

CYTOTAXONOMICAL STUDIES IN SPECIES OF *DIOSCOREA* (DIOSCOREACEAE) FROM ARGENTINA AND BRAZIL.

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Meiotic and mitotic chromosomes of 12 species from 7 sections of *Dioscorea* L. (Dioscoreaceae) were studied. Provenance of the materials were NE & NW Argentina and SE Brazil. Flowers buds were fixed in a 6:3:1 solution (ethanol: chloroform: glacial acetic acid, by volume). Immature anthers were squashed directly in propionic acid haematoxylin (2 %) using as mordant ferric citrate. Mitosis were observed too in squash of root tips from germinating seeds pretrated with 8' hidroxyquinoline. Most of our data are new counts\*, two of them confirm previous reports or modify the ploidy level cited previously. \**Dioscorea brachybotrya* Poepp. and *D. reticulata* Gay from section Chirophyllum Uline, both have  $n=15$  and secondary associations of bivalents were observed. Moreover, groups of bivalents were characterized in metaphases, suggesting the presence of different genomes with 5 chromosomes each one. Accordingly, we assume that results support a basic chromosome number of  $x=5$ , for these entities. The same number  $n=15$  presents \**D. bolbothicha* Hand-Mzt., whose belonging to sect. Dematostemon is in need of review. Chromosome numbers presented in \**D. glomerulata* Hauman, from sect. Dematostemon Griseb., and \**D. ovata* Vell. pertaining to sect. Chondrocarpa Uline, have proved to be  $2n=50$ . A number of  $2n=36+2B$ ,  $x=9$ , was obtained in *D. sinuata* Vell.-classified in Sect. Brachystigma Uline. The presence of  $x=10$  is presumed in the following taxa. In sect. Centrostemon Griseb. two species were analyzed: \**D. pilcomayensis* Hauman is a tetraploid  $2n=40$  and \**D. multispicata* R. Knuth an octoploid  $n=40$ . \**D. stenopetala* Hauman (Sect. Cycladenium Uline), has  $2n=40+1B$ . Finally, the section Monadelpha Uline has provided two species tetraploids, \**D. monadelpha* (Kunth) Griseb. and \**D. cienegensis* R. Knuth  $n=20$ , and the octoploid \**D. coronata* Hauman with  $2n=80$ . Some systematic and evolutionary aspects of the genus *Dioscorea*, in the light of the chromosomal data, are discussed.