showed single or double chromosome bridges (Fig. 2). (4) Pollen grains (*c.* 225 per anther) gave cent per cent

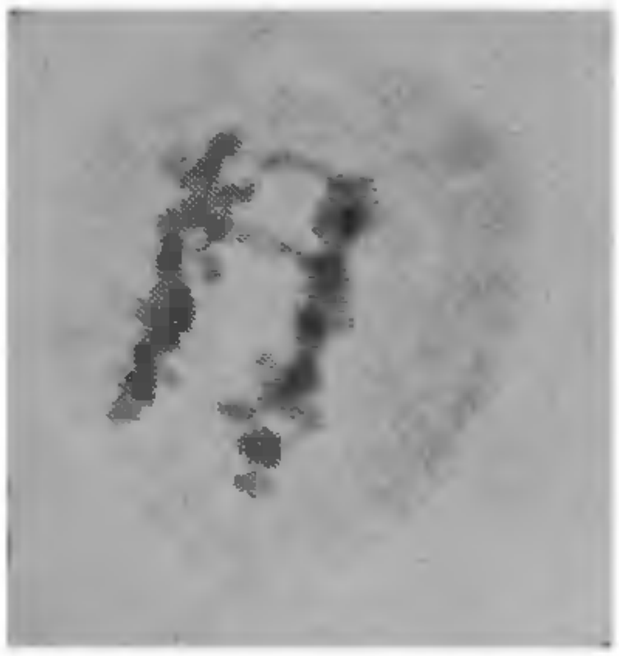

FIG. 2. *Bidens pilosa* L. Meiosis, showing a double chromosome bridge.

germination and the growth of the pollen tube was normal (observed under uv microscope). (5) Copious seed-setting occurred even when selfed (by early bagging of capitula) and the resulting seeds germinated as fast as seeds from crossing. (6) Caffeic acid, aurones and chalcones were the main flavonoids from leaf extracts.

The Rapinat Herbarium, K. M. MATTHEW.
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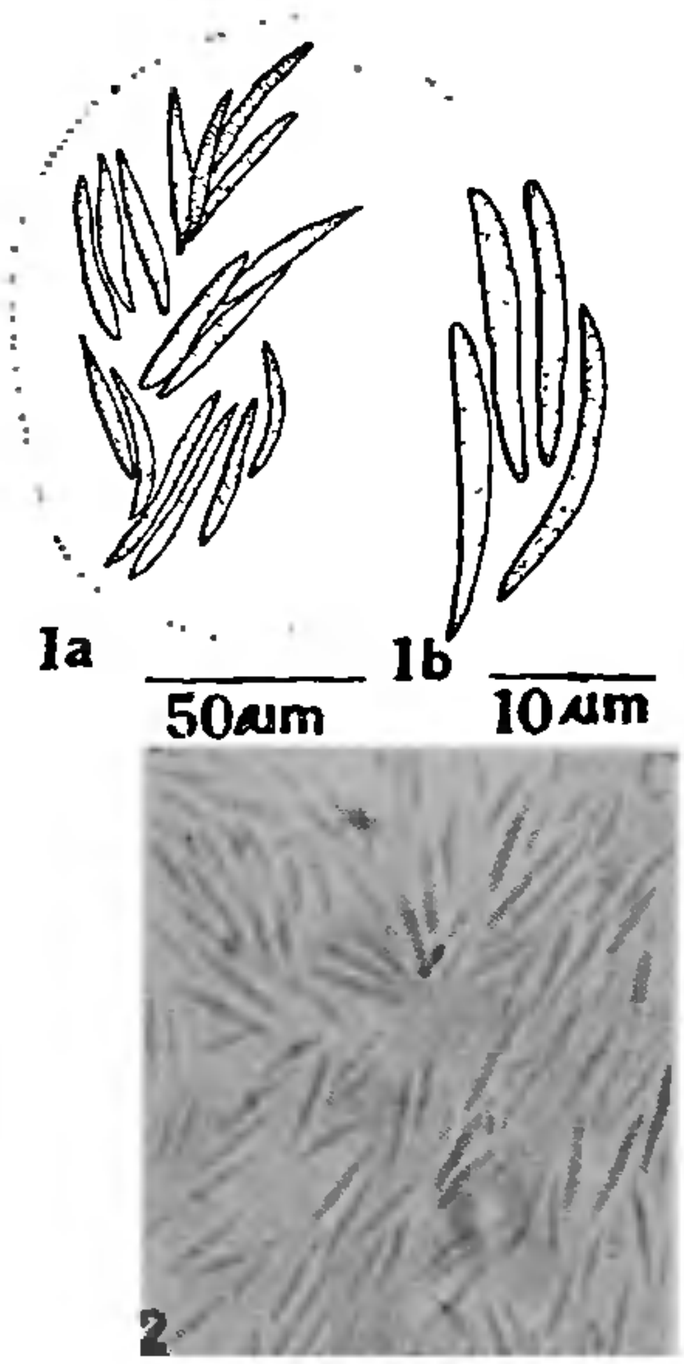
GENUS *QUADRIGULA* PRINTZ.—A NEW ADDITION TO THE INDIAN FLORA

THE genus *Quadrigula* Printz, belongs to order chlorococcales, which is well represented in the Indian flora and of which 53 genera and 208 species are known to occur in this country[1]. Depending on taxonomic opinion, the order comprises a total of 173–180 genera and 900–1,079 species, distributed over 10 to 14 families[1–3]. The genus *Quadrigula* is placed in the Selenastraceae or the Oocystaceae[1–5]. The Selenastraceae includes 14 genera out of which only 6 are known from India[1]. *Quadrigula* has not been recorded from this country so far. The present communication records the occurrence of this genus in the Indian flora and briefly describes the Indian alga.

The alga was collected from a paddy field near Lucknow, U.P., during the course of an investigation on the algal flora of Crop-fields of Uttar Pradesh. It was also isolated from soil-water enrichment cultures of the soil of the same paddy field in the month of September 1974. Both in nature and in culture, the alga forms a thin floating scum on the surface made up of groups of cells embedded in a gelatinous envelope (Fig. 1 *a*).

The cells are generally in groups of two, three or four, although solitary cells are not uncommon. The individual cells are fusiform, elongated and straight with inner margins slightly concave. The cells are arranged with their longitudinal axes parallel and are 2·0–5·0 μm in breadth and 15·0–30·0 μm in length. Each cell possesses a single chloroplast filling almost the entire cell; pyrenoids are absent (Figs. 1 *b* and 2).



FIGS. 1–2. *Quadrigula lacustris*. Fig. 1 *a*. Groups of cells embedded in a gelatinous envelope. Fig. 1 *b*. A group of four cells. Fig. 2. Cells arranged in groups of 2–4 (× 300).

The present alga agrees well with the available descriptions of *Q. lacustris* (Chodat) G. M. Smith, but has slightly longer cells and lacks pyrenoids. It is, therefore, identified as that species.

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University of Lucknow, R. K. MEHROTRA.
Lucknow 226 007, *October* 28, 1976.

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