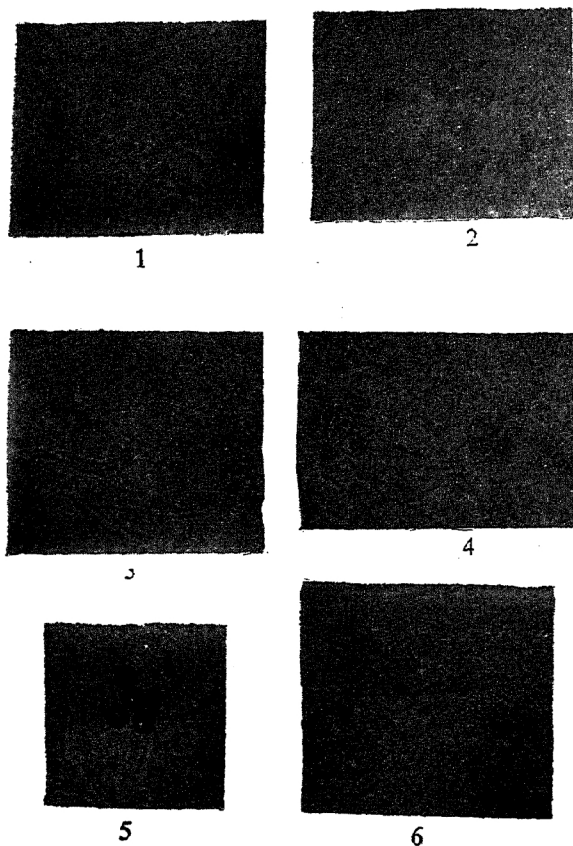


PRELIMINARY NOTE ON A NEW
SPECIES OF *EREMASCUS*

DURING January 1941 a species of *Eremascus* was isolated from a betel-vine garden at Ramtek which behaved differently from any of the species so far described. Pure culture of the fungus was obtained and it gives a luxuriant aerial cottony growth on rice-meal or glucose agar. The aerial hyphæ are sub-hyaline, highly granular, generally straight, more or less uniformly thick, sparsely branched, distantly septate and measure $1.52\ \mu$ to $9.54\ \mu$ in width (average $4.32\ \mu$). The submersed hyphæ, measuring $1.27\ \mu$ to $6.36\ \mu$ in width (average $2.92\ \mu$) are also sub-hyaline but less granular, more often tortuous than straight, irregularly thick, frequently branched and closely septate. As the culture grows older the aerial and submersed hyphæ both turn faintly pale-yellow.

Sexual reproduction is predominantly marked in this fungus. Two copulation branches arise from the sides or the ends of a hypha and coil spirally round one another (Fig. 1) and after one to several windings they meet at their tips and fuse (Fig. 2). The fused portion gradually gets abjoined from the copulation branches and eventually swells up to an eight-spored ascus (Fig. 3). In some cases it was observed that a few of the spores in an ascus degenerate. The asci, measuring $19.71\ \mu$ to $28.30\ \mu$ (average $19.97\ \mu$) \times $22.26\ \mu$ to $37.84\ \mu$ (average $31.29\ \mu$) are thin-walled, hyaline, usually ovate, frequently pear-shaped and occasionally spheroidal in shape (Fig. 4). Asci are also produced parthenogenetically from fertile hyphæ

but they are smaller in size and contain less than eight spores. Ascospores are one-celled, globose, distinctly brown, typically spiny surfaced and measure $9.98\ \mu$ to $11.82\ \mu$ in diameter (average $10.28\ \mu$) (Fig. 5).



Eremascus terrestris n. sp.

FIGS. 1-4. Development of copulation branches and ascus. $\times 900$.

FIG. 5. Ascospores.

FIG. 6. Conidiospores.

The fungus also occasionally produces round, smooth and hyaline conidiospores measuring $8.20\ \mu$ to $12.72\ \mu$ in diameter (average $10.0\ \mu$) (Fig. 6).

So far only two species of *Eremascus*, *E. albus* Eidam and *E. fertilis* Stoppel, are reported. Though the present fungus very much resembles *Eremascus albus* Eidam in its sexual reproduction yet its habitat, cultural characters and size and shape of the spores justify it to be classed as a new species and is, therefore, named as *Eremascus terrestris* Asthana and Mahmud (n. sp.).

Agricultural Research
Institute, Nagpur,
December 23, 1943.

R. P. ASTHANA.
K. A. MAHMUD.