VBMH 79101 : monosporous cultures isolated from a sporophore on *Shorea robusta* Gaertn.

A_1B_1 : 1,2,5,7,12; A_1B_2 : 3,6,8,10,17,18;
A_2B_2 : 4,9,11,15,16; A_2B_1 : 14,19,20,22.

VBMH 79102 : monosporous cultures isolated from a sporophore on *Mangifera indica* L.

A_1B_1 : 4,8,9; A_1B_2 : 3,5,7,19;
A_2B_2 : 1,2,13,17,20; A_2B_1 : 6,10,11,12,14,15, 16,18.

VBMH 79104 : monosporous cultures isolated from a sporophore on *Cocos nucifera* L.

A_1B_1 : 3,8,10,15,19,20; A_1B_2 : 1,2,7,9,18;
A_2B_2 : 4,11,12,16,17; A_2B_1 : 5,6,14,23.

VBMH 79105 : monosporous cultures isolated from a sporophore on *Casuarina equisetifolia* L.

A_1B_1 : 21,22,25; A_1B_2: 1,2,3,4,16,17,18;
A_2B_2 : 5,6,7,8,9,10,12; A_2B_1 : 19,20,23.

VBMH 79107 : monosporous cultures isolated from a sporophore on *Ficus bengalensis* L.

A_1B_1 : 5,8,9,12,14,17, 18; A_1B_2 : 6,10,11,13,16;
A_2B_2 : 1,2,7,15; A_2B_1 : 19,20,21,24.

The results of pairings showed that the single spore cultures of each of the 5 sporophores fall into four groups on the basis of their ability to form clamp connections. Therefore, *Daedalea flavida* possesses tetrapolar type of interfertility and not bipolar as was reported previously[4]. The data obtained from the present investigation are therefore compatible with the taxonomic scheme proposed by Nobles[1] in Polyporaceae.

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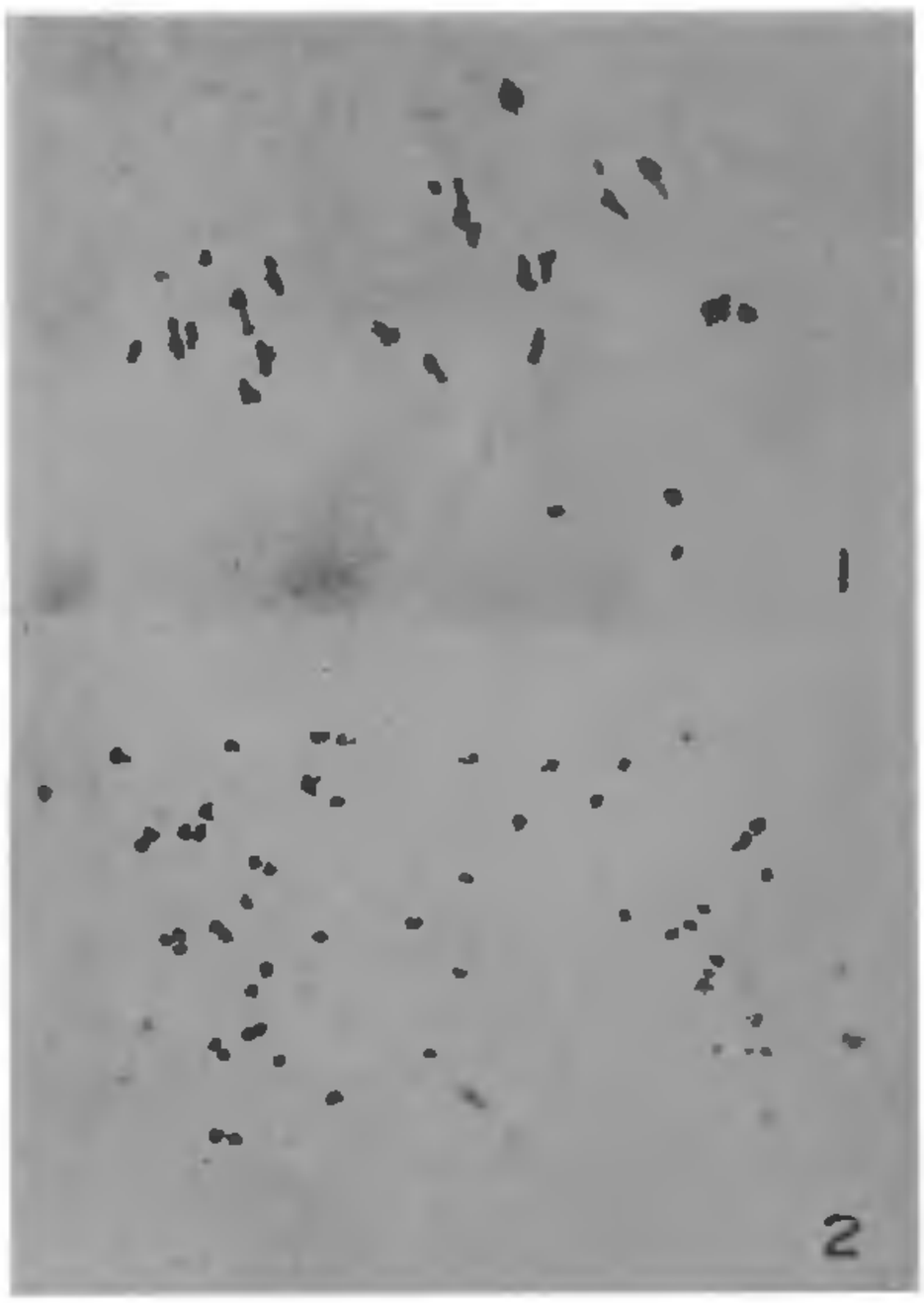
CYTOLOGY OF A TRIPLOID *SANSEVIERIA*

