

Chromosome Number in *Dracaena fragrans*

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A specimen of *Dracaena fragrans*, Ker. which had attained some eight feet in height, was growing in the biology greenhouse of Purdue University. This plant had been grown as a house plant prior to being taken to the greenhouse and was estimated to be 12-15 years of age.

During the month of February, 1940, this plant produced a terminal inflorescence. It had been in the greenhouse about two years at that time. Flowering of this species in our latitude is rare, chiefly because it is grown for foliage purposes and the plants are not ordinarily permitted to attain this age. In all its 12-15 years of existence this plant had been repotted but once if at all, and the nitrogen content of the soil was doubtless at a low ebb. It is probable that this plant had a very high carbon-nitrogen ratio, which condition favors flowering. This assumption is further borne out by the fact that large drops of concentrated sugar solution were exuded in various parts of the inflorescence.

Anthesis of the flowers occurred only at night. Blooming was accompanied by a strong but pleasing fragrance. The flowers were ephemeral, lasting but a single night. Each evening about sundown, during the blooming period, the flowers began to unfold and the concomitant fragrance filled the greenhouse. Each morning, likewise, the flowers produced the night before had completely withered, and no trace of the pleasant odor remained. This nocturnal, diurnal production of flowers continued for approximately three weeks. No fruits were set although some flowers were hand-pollinated.

During the early stages of flowering smear mounts of pollen mother cells were made to determine the chromosome number. The haploid number was found to be 21. These chromosomes are small and of uniform size. This is different from many species of Liliaceae which have very large chromosomes. Of the species determined in the Liliaceae the more common numbers are six and eight or multiples thereof. Several species of the genus *Aloe* have a haploid number of 7. So far as we have been able to ascertain there is no report in the literature of any other species in this family which has 21 as the haploid number of chromosomes.