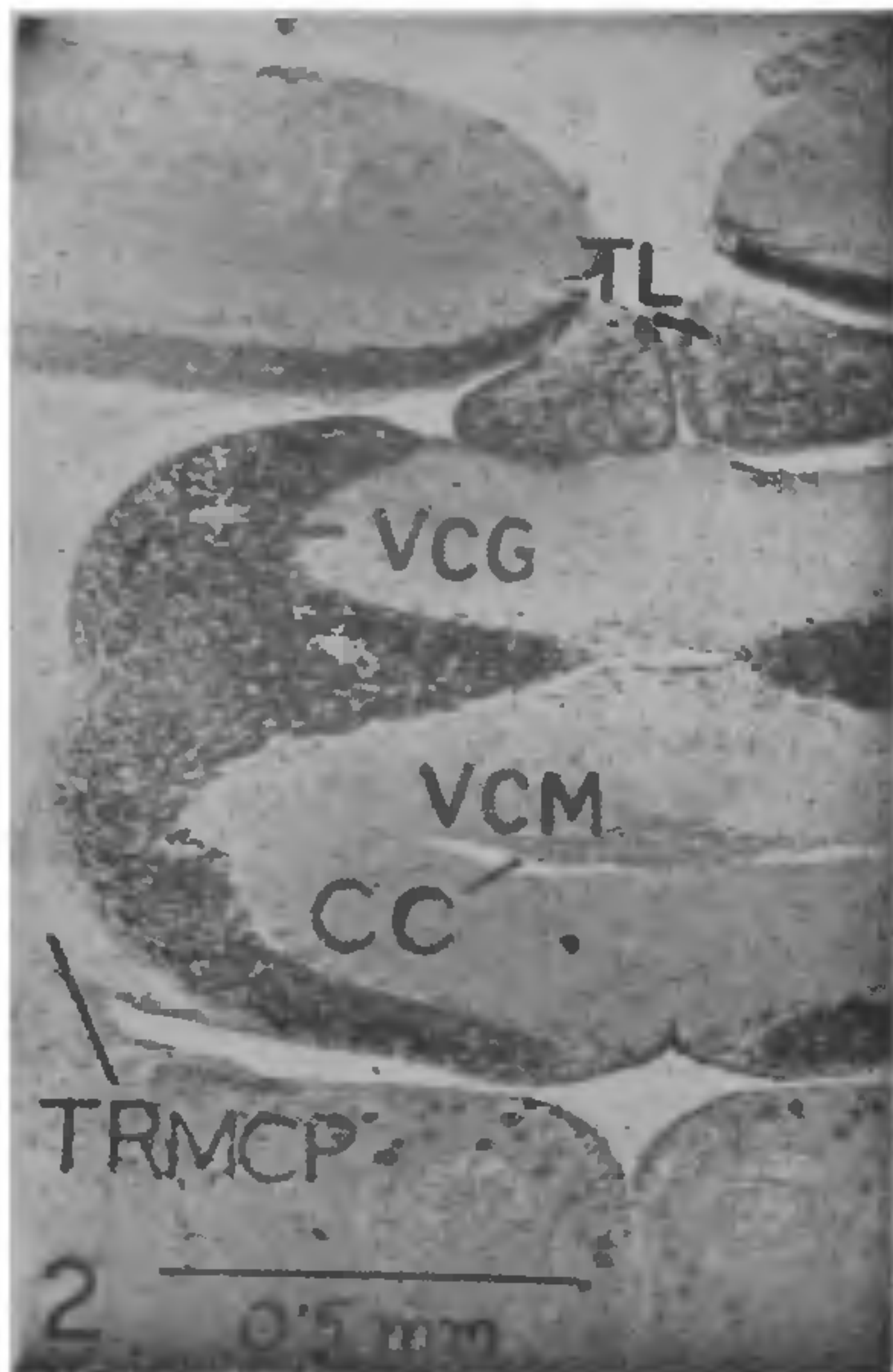
