

TABLE I

Number and distribution of chromocentres in the inbred families (I_1) and the population

Materials	No. of chromocentres per nucleus in plants								Mean† ± S.E.	CV (%)
	1	2	3	4	5	6	7	8		
Population	13.65	13.20	13.25	13.55	13.15	13.35	13.50	13.75	13.4 ± 0.15	3.2
P ₁	13.85	14.00	14.50	13.00	14.15	14.30	14.10	14.00	14.0 ± 0.14*	3.0
P ₂	14.53	14.10	14.30	14.10	13.90	14.2 ± 0.10**	1.5
P ₈	13.85	13.70	14.55	13.30	14.75	13.25	13.00	13.50	13.8 ± 0.21*	4.3

† Based on 20 nuclei per plant.

* Not significant

** Significant at 5% level.

Forced inbreeding of an allogamous and heterozygous population like radish leads to homozygosity at various loci⁷⁻⁹. It was shown earlier that the mean number of chromocentres is under the control of the genotype. It is related to homo- and heterozygosity, homozygotes having a higher mean than heterozygotes⁵. Hadlaczky and Kalman¹⁰ also held a similar view. Our study indicates that inbreeding directly affects the amount and distribution of constitutive heterochromatin as inferred from chromocentre counts. Besides, the segregation pattern of chromocentres points out that heterochromatin phenotype in radish, like chiasma frequency¹¹⁻¹², is also under genic control.

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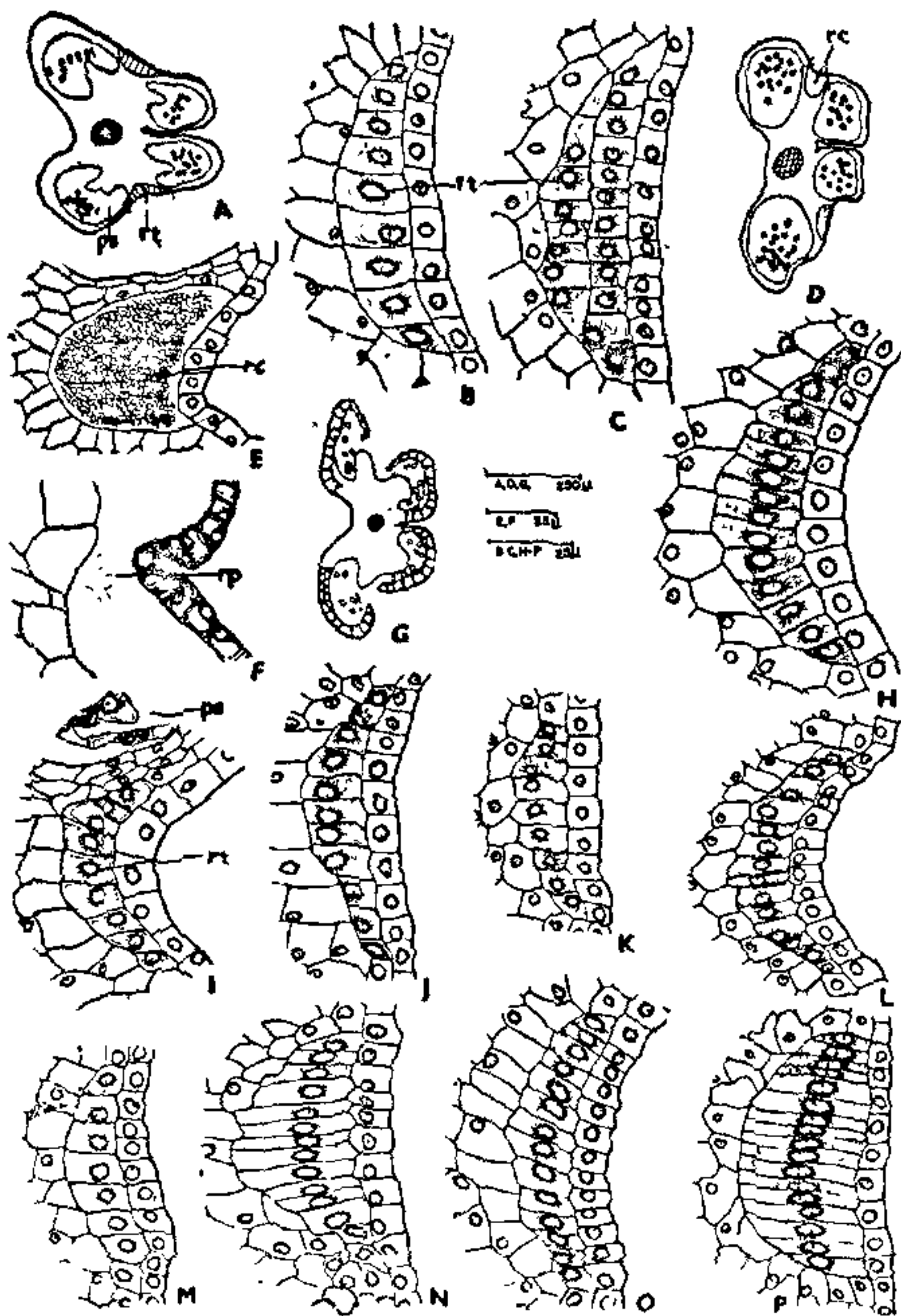
DEVELOPMENT AND STRUCTURE OF RESORPTION TISSUE IN *CAPSICUM* L.

