

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

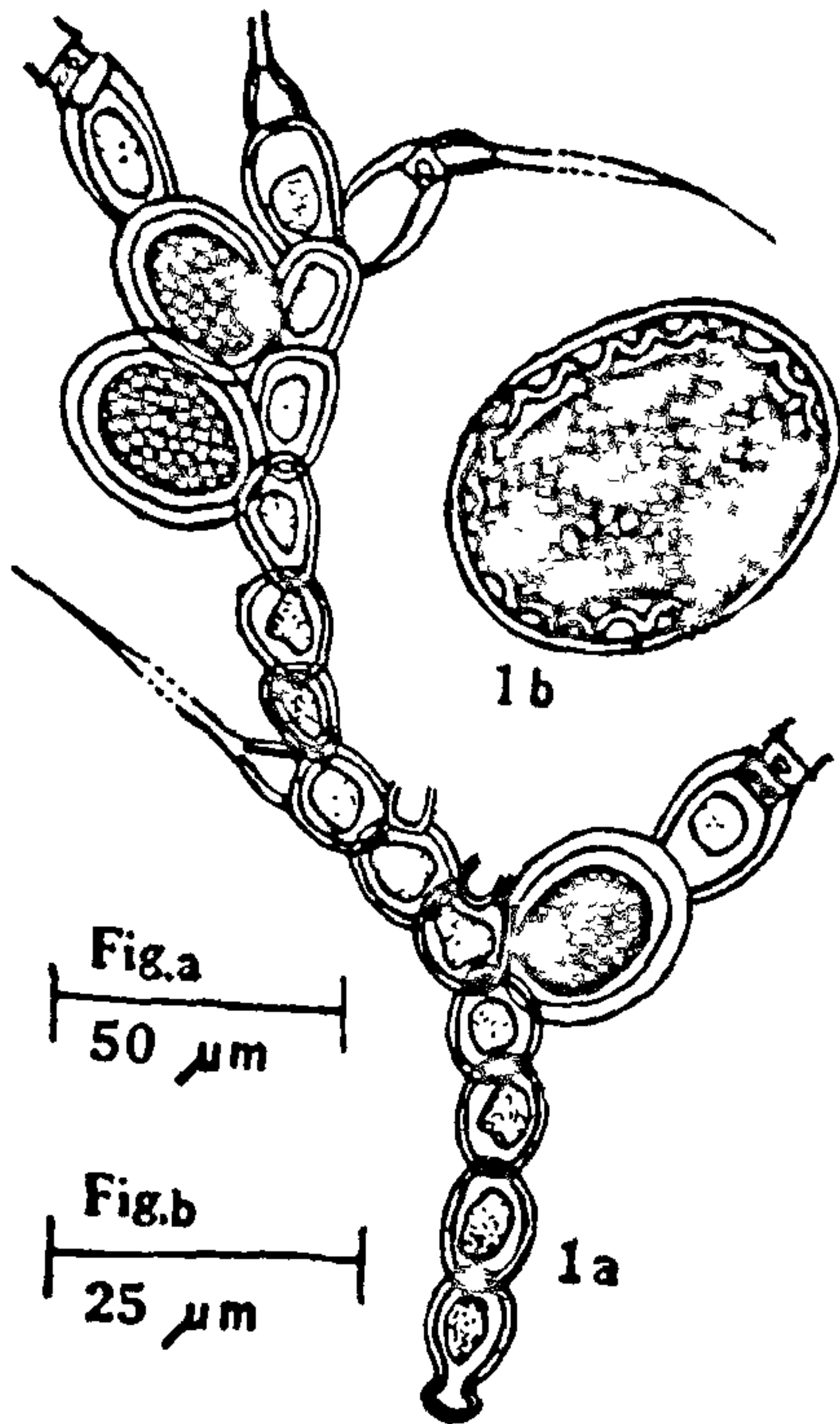


FIG. 1. *Bulbochaete ivorensis* Gauthier Lievre. Fig. 1 a. Mature plant with sex organs. Fig. 1 b. Mature oospore showing ornamentations.

of *Hydrilla* sp. The filaments are short with subspherical moniliform cells. Many of the cells bear long setae with bulbous bases. The cells are slightly broader at their distal end having two faces, one bearing a seta and the other a vegetative cell or oogonium. The basal cell forms a knob-like hold fast (Fig. 1 a). The apical cell supports one or two setae. The cells are uninucleate and each contains a single chloroplast having many pyrenoids.

Vegetative cells are 13–17 μm in breadth and are 15–22 μm long. The basal cell is 14 μm in width and 27 μm in length. Oogonia and antheridia are found on the same plant showing a monoecious macrandrous condition. Oogonia are solitary, lateral, ovate to oblong, 25–29 μm in breadth and are 34–38 μm long. Oospores are oval, 25 μm in width and are 33–34 μm long. Epispore is very thin, colourless and smooth; mesospore is thick and provided with 22–23 teeth-like projections in surface view (Fig. 1 b); it

is at first orange, finally turning brown after full maturation. Antheridia are found singly or in pairs, generally epigynous, more rarely situated laterally with a supra-lateral opening. Antherozoids two per antheridium, laterally placed in the antheridium. Antheridia 9–11 μm broad and 4–5 μm long.

The present alga resembles *B. ivorensis* in vegetative morphology, sex organs, size of oospores, ornamentations of mesospore and supra-lateral opening for escape of antherozoids from the antheridium. It, however, differs from it slightly in having somewhat larger vegetative cells and smaller antheridia. This species is being recorded for the first time from India.

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INHERITANCE OF GLOSSY STEM CHARACTER IN *BRASSICA JUNCEA* L. CZERN AND COSS

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REPORTS of glossy stemmed spontaneous mutants in *Brassica* spp. are not uncommon^{1,2}. However, in these cases primary species like *B. campestris*, *B. rapa* and *B. oleracea* were involved. Occurrence of such a glossy stemmed spontaneous mutant in *B. juncea*, an amphidiploid, was reported earlier³ and it was stated that the glossy stemmed character will be advantageous to a plant breeder pursuing aphid resistance work since colonization of aphids on glossy stem was found to be slow. In further tests the observation appeared to be correct. Inheritance of this glossy stemmed character was studied.

Glossy stemmed plants, found to breed true, were crossed both ways with non-glossy B-85, the parent material from which it was isolated. F_1 characters and the segregation pattern in F_2 and F_3 generation were noted. In F_2 generation, all the glossy stemmed plants were bulked, since initially genetical study in the material was not the objective. F_3 generation was studied out of the seeds of the glossy stemmed plants derived from F_2 bulk.

Results presented in Table I showed that F_1 plants were all glossy stemmed, indicating dominant nature of the character. In F_2 , a clear segregation ratio of 3 glossy : 1 non-glossy was obtained having a probability of 0.95 to 0.90. Thus, a diallelic locus was assumed which was further confirmed by 5 : 1 ratio in the F_3 generation as theoretically expected (Fig. 1),