrimental effects on the fitness of the hosts (Camacho et al, 2000).

COMMENTS:
