

MALE MEIOSIS AND CHROMOSOME NUMBER IN ASTERACEAE FAMILY FROM DISTRICT KANGRA OF H.P. (WESTERN HIMALAYAS)

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ABSTRACT

At present 156 populations covering 44 genera and 74 species under 11 tribes of Asteraceae family have been cytologically worked out from district Kangra of Himachal Pradesh in Western Himalayas. The study reported 14 species with new reports which includes varied chromosome count for *Aster lanceolatus* ($2n = 48$), *Cotula australis* ($2n = 26$), *Gerbera gossypina* ($2n = 18$), *Gnaphalium pensylvanicum* ($2n = 18$), *Senecio nudicaulis* ($2n = 10$); first chromosome count for *Carpesium abrotanoides* ($2n = 36$), *Conyza stricta* var. *stricta* ($2n = 18$), *Erigeron acer* ($2n = 18$), *Gnaphalium coarctatum* ($2n = 28$), *Stevia rebaudiana* ($2n = 22$), *Synedrella vialis* ($2n = 24$); first B-chromosome count for *Anaphalis margaritacea* ($2n = 28+2B$), *Anaphalis royleana* ($2n = 28+2B$) and *Cosmos sulphureus* ($2n=24+0-3B$). Population based study in most of the species reveals cytomorphological diversification. Cyto-variants are reported in two species viz. *Galinsoga parviflora* ($2n = 2x = 16$; $2n = 4x = 32$) and *Senecio nudicaulis* ($2n = 2x = 10$; $2n = 8x = 40$). Cytomorfo-variant is observed for *Ageratum conyzoides*: blue colored ray floret ($2n = 2x = 20$), white colored ray floret ($2n = 4x = 40$). Morpho-variants are reported for 10 species which covers flower morphotype for *Aster peduncularis*, *Cosmos bipinnatus*, *Erigeron annuus*, *Myriactis wallichii*, *Vernonia cinerea*; leaf morphotype for *Conyza japonica*, *Eclipta alba*, *Taraxacum officinale*; and habit morphotype for *Conyza stricta* var. *pinnatifida* and *Sonchus oleraceus*. Among presently worked out species $2n = 18$ is the most common chromosome number with $x = 9$ as the commonest base number. Chromosome number data is presently reviewed for presuming probable base numbers for each genus and frequency of polyploidy. Many species observed with meiotic abnormalities which consecutively reduces the pollen fertility.

KEYWORDS: Asteraceae, Chromosome Number, Base Number, Meiosis, Polyploidy, Western Himalayas