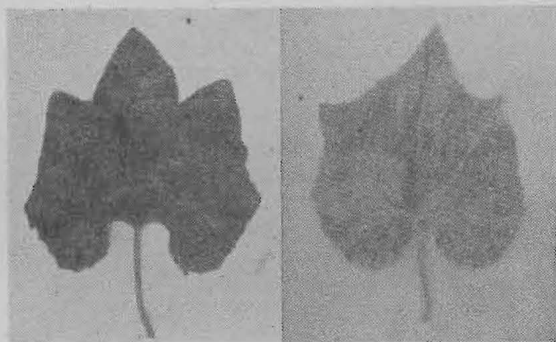


A mosaic disease of snake gourd

(*Trichosanthes anguina* Linn.)

Snake gourd (*Trichosanthes anguina* Linn.) was found to be affected by a disease in few gardens near Central Coconut Research Station, Kayangulam, Kerala in June, 1967. The symptoms suggested a possible virus nature of the disease. It is characterised by distinct mosaic pattern of irregular dark green and yellow chlorotic patches on the lamina (Fig. 1). Crinkling and reduction in size of the leaves were also noticed. The affected plants were stunted in growth and produced fewer flowers and fruits.



Healthy leaf.

Diseased leaf.

Fig. 1

The disease was transmitted by mechanical inoculation, by rubbing the extract of infected leaves on healthy seedlings of *T. anguina*. Attempts to transmit the disease by Aphid vectors—*Aphis craccivora* and *Myzus persicae* were not successful. Out of 31 species of test plants belonging to seven families tested for determining the host range of the virus, 15 species distributed in six families were found to be susceptible. *Nicotiana glutinosa*, *Chenopodium amaranticolor*, *C. quinoa*, *Cucurbita pepo*, *Vigna sinensis*, *Physalis minima* etc. were the

best indicator hosts of the virus. The symptoms developed on differential hosts on inoculation are given below :

Family	Host species	Characteristic symptoms
Solanaceae	<i>Nicotiana glutinosa</i>	Chlorotic ring spots and Mosaic mottling.
	<i>N. rustica</i>	do
	<i>N. tabacum</i> var. <i>delcrest</i>	do
	<i>Petunia hybrida</i>	Mosaic mottling.
	<i>Physalis minima</i>	do
Cucurbitaceae	<i>Cucurbita pepo</i>	Mosaic with blistering.
	<i>Lagenaria vulgaris</i> var. <i>longsori</i>	Mosaic
	<i>Cucumis melo</i>	Mosaic
Chenopodiaceae	<i>Chenopodium amaranticolor</i>	Necrotic local lesions
	<i>C. quinoa</i>	do
Apocynaceae	<i>Vinca rosea</i>	Mosaic mottling.
Amaranthaceae	<i>Gomphrena globosa</i>	Large necrotic lesions.
Papilionaceae	<i>Vigna sinensis</i> vars. new-era black seeded & E.C. 13060	Small reddish brown lesions.
	<i>Phaseolus mungo</i>	Dark brown necrotic local lesions.
	<i>P. roxburghii</i>	do

The virus was found to lose infectivity at a dilution of 1:10,000 and retained infectivity for 72 hrs. at room temperature. The thermal inactivation point of the virus was found to be 60°C. for 10 m. Lesion count on cowpea showed that considerable inactivation took place at 50°C., reducing the lesion count considerably from 218 to 11 in 5 seedlings.

Production of local lesions on cowpea by strains of Cucumber mosaic virus was reported by Smith¹ and Chester². The symptoms produced on differential hosts and physical properties of the virus under investigation are in general agreement with Cucumber mosaic virus (*Cucumis virus* I Smith or *Marmor cucumeris* Holmes)^{3,4}. Bhargava⁵ reported a spinach strain of Cucumber mosaic virus producing chlorotic ring spots and oak leaf patterns on inoculated leaves followed by severe systemic infection on *Nicotiana* spp. especially *N. glutinosa*. The virus under study induce local lesions on several hosts including *Chenopodium*

spp. and *Vigna sinensis* and produce pale chlorotic ring spots on inoculated leaves of *Nicotiana* spp. followed by severe mosaic mottling. It therefore appears that the mosaic of *Trichosanthes anguina* described here is caused by a strain of cucumber mosaic virus probably the spinach strain of cucumber mosaic virus of Bhargava⁵.

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¹ K. M. Smith, *Ann. Appl. Biol.*, **22**, 236-238, 1955.

² K. S. Chester, *Plant Dis. Reporter*, **22**, 31-32, 1938.

³ W. C. Price, *Phytopath.*, **24**, 743, 1934.

⁴ K. M. Smith, A text book of Plant Virus Disease, 1957, J & A Churchil Ltd., London.

⁵ K. S. Bhargava, *Ann. Appl. Biol.*, **38**, 377-388, 1951.

Additions to the fungi of India

This paper deals with two fungi new to India viz., *Pithomyces maydicus* (Sacc.) M. B. Ellis and *Stemphylium piriforme* Bonorden. Their diagnostic characters are as follows:

1. *Pithomyces maydicus* (Sacc.) M.B. Ellis

Colonies on oatmeal agar medium round to irregular in shape, olivaceous brown. Mycelium composed of a network of branched anastomosing, subhyaline to olive, smooth walled, 2-4 μ thick hyphae. Conidiophores arise as lateral branches on the hyphae straight or slightly curved, cylindrical, hyaline to subhyaline and 2-6 μ long. Conidia formed singly as blown-out ends at the apex of each conidiophore, broadly oval, with 2 very rarely 3 transverse septa, the middle cell sometimes divided by 1 or occasionally 2 longitudinal septa, constricted at the septa, straw coloured