THE genus *Sansevieria* Thunb. (Family-Agavaceae) consists of nearly 60 species[1]. During the course of cytological investigation of nearly 20 species of *Sansevieria*, a clone of *S. gracilis* N. E. Brown was found to be a triploid. Natural triploidy in this genus is not reported before and the salient features of meiosis of the triploid taxon is described in the present communication.

Meiotic analysis of PMC's was made following the usual technique of iron-acetocarmine squashes. The basic chromosome number in the genus *Sansevieria* is X = 20 and the present material showed $2n = 60$.



FIGS. 1–2. Fig. 1. Metaphase I in *S. gracilis* showing $13_{III} + 7_{II} + 7_{I}$. Fig. 2. Anaphase I showing lagging chromosomes. (All × 1,500)

Thirty cells were analysed for metaphase I and various chromosome configurations such as trivalents, bivalents and univalents were observed (Fig. 1). The number of trivalents ranged from 11 to 20 with an average of 14·26. At diakinesis one trivalent was found to be attached to the nucleolus. The trivalents showed a tendency to disjoin at metaphase I ensuing in bivalents and univalents. The number of bivalents and univalents ranged from 0 to 11 and 0 to 9 with a mean of 6·63 and 3·96 respectively. Anaphase I was highly irregular with unequal distribution of chromosomes such as 28 : 32, 29 : 31, etc. Laggards were also observed (Fig. 2) of which some of the univalents

divided precociously. Though the taxon had 31·25% pollen stainability there was no seed setting.

A cytological screening of *Sansevieria* species revealed different chromosome status such as diploids, tetraploids, hexaploids and aneuploids[2]. *S. gracilis* is a diploid with 20 II in the PMC's ($2n = 40$) however, the triploid clone showed $2n$ as 60. The maximum possible chromosome association, *i.e.*, 20 trivalents indicate the autoploid nature of the taxon. Spontaneous triploids are reported in different plant genera such as Guava[3], *Lilium*[4], *Hemerocallis*[5], Pineapple[6] and *Rubus*[7]. In nature, usually triploids originate as a result of hybridization between tetraploids and diploids or through the union of unreduced diploid gametes with normal haploid ones. The complete homology of the genomes in the present triploid suggests that it might have originated through the fusion of a normal gamete with an unreduced gamete as was the case in *Oenothera*[8], *Tulipa*[9] and *Tradescantia*[10].

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IMMUNOLOGICAL EVIDENCE ON THE UTILISATION OF STORAGE PROTEINS DURING SEED GERMINATION AND SEEDLING GROWTH IN *TEPHROSIA PURPUREA* (L.) PERS. (FABACEAE)

Storage proteins in legume seeds were immunologically demonstrated to be tissue specific, found only in the extracts of the cotyledons, epi and hypocotyles and radicles; they are absent from other parts of the seed including the seed coat[1]. Storage proteins are synthesised during seed development along with reserves of carbohydrates and lipids and occur within cells in discrete protein bodies. They are expected to be utilised in providing nitrogen and carbon skeletons to the developing seedlings[1]. The present work provides immunological evidence in support of this assumption, for which there was no direct evidence so far.

