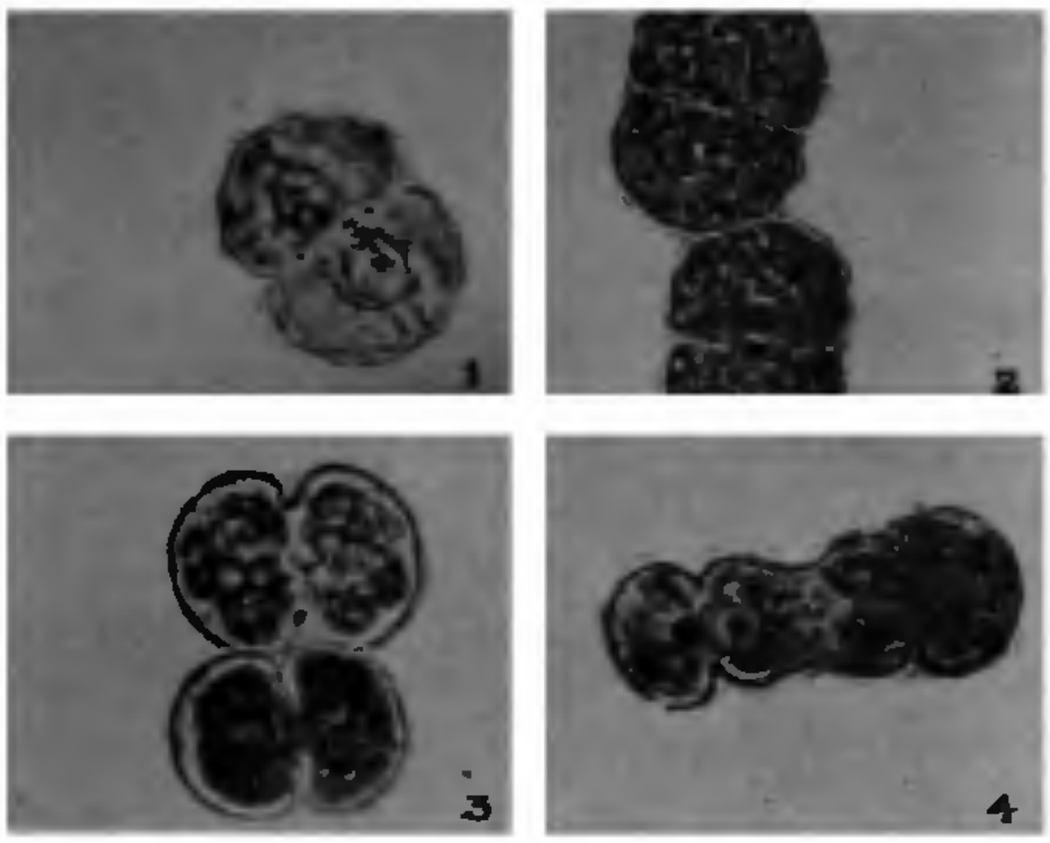

Figures 1-4 *Cosmarium Praemorsum Breb* **1.** Control Cell × 2400. **2.** Cell showing chloroplast contraction × 2400. **3.** Cell showing Chloroplast fragmentation × 2400. **4.** Abnormal Cell × 2400.

In quinazaline Zn (II) treated cultures, at the end of the third week, a few abnormal forms, are recorded due to suppression in the wall formation (figure 4).

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RESIDUAL MERCURY LEVEL IN A BLUE-GREEN ALGA, *WESTIELLOPSIS PROLIFICA*, JANET.