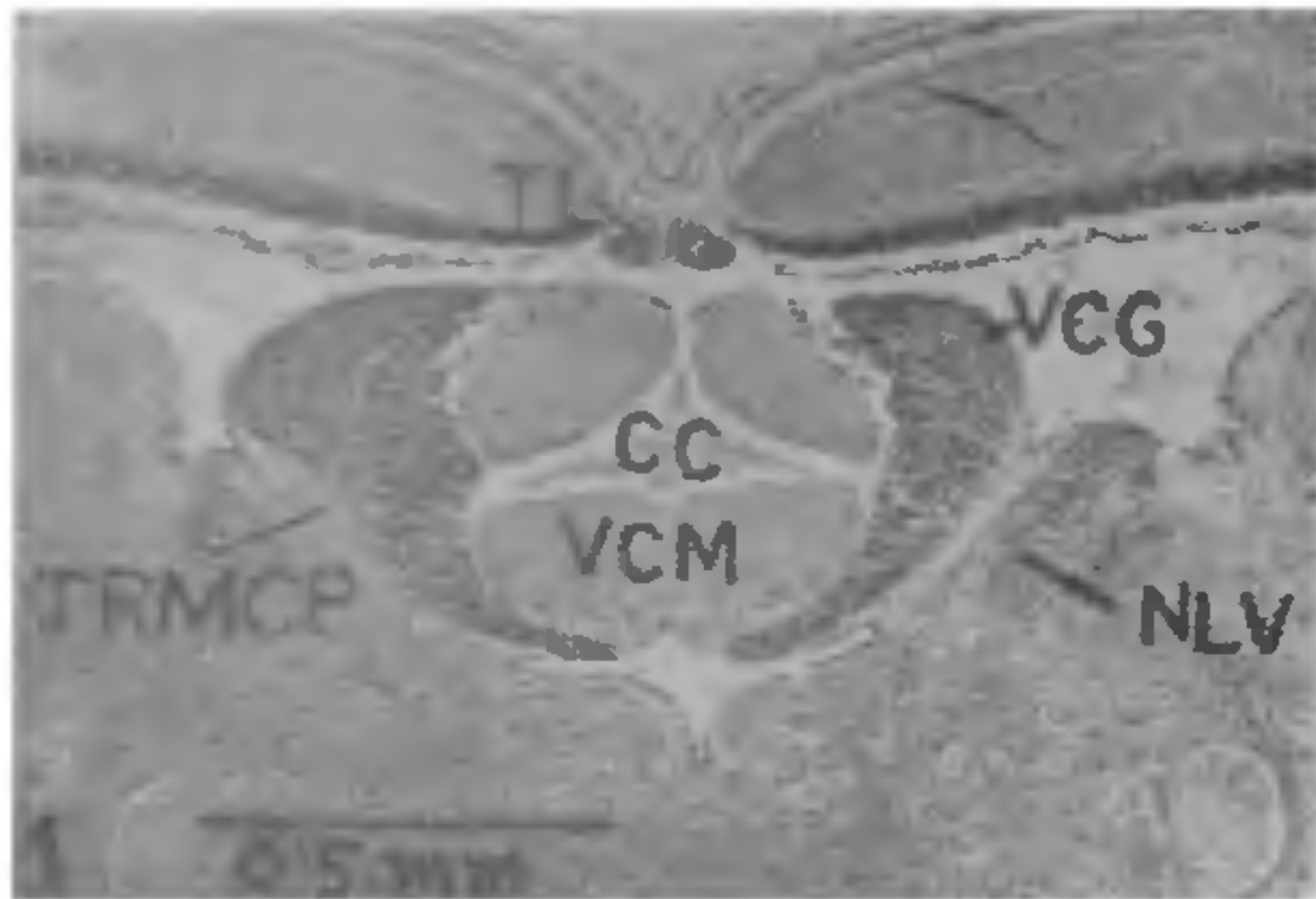


