Proceedings of the Iowa Academy of Science

Volume 32 | Annual Issue

Article 37

1925

Culture Studies of *Psilocybe coprophila*

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Recommended Citation

Gilmore, Katherine (1925) "Culture Studies of *Psilocybe coprophila*," *Proceedings of the Iowa Academy of Science*, 32(1), 266-266.

Available at: <https://scholarworks.uni.edu/pias/vol32/iss1/37>

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stitute the multipolar spindle. There are twenty bivalent chromosomes at the heterotypic division. Counts in root tip cells showed forty somatic chromosomes. During diakinesis a callose wall is secreted around the mother cell. When the heterotypic division has been completed a *special wall* composed of callose is formed just inside of the original mother cell wall. Quadripartition of the mother cell is effected by partition walls which originate on the inner surface of the special wall and grow centripetally.

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CULTURE STUDIES OF *PSILOCYBE COPROPHILA*

KATHRYN GILMORE

(*