Tesis para optar al Título de Licenciado en Genética

Título:

Estudios cromosómicos en *Zephyranthes mesochloa* Herb. ex Lindl. (Amaryllidaceae)

Cátedra: Planeamiento de Trabajo Científico y Tesis de Graduación

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Lugar de trabajo: Laboratorio de Citogenética Vegetal. Programa de Estudios Florísticos y Genética Vegetal. Instituto de Biología Subtropical, nodo Posadas (IBS - CONICET - UNAM). Rivadavia 2370. Posadas, Misiones, Argentina.

Año: 2014.

ABSTRACT

Zephyranthes Herb. is a genus with approximately 50 native species from tropical and subtropical America, which are distributed from SE USA to Patagonia (Argentina). *Zephyranthes mesochloa* Herb. ex Lindl., with white campanulate flowers, inhabits southern South America and has distinct chromosome numbers published: diploid (2*n*=2*x*=12), aneuploid (2*n*=13,26) and polyploid (2*n*=4*x*=24 and 2*n*=8*x*=48). The aim of this thesis is to analyze chromosomally accessions of *Z. mesochloa* from northern Argentina, in order to contribute to the cytogenetic knowledge of the genus. Eight populations from northern Argentina were studied. Mitotic preparations were performed from root meristems stained with Schiff's reagent and acetorcein. Meiotic preparations were made using young anthers stained with acetocarmine. Karyotypes were analyzed from all studied accessions, and geographical distribution data were plotted on a map. Most of the populations were diploid with 2*n*=2*x*=12 (75%) with a karyotype formulae made by 4*m* + 4*sm* + 4*st* chromosomes. Two of the diploid populations also had individuals with 2*n*=13, and the additional chromosome is metacentric, probably a B chromosome. At diakinesis and metaphase I of microsporogenesis of the aneuploid cytotype, all pollen mother cells showed 6 bivalents and 1 univalent. The remaining populations (25 %) were tetraploids with 2*n*=4*x*=24 and a karyotype formulae made by 8*m* + 8*sm* + 8*st* chromosomes. The duplicated karyotype formulae in tetraploids regarding to 2*x*, and the high morphological similarity between the two ploidy level accessions suggest an autotetraploid origin of the polyploids. Geographycally, populations of *Z. mesochloa* are discontinuous, without sympatric or adjacent coexistence of ploidy levels. Our results indicate that all set of cytotypes constitutes a polyploid complex with *x*=6 as chromosome basic number.