Seeds of *Tephrosia purpurea* (L.) Pers., collected from a single population at Waltair, were germinated in a mixture of garden soil and sand. The cotyledons were removed from the seedlings on the 2nd, 4th, 6th, 8th, 10th, 14th and the 20th day of germination. Since the rates of growth of the seedlings varied considerably from sample to sample, the ages of the seedlings given here are only an approximate reference to the stage of their development. Antibodies were raised in a rabbit against defatted extract of dry seeds following standard methods[2,3]. A part of this seed extract was used as a standard for comparative purposes in the subsequent studies. Ouchterlony's[4,5] double diffusion technique was employed loading the antiserum in the central well and the standard and the protein extracts of cotyledons and parts of the seedlings of different ages in neighbouring peripheral wells cut in 1·5% Difco bacto agar plates. The standard immunodiffusion pattern for the species was obtained by plating the antiserum against seed protein extracts of 18 populations of *T. purpurea* from different parts of peninsular India, four of which are shown in Fig. 1.

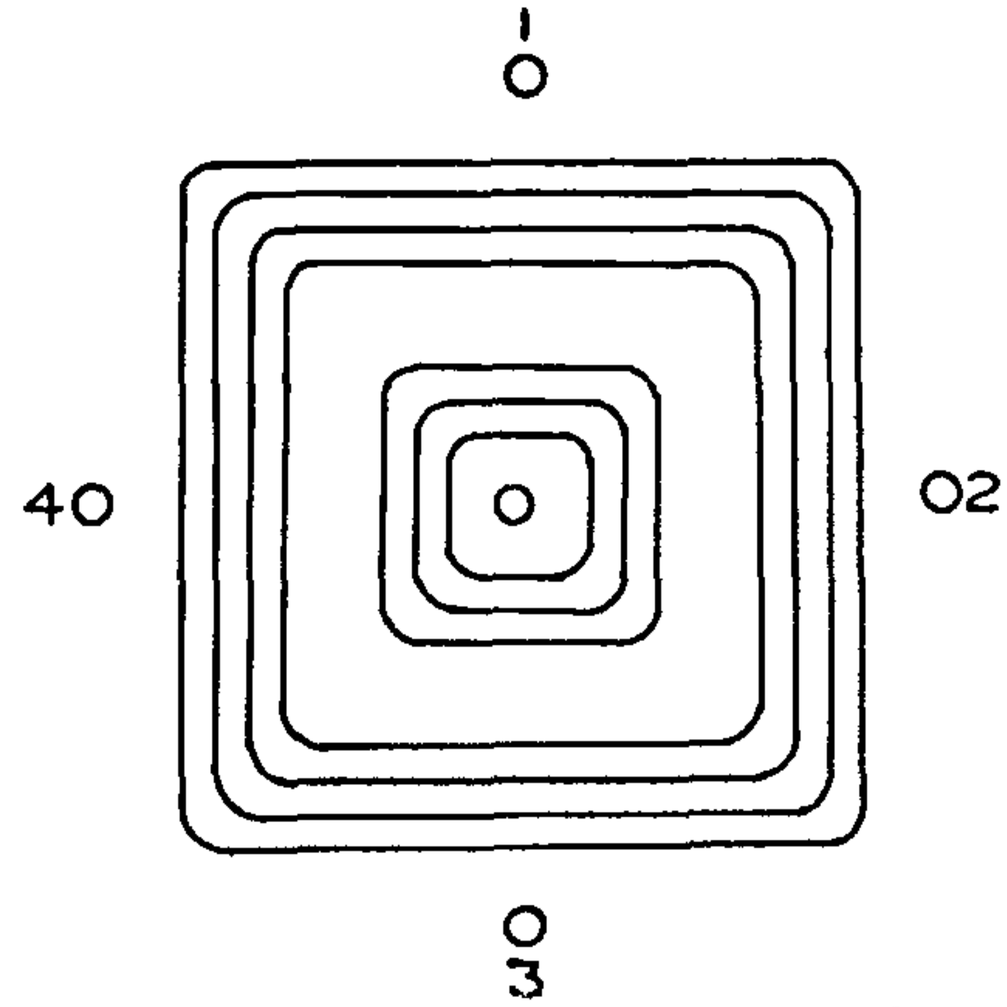

Fig. 1. Standard immunodiffusion pattern (schematic) of *T. purpurea*. Central well: antiserum; well at 1: standard (Waltair); wells at 2, 3 and 4: protein extracts of populations from Bangalore (2), Rameswaram (3) and Markhandi-Udadoan (4). The smooth arcs of confluence at the corners indicate total identity of the respective protein components.

Cotyledons of 10 seedlings of the same age were used to obtain protein extracts in each case. Five replicates were maintained. The deterioration of definition or the disappearance of the respective immunoprecipitin lines as compared with those formed by the standard was taken as an indication of degradation of the protein components.