TABLE I

Virus infection in field populations of shoot borer

Month	Number of larvae examined	% larvae infected with granulosis	Mean maximum temperature	Mean minimum temperature	Mean R.H.
October 1977	1635	11·9	29·5	21·3	80
November	1848	8·3	28·5	20·9	82
December	3605	3·0	28·5	17·4	69
January 1978	1872	3·7	29·7	17·5	65
February	Not observed		31·4	19·5	65
March	885	3·3	34·0	21·2	60
April	2395	3·6	35·8	22·5	60
May	3003	4·0	34·5	23·0	66
June	2104	11·0	30·8	22·6	65
July	2358	6·5	31·3	22·2	68
August	2658	4·9	31·0	22·8	66
September	2563	4·7	32·1	21·7	71

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Division of Entomology, Sugarcane Breeding Institute, Coimbatore 641 007,
S. EASWARAMOORTHY.
H. DAVID.

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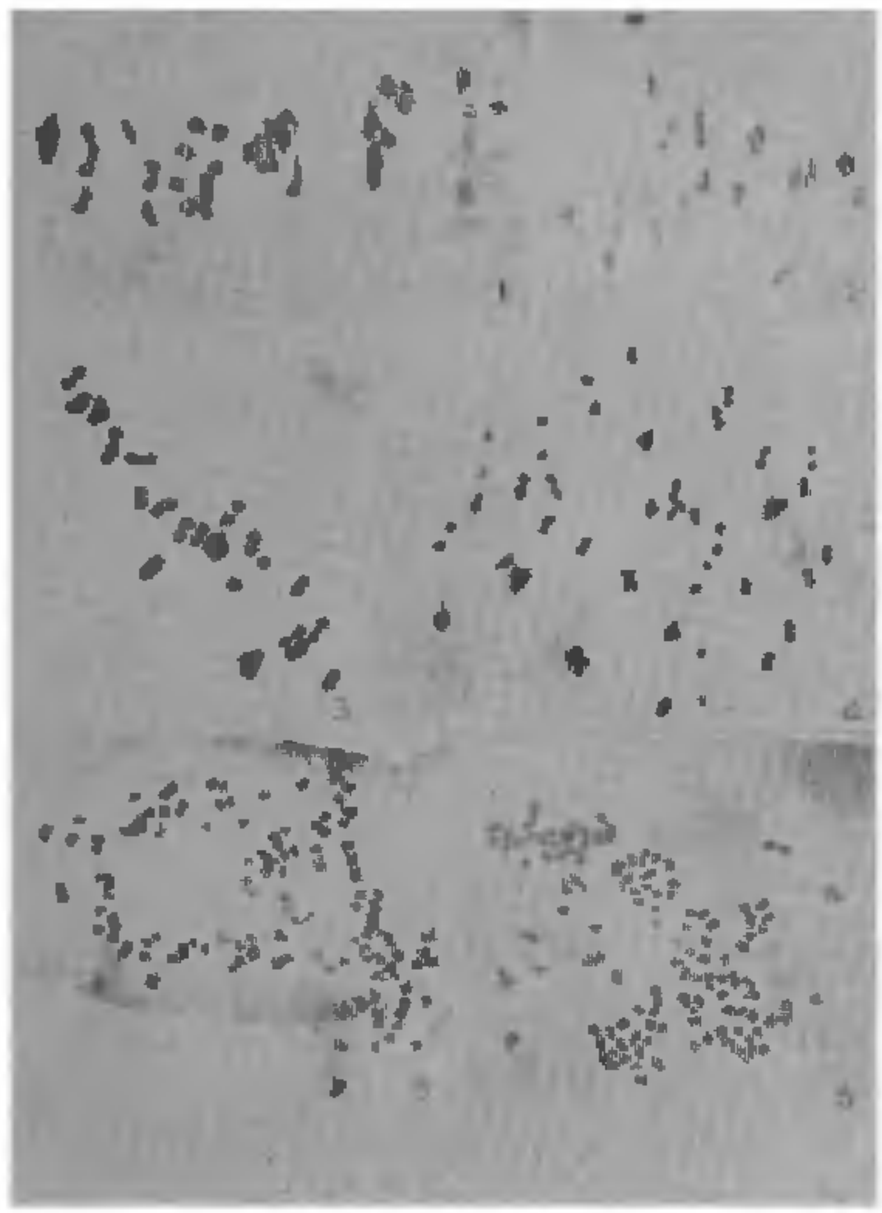
CHROMOSOME NUMBER IN SOME SANSEVIERIA SPECIES

SANSEVIERIA Thunb, a genus of the family Agavaceae is native to Africa and Asia and contains more than 60 species[2]. Chromosome numbers of only 25 species have been reported so far[1] and many of the counts are contradictory. In the present communication, results on cytological analysis of 15 species are reported. The chromosome numbers of 4 species, *viz.*, *S. caulescens* N. E. Brown, *S. intermedia* N. E. Brown, *S. pearsonii* N. E. Brown (all $2n = 40$) and *S. powellii* N. E. Brown ($2n = 120$) have been reported for the first time. The count for *S. cylindrica* Bojer ($2n = 112$) is new to the species.