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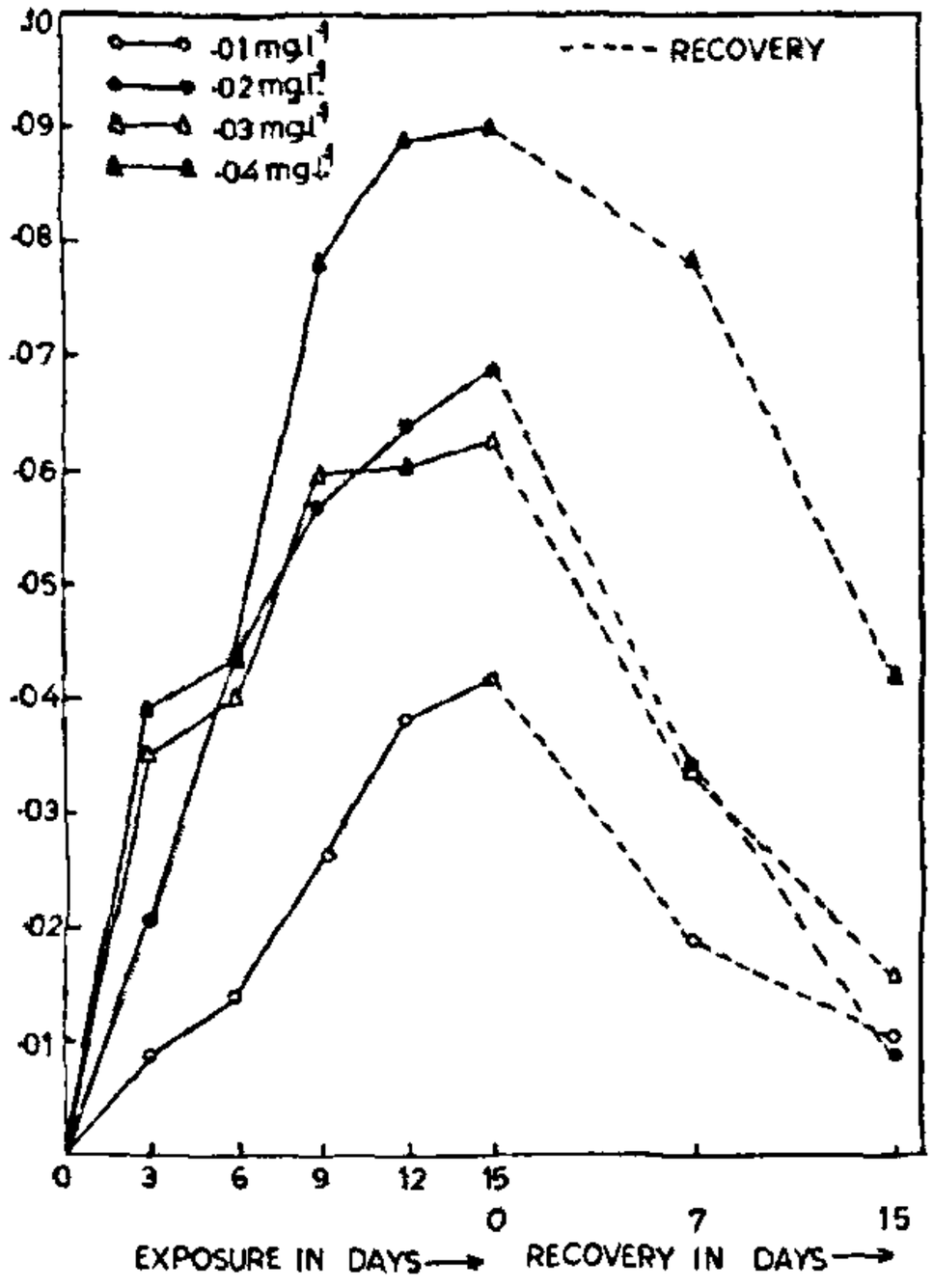
THE use of elemental mercury in caustic chlorine industries and mercurial compounds as seed dressings and subsequent discharge of waste on leaching to water bodies, create widespread environmental problems, particularly when the inorganic mercurial compounds are converted, in natural waters, to biologically active compounds[1]. Algae have been shown to concentrate heavy metals to a large extent in crop field[2]. Algicidal effects of 2,4-dichlorophenoxy acetic acid on *Cylindrospermum sp*[3], and panacide effects on dertain green and blue-green algae[4] were reported. Holderness *et al*[5] studied the effects of methylmercury on the growth of *Coelastrum microsporum* Naeg. Hannan and Patouillet[6] reported the effect of inorganic mercury on the growth rates of alga. The present work was proposed to study the accumulation of mercury in laboratory controlled cultures of *Westiellopsis prolifica*, Janet.

