branch usually terminated in a phialide like structure (Fig. 2). Microconidia were usually aseptate, sometimes one septate (Fig. 1) and measured 7·5–12·5 $\mu \times 3{\cdot}5$–5 μ. Development of macroconidia started on the third day in culture. These were slightly curved, inequilaterally fusoid, widest in the upper half, thick walled, 1–3 septate (Fig. 1) and

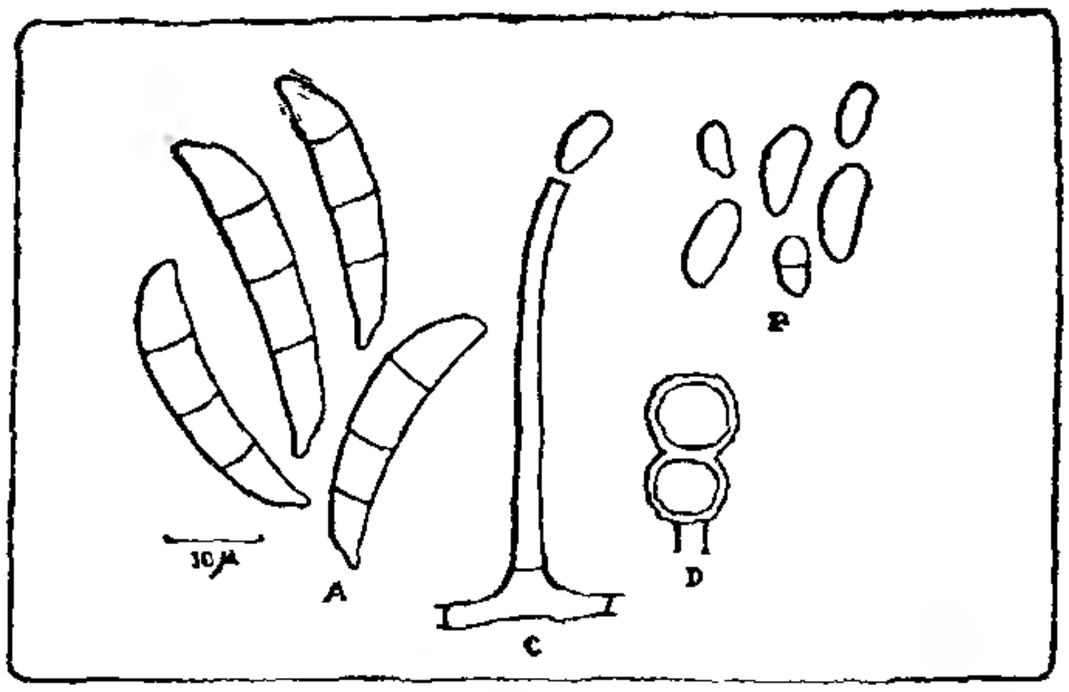

FIG. 1. *Fusarium solani* (Mart) Sacc: (A) Macroconidia; (B) Microconidia; (C) Microniodiophore; (D) Chlamydospore.

FIG. 2. Elongated Microconidiophore terminating in a phialide branching at the tip.

measured 32·5–35 $\mu \times 4{\cdot}2$ – 5·5 μ. Chlamydospores developed abundantly in old cultures. These were globose, rough walled, 7–9·5 μ and formed either terminally or on short lateral branches or were intercalary, sometimes in chains. With the help of these characters and following Booth's system of classification, the pathogen was identified as *Fusarium solani* (Mart) Sacc. The identification was confirmed further by Dr. C. Booth (CMI, Ac. No. 212851). The culture has been deposited at the Indian Type Culture Collection of Fungi, I.A.R.I. (A. No. 1984).

Although *F. solani* is generally known to be a root rotter[3], the present study was unique in noticing the absence of any rotting in the roots and a gradation of symptom expression was observed which was found to vary from a large proportion of stunted and thrifty plants to a considerably small proportion of completely wilted plants in muskmelon variety Pusa Sarbati. From our pathological observations[5] muskmelon did not appear to be the primary host of this pathogen[1]. This fungus was definitely not *F. solani* f. sp. *cucurbitae* as it failed to infect *Cucurbita moschata*, *C. pepo* and *C. maxima* which is an essential feature for confirming the identity of this forma specialis[4].

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YELLOW MOSAIC OF *AMMI MAJUS* L.— A NEW VIRUS DISEASE IN INDIA*

DURING 1976–78, *Ammi majus* L., a common medicinal herb grown at National Botanic Gardens, Lucknow, showed bright yellow mosaic often in the form of rings or line patterns on the leaves. This communication deals with mechanical transmission and host range studies of the pathogen.

Young infected leaves were crushed in pestle and mortar with an equal amount of 0·1 M phosphate buffer at pH 7·0. The slurry was squeezed through double folds of muslin cloth. Sap thus obtained was centrifuged at 5,000 rpm for 10 minutes and the

supernatant was inoculated on *Ageratum conyzoides* L., *Amaranthus viridis* L., *Ammi majus* L., *Catharanthus roseus* L. (G. Don)., *Chenopodium amaranticolor* Coste and Reyn., *Cucumis sativus* L., *Datura metel* L., *D. stramonium* L. *Nicotiana glutinosa* L., *N. tabacum* L. var. *Samsun*., *N. tabacum* L. var. White Burley, *Vigna sinensis* L., and *Zinnia elegans* Jacq. Back inoculations from all plants were invariably made on *C. amaranticolor*.

Out of 13 plants tested only 5 plants showed symptoms which are as follows :

Ammi majus : Yellow spots developing 10 days after inoculation later on became bright yellow mosaic on dark green background of the leaves. At acute stages all the leaves turned yellow leaving only a few green areas.

