

Reuben *et al*<sup>9</sup>. According to them, reduced rate of mitosis and non-polar cell division in the cortical cells of roots, as suggested in *Pisum sativum*<sup>16</sup> may be responsible for these 'tumour-like thickenings'.

Decrease in length of radicle by morphactin is similar to the effect of GA<sub>3</sub> and coumarin in *Hibiscus esculentus*<sup>17</sup>, where only the lower concentrations of phosphon and B-nine increased the radicle size. In *Cicer arietinum*<sup>18</sup> also, CFI at concentrations above 10<sup>-7</sup> M decreased root length. The number of lateral roots arising singly was highly reduced. The same phenomenon has been observed in castor. While the number of lateral roots was increased over control at 50 ppm and beyond, it was considerably reduced at 150–75 ppm. In many other cases<sup>19–23</sup>, morphactins have an inhibitory effect on the length of roots or the formation of lateral roots. In *Bryophyllum tubiflorum*<sup>24</sup>, CFI is reported to increase the number of roots per epiphyllous bud. It even stimulated lateral root formation upto 20 ppm and reduced it at 40 ppm.

The inhibitory effect of morphactins on the formation of lateral roots, is not due to an inhibition of the initiating cell divisions in the pericycle, which are actually strongly stimulated<sup>15</sup>. It is mainly due to the effect on the emergence and elongation of the side root or the normal organization of their primordia.

The different concentrations of morphactin had a similar direct relation with the length of lateral roots—lower concentrations stimulating and higher ones retarding. Shortest length, therefore, was at 150 ppm.

The lateral roots were negatively geotropic to varying degrees at all concentrations. The highest percentage of seedlings with such roots was at 50 ppm, whereas control seedlings had none. It is suggested<sup>25</sup> that the lateral transport of IAA is suppressed by morphactins which ultimately results in an upward growth of the roots.

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## OVARY WALL OBTURATOR IN *OTTELIA ALISMOIDES*

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OBTURATORS are specialised glandular structures involved in directing the pollen tube towards the mic-

ropyle. They have been reported in several angiosperm families and take their origin from parts like placenta, funiculus, base of the style and integument<sup>1</sup>. So far obturators developing from ovary wall have been recorded only in *Rivina humilis* of Phytolaccaceae<sup>2</sup>. In the present paper it is recorded in *Ottelia alismoides* of Hydrocharitaceae.

Obturator in *O. alismoides* is composed of a group of gland cells situated above the placenta. The cells are positioned in such a way that the micropyle of the ovule comes closer to the obturator. The cells of the obturator are invariably uninucleate. The number of cells constituting a single obturator varies from ten to seventy<sup>3</sup>.

The pollen tubes after traversing the ovary wall, grow ectotropically on the outer wall of the obturator cells and then directly enter into the micropyle. Normally obturators lose their function after directing the pollen tubes, but in *Ottelia alismoides*, they persist till fruit maturity<sup>3</sup>.