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THE resorption tissue has been reported in anthers of *Capsicum annuum* L.^{1,2}. Wild species of *Capsicum*, however, lack such investigation. The development and structure of resorption tissue was, therefore, studied in 8 species including both cultivated as well as wild species of *Capsicum* and are reported in this communication.

The seeds of *Capsicum annuum* L. var. *floralgem*, *C. chacoense* Hunz (E.C. No. 86944), *C. chinense* Jacq. (E. C. No. 86929 normal and aberrant), *C. frutescens* L. (E.C. No. 86949), *C. frutescens* L. var. *tabasco*, *C. microcarpum* Cav. and Desc. (E.C. No. 86952), *C. pendulum* Willd. (E.C. No. 86935), and *C. praetermissum* Heiser and Smith (E.C. No. 86928) were obtained through the courtesy of Dr. W. R. Langford, Southern Regional Plant Introduction Station Experiment, Georgia, U.S.A. and those of *C. nigrum* Willd. from the Botanical Garden, Washington State University, Seattle, U.S.A. The plants were raised in the garden of the Botany Department. The flower buds of different sizes were selected from three plants of each species for the present study. Sections were cut at 8–10 μ and stained with safranin-fast green following usual microtome techniques.

The anthers dehiscence longitudinally and it takes place by the organisation of a characteristic resorption tissue in the hypodermal region of the septum (Figs. 1A, B, H–P). The hypodermal cells enlarge radially and become distinct due to their dense and granular con-



FIGS. 1 A-P. Development and structure of resorption tissue in *Capsicum* spp. Figs. A-G. *C. nigrum*. Fig. A. T.S. of anther showing the location of resorption tissue. Figs. B C. Portions from the resorption tissue magnified showing 1- and 2-layered conditions respectively. Fig. D. T.S. of anther showing resorption cavity. Figs. E F. Portions of anthers enlarged to show the cavity and resorption passage respectively. Fig. G. T.S. of dehisced anthers. Figs. H-P. Portions of anthers showing resorption tissue in *C. annuum* var. *floralgem*, *C. chinense* (normal), *C. chinense* (aberrant), *C. chacoense*, *C. frutescens*, *C. frutescens* var. *tabasco*, *C. microcarpum*, *C. pendulum* and *C. praetermissum* respectively (ps, pollen sac; rc, resorption cavity; rp, resorption passage; rt, resorption tissue).

tents. In all the species it remains single-layered throughout but in *C. nigrum* rarely the cells divide periclinally forming 2 layers (Fig. 1C). The resorption tissue is large having 13 to 18 cells in *C. microcarpum*, *C. praetermissum*, *C. pendulum* and *C. annuum* var. *floralgem* while in others it is comparatively smaller. It develops usually at the tetrad stage but rarely before meiosis. Consequently the walls of the palisade-like cells of the tissue disintegrate resulting in the resorption cavity (Figs. 1D, E) which by further

lysis, forms the resorption passage between two pollen sacs (Fig. 1F). At maturity, the cells of the stomium rupture opposite the resorption passage forming a longitudinal slit (Fig. 1G) and thus the process of anther dehiscence is completed.

A uniseriate-multicelled resorption tissue is characteristic of anthers of *Capsicum*. Though (as early as 1919) its presence in members of Solanaceae, including *C. annuum* was reported¹, but most of the workers³⁻⁸ failed to record it. *Datura* and *Nicandra*, out of the 7 genera investigated, were the only exception in which the resorption tissue was not observed^{2,9}. This tissue is hypodermal, usually 1-layered, rarely 2-layered in *C. nigrum* and comprises 8-18 radially elongated cells in *Capsicum* species. The behaviour of the resorption tissue was similar to that recorded by earlier workers^{1,2}. The cells undergo lysis forming the resorption cavity and resorption passage and bring about the confluence of the pollen sacs of one lobe. Besides this primary function, it certainly facilitates the dehiscence of anthers.

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BULBOCHAETE IVORENSIS GAUTHIER-LIEVRE— A NEW ADDITION TO INDIAN FLORA

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WHILE investigating the algae of a large pond situated in Telibagh, near Lucknow, the authors came across *Bulbochaete ivorensis* Gauthier Lievre, a monoecious macrandrous species (Chlorophyceae), hitherto unrecorded in the India flora. This species was first described by Lucienne Gauthier Lievre from Ivory Coast, Africa. There seems to be no record of its occurrence so far from India.

The filaments of *B. ivorensis* Gauthier-Lievre were found growing epiphytically on the submerged leaves