Chenopodium amaranticolor : Chlorotic lesions appeared 7 days after inoculation.

Nicotiana tabacum var. White Burley : Symptoms developed 5 days after inoculation in the form of mild, light and dark green mosaic. Infected plants, however, fully recovered after 10 days. Virus could be recovered from such plants when back inoculations were carried out on *C. amaranticolor*.

Zinnia elegans : Mosaic of light and dark green colour developed on new emerging leaves after 5 days of virus inoculation. Symptoms although apparent became mild afterwards. Virus could be recovered from leaves showing very mild symptoms.

Datura stramonim : Symptoms developed as vein yellowing of leaves after 5–6 days of virus inoculation which disappeared completely after 15 days. The virus, however, could not be recovered from infected plants.

Ageratum conyzoides, *Amaranthus viridis*, *Catharanthus roseus*, *Cucumis sativus*, *Datura metel*, *Nicotiana glutinosa*, *Nicotiana tabacum* var. *Samsun* and *Vigna sinensis* neither developed any symptom after one month of virus inoculation nor the virus could be recovered from them.

The virus disease recorded herein on *Ammi majus* appears to be the first record of any virus naturally infecting *Ammi majus* plants. Further characterization of virus through study of bio-physical properties, serology and electron microscopy is in progress.

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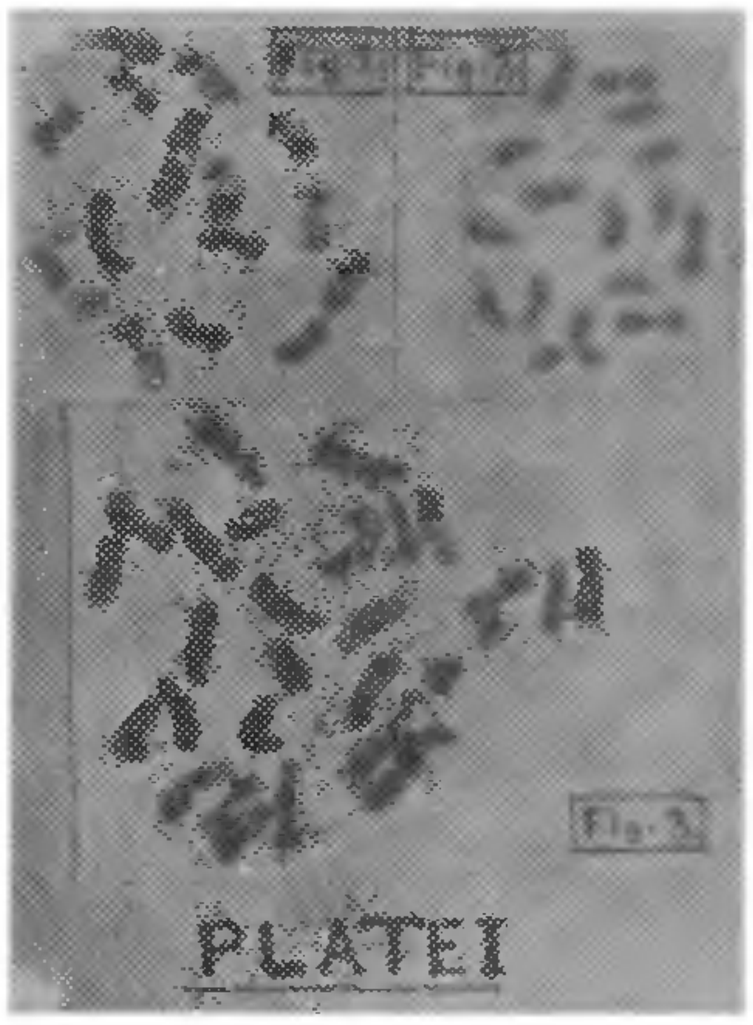
FIRST REPORTS OF CHROMOSOME NUMBERS OF A FEW SPECIES OF PAPILIONACEAE

In the present paper, chromosome numbers of three plant species: *Vicia biensis* Linn., *Crotalaria pumila* Ort., and *Terannus labialis* (L.f.) Spreng., all belonging to the family Papilionaceae, have been reported for the first time[1–3]. *Crotalaria pumila* is the only species in which $2n = 32$ was reported earlier by Atchison but the rest three reports are entirely new.

In *Vicia biensis*, the somatic chromosome number was found to be fourteen ($2n = 14$) (Plate I, Fig. 1.) There are six pairs of submedian and one pair of median chromosomes, which vary from 2·33 to 6·00 μm in length. Three pairs of submdian chromosomes have also secondary constrictions. Meiotic studies supported the somatic chromosome count—*i.e.*, metaphase I plates showed regular seven bivalents ($n = 7$) among which the ring ones were in greater frequency. In *Crotalaria pumila*, the somatic chronosome number was found to be sixteen ($2n = 16$) (Plate I, Fig. 2). There are seven pairs of median and one pair of submedian chromosomes which vary from 1·33 to 2·33 μ in length. The somatic chromosome count was corroborated by meiotic studies, *i.e.*, metaphase I plate showed eight regular bivalents ($n = 8$), among which the ring ones were in greater frequency. The diploid number 32 in this species reported earlier by Atchison from U.S.A. is probably a distinct cytotype. In *Terannus labialis* the somatic chromosome number was found to be twentyeight ($2n = 28$) (Plate I, Fig. 3). There are thirteen pairs of submedian and one pair of subterminal chromosomes, which range in length between 1·33 and 3·66μ. A pair of chromosomes was found to have been



FIGS. 1–3