The alga was grown in allen and Arnon's medium as modified by Pattnaik[7]. After sterilisation of the growth medium, mercuric chloride was added in order to get the sub-lethal concentrations of 0.01, 0.02, 0.03 and 0.04 mg.l^{-1}. Keeping the volume of the medium at 50 ml in each flask, control flasks were maintained without the mercury salt for comparison. The inoculated flasks were kept in a culture room at a temperature $27 \pm 2°$ C and under a 12 hr illumination of 2500 ± 200 Lux. Cells were harvested for experimental work at 3 day interval to study the residual mercury accumulation in the exposed algal cells. After 15 day exposure, the cultures were centrifuged, washed and resuspended in mercury freeculture medium for recovery studies.

The cultures were centrifuged and washed 5 times with distilled water to ensure complete removal of adhered mercury on the outer surface of the algal tissue. The tissues were digested in a Klein's apparatus with an acid mixture (1:1, conc. H_2SO_4 and conc. HNO_3 acid). Residual mercury measurements were made in a mercury analyser (ECIL, MA 5800A) fitted with a mercury cold vapour analysis attachment. Total mercury levels were expressed as mg g^{-1} dry wt.

With the increase in exposure period, the residual mercury concentration increased showing a positive correlation (figure 1). The exposed algal cells, when transferred to mercury-free growth medium, could recover only partly. The residual mercury concentration level declined after 15 day recovery (figure 1), possibly due to excretion of mercury from the algal cells. What sets mercury apart from the other pollutants is the comparative irreversibility of its toxic action[6]. The mechanism by which mercury was picked up probably depends upon the concentration of mercury. Effect of toxicity was most obvious immediately after the addition of mercury in continuous culture experiments. Our experimental trend is in agreement with other workers[8,9]. The recovery observed in *Westiellopsis prolifica* might have resulted from volatilization or fixation or excretion of mercury from algal

FIG 1



system[6]. The alga was extremely tolerant to inorganic mercury and continues to grow and accumulate in concentrations less than 0.04 mg. Hgl^{-1}. The growth, however ceases at 1 mg Hgl^{-1}. The role of algal mass in crop fields should be considered as important as that of the crop plant.

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AN ADDITION TO INDIAN MYCOFLORA

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DURING the studies on dermatophytes and related keratinophilic fungi from soils of India[1], *Myrothecium atroviride* (Berk & Br.) Tulloch was collected. The fungus was recorded from the cattle farm soil of Tili, Sagar, M. P. and was isolated using cow hoof pieces as keratin-bait. A review of literature reveals that this is a new record to Indian mycoflora.

Myrothecium atroviride (Berk & Br.) Tulloch.

Mycelium hyaline, septate, branched measuring 2–3 μ in bredth. Conidiophores simple or branched, cylindrical tapering towards the end, hyaline measuring 2-2.5 × 40–60 μ in size. Conidia dark green in mass. cylindrical tapering towards the ends, 1-celled, hyaline, smooth and thin walled measuring 2.5–3 × 7.5–12.5 μ in size.

Fungus grew well on autoclaved pig hair and peacock feathers. Present isolate comes within the range of variations of *M. atroviride*[2]. Living cultures of this fungus have been deposited at CMI, Kew (IMI 196830); IARI, New Delhi (ITCC 2357) and culture collection of Department of Botany, Saugar University, Sagar (J/77/42).

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