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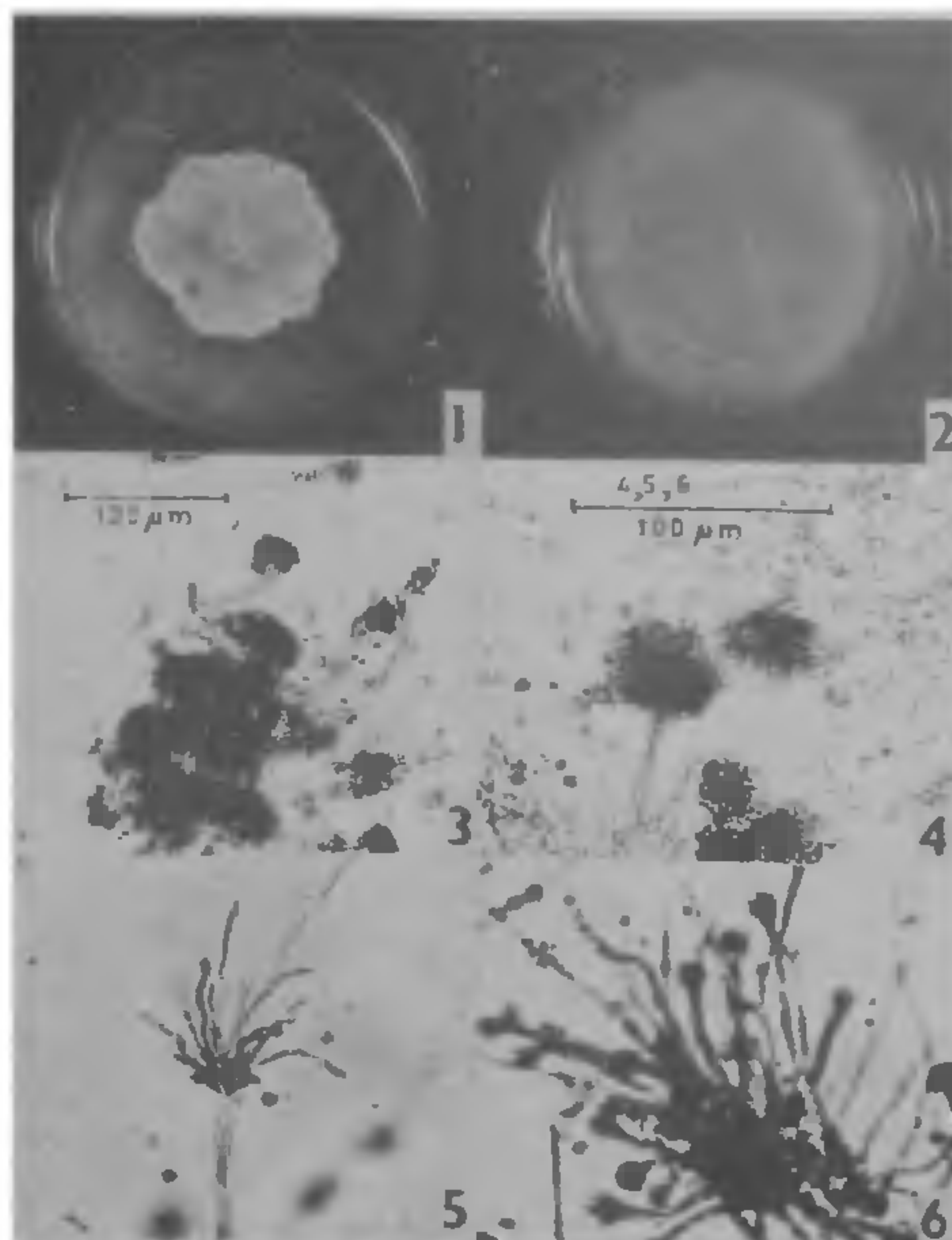
### **ASPERGILLUS SUB-UNGUIS SPEC. NOV: A NEW MEMBER OF A. NIDULANS GROUP**

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THE new osmophilic, non-ascocarpic *Aspergillus*, belonging to *A. nidulans* group, was isolated from germinating, surface-sterilized seeds of *Helianthus annuus* L. (cv. EC 15), later from the air of Sunflower fields.

*Aspergillus sub-unguis* spec. nov. (figures 1–6)



Figures 1–6. *Aspergillus sub-unguis* spec. nov. on Czapek Dox agar medium. 1 & 2 with 3 and 20% sucrose respectively. 3 & 4 Conidiophore heads. 5 & 6 Proliferating conidial heads.

Colonies on Czapek Dox agar (figure 1) restricted, attaining a diameter of 4 cm in 10 days at 30°C, with raised tough mycelial felt having irregular furrows, colour varying from cream-orange, with greyish brown tinge owing to the presence of limited number of conidial heads. Exudates lacking, reverse colourless, without hulle cells and cleistothecia.

Colonies on Czapek Dox- agar + 20% sucrose (figure 2) luxuriantly sporulating with very little aerial mycelium attaining a diameter of 8 cm, Spinach green Epinard 270/4–0960/3<sup>3</sup>. Conidial heads conical at maturity, conidiophores 37.4–73.1 μm × 3.4–5.1 μm, arise from funiculose, interlacing aerial mycelium, colourless, smooth and thin-walled, vesicles sub-conical 8.5 μm in diameter with upper 2/3 surface covered with biseriate crowded sterigmata, primaries 3.4–5.1 μm × 3.4 μm, secondaries 5.1–10 μ × 3.4 μ, conidia globose, slightly echinulate, in mass dark green 3.4–5.1 μm (figures 3–4). No hulle cells or cleistothecia observed.

A sub culture deposited at Commonwealth