Study of the mesial sections of the mesencephalon of *Channa punctatus* and *C. marulius* exhibits remarkable variation. In *C. punctatus* the tori appear like two small cones hanging into the optocoele whereas in *C. marulius* they are like foot imprints. Moreover, the optocoele between the tori and the valvula is wide in *C. punctatus* but extremely narrow in *C. marulius* because of the difference in the degree of development



FIGS. 1 AND 2. T.S. mesial sections of Mesencephalon of *Channa punctatus* and *C. marulius* respectively. (CC = Cavum cranii, NLV = Nucleus lateralis valvulae, TL = Torus longitudinalis, TRMCP = Tractus mesencephalo-cerebellaris posterior, VCG = Granular area of valvula cerebelli, VCM = Molecular area of valvula cerebelli.)

of the valvula. In *C. punctatus* the granular valvula encircles the molecular valvula in a semicircle fashion, the molecular valvula being differentiated into a ventral and two dorso-lateral masses with the cavum cranii between them (Fig. 1). On the other hand, in *C. marulius* the granular valvula intrudes into the molecular part dividing it into a dorsal and a ventral half, the cavum cranii being restricted to the ventral half only (Fig. 2).

These observations further indicate that the configurations of these structures can be taken as an additional parameters in taxonomy.

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1. Ariens Kappers, C. U., Huber, G. C. and Crosby, E. C., *The Comparative Anatomy of Nervous System of Vertebrates, including Man*, Hafner, New York, 1936, 2, 696-1239.
2. Kuhlenbeck, H., *The Central Nervous System of Vertebrates*, S. Karger, New York, 1975, 4, 1-1006.
3. Tandon, K. K., *Curr. Sci.*, 1978, 47, 600.

**REACTION OF CHILLI (*CAPSICUM FRUSTESCENS*) VARIETIES TO *COLLETOTRICHUM CAPSICI* (SYD) BUTLER AND BISBY**

IN India, the fruit rot of chilli caused by *Colletotrichum capsici* (Syd.) Butler & Bisby is known to cause 12-32% fruit rot in Assam<sup>2</sup>, 10-30% reduction in fruit yield in the Punjab<sup>4</sup> and 10-35% fruit yield loss in parts of the Punjab and Haryana<sup>1</sup>. But little studies related to varietal susceptibility or resistance against the pathogen have been done, although varying degrees of susceptibility and resistance of a few chilli cultivars against the fungus are known to exist<sup>1,3</sup>.

*Materials and Methods*

Mature green chilli fruits of the test varieties were collected from the experimental plots in brown paper bags, immediately washed in running tap water, surface sterilised with 0.1% aqueous HgCl<sub>2</sub>, rinsed thoroughly with distilled water and kept at 30°C for 48 h to see the presence of incipient infection. For each test, 100 healthy fruits were picked up after a lapse of 48 hours of incubation and inoculated as per method of Robbins and Angell<sup>5</sup> with a spore suspension (20-25 spores per low microscopic field of 10 × 10x) of a highly virulent isolate MI of the fungus maintained on PDA at 30°C for 10 days. The inoculated fruits were incubated at 30°C and 100% R.H. The percentage of fruit infection was noted on the 6th and the 12th days of incubation. Sporulation on the

TABLE I

Reaction of *Cililli* (*Capsicum frutescens*) varieties to *Colletotrichum capsici*

Varieties	Fruit infection (%)		Per cent area infected	Disease intensity*	Sporulation**
	6 days	12 days			
Rajpura	18	34	16.58	L	+
Celctio No. 2	..	9	1.63	VL	—
Seeswal No. 2	50	54	48.87	H	++
6.3-III	36	45	32.17	H	++
Patna chilli	18	21	8.49	VL	—
Sirhindi red	27	42	19.56	L	+
NP. 46—No. 4	27	36	16.52	L	+
Seeswal	24	26	9.40	VL	—
Black Hungarian	36	43	30.00	M	+
2.4-III	36	39	11.86	L	+
Patna chilli No. 2	45	47	23.43	M	+

C.D. for per cent area infected = 18.34

\* VL = very light (1-10% area infected)

L = Light (11-20% area infected)

M = Moderate (21-30% area infected)

H = Heavy (More than 31% area infected)

\*\* ++ = Abundant, + = Moderate, — = No sporulation.

infected fruits and disease intensity calculated as per the method of Thakur<sup>6</sup> by using four different infection grades ranging from very light to heavy on the basis of area of the lesions were examined 12 days after inoculation.

#### Results and Discussion

It is evident from Table I that none of the varieties tested was found to be immune. Only three varieties, viz., Celctio No. 2, Seswal and Patna Chilli were found least susceptible whereas varieties Seeswal No. 2 and 6.3-III recorded the highest infection, i.e., 48.9 and 32.2% respectively. Further in these two varieties, sporulation on the lesions was quite abundant whereas in Celctio No. 2, Patna Chilli and Seeswal, where the per cent areas of fruit infection were least (respectively 1.63, 8.49 and 9.40), the spore production was nil. Bansal and Grover<sup>1</sup> obtained similar results in respect of lesion size and spore production on the lesions. The present study indicates that sources of resistance to the disease are available.

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1. Bansal, R. D. and Grover, R. K., *J. Res. P.A.U.*, 1969, 6, 345.
2. Chowdhury, S., *Indian Phytopath.*, 1957, 10, 55.
3. Misra, A. P. and Dutta, K. K., *J. Indian Bot. Soc.*, 1963, 42, 74.
4. Rai, I. S. and Chohan, J. S., *J. Res. P.A.U.*, 1966, 3, 32.
5. Robbins, L. M. and Angell, F. F., *Phytopath.*, 1969, 58, 887.
6. Thakur, D. P., *M.Sc. Thesis*, Bihar Agricultural College, Sabour, Bhagalpur, 1961.