Chromosome counts were made from pollen mother cells and root tip cells following the usual technique of iron-acetocarmine squashes and feulgen reaction respectively. Eleven species were found to be diploids ($2n = 40$), which invariably formed 20 bivalents at metaphase I (Figs. 1–3). Few bivalents were found to disjoin early in most of the species. Anaphase I and subsequent division was regular. Chromosome number determined for the diploid species such as *S. deserti* N.E. Brown, *S. ehrenbergi* Schweinf, *S. metallica* Ger. et Labr. *S. senegambica* Baker, *S. suffruticosa* N. E. Brown, *S. trifasciata* Prain and *S. zeylanica* Willd is in agreement with the earlier reports (Menzel and Pate[8], Sharma and Chaudhuri[13]. Sati[12], Harvey[4], Miege[9], Takagi,[14] and Matsuura and Suto[7]). However Dewet[3] reported $2n = 28$ for *S. deserti* and Sharma and Chaudhuri[13] found $2n = 36$ in *S. trifasciata*. Janaki Ammal[6] showed $2n$ as 42 in *S. zeylanica*. Parker[10] and Menzel and Pate[8] established a somatic number $2n = 42$ for *S. gracilis* N. E. Brown while present study showed only 20 bivalents ($2n = 40$) in the PMC's.

Meiotic studies in higher polyploids were rather difficult due to the extreme stickiness and small size of the chromosomes, however, anaphase I was clear and in *S. subspicata* Baker ($6x$) 120 chromosomes could be counted. The presence of 4 III + 33 II + 2 I in *S. canaliculata* carr (Fig. 4) probably reveals the segmental alloploid nature of the species. Chromo-

some number in *S. cylindrica* as reported by various authors is $2n = 40, 92, 102–104, 120 \pm 1$ (Roy[11], Sharma and Chaudhuri[13], Heitz[5], Menzel and Pate[8]), whereas present counts from root tip cells showed an aneuploid number $2n = 112$ (Fig. 5). *S. powellii* is a hexaploid ($2n = 120$) (Fig. 6).



FIGS. 1–4. Metaphase I. Figs. 1–3. 20 II in *S. intermedia, S. caulescens, S. pearsonii*. Fig. 4. 4 III + 33 II + 2 I in *S. canaliculata*. Figs. 5 and 6. Somatic cell in *S. cylindrica* and *S. powellii* showing 112 and 120 chromosomes respectively. (All figures, × 1500).

From the foregoing account it is clear that the genus is characterised by a basic number $x = 20$ and most of the species are predominantly diploids, the other polyploids being either tetraploids and hexaploids or higher aneuploids.

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Cytogenetics Laboratory, M. A. NAZEER.
National Botanical Research Institute,
Lucknow 226 001, India,
November 18, 1978.

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VIRAL WILT—A NEW DISEASE HITHERTO UNRECORDED ON COTTON

THE survey carried out during 1976–77 in cotton trials and germplasm in the fields of All India Coordinated Cotton Improvement Project at Parbhani and Nanded revealed an incidence of viral wilt on a few plants of H–5 (*Gossypium hirsutum* cv. G–67 × *G. hirstum* cv. 289E) and Buri–1007 (*G. hirsutum*). The disease was characterized by transitory mild chlorosis in areas of major veins and veinlets preceding necrosis and blackening of the major veins and veinlets followed by phloem browning resulting into sudden wilting and collapse of the plants (Figs. 1, 2). The wilted plants did not recover and dried, crisp leaves, subsequently abscissed denuding the branches. Stems dried up progressively from top to root. Though the roots were evidently healthy, rootlets were often found killed. Though phloem browning was marked, no discoloration of xylem was evident. Repeated isolations from infected plants did not yield any fungus or bacterial organisms. The present paper reports the viral etiology on the basis of transmission studies for the cotton wilt disease.

The results on bud-graft transmission indicated that out of the 10 inoculated plants, 8 of H-5 and 6 of Buri–1007 displayed the characteristic symptoms of the disease after 2–3 months. However, the disease pathogen was not transmissible by conventional leaf rub method using carborundum (800 mesh) as an abrasive with sap from infected tissue extracted in a cold neutral 0·05 M phosphate buffer containing either 2-mercaptoethanol (0·02M) or DIECA (0·01M) or Na_2SO_4 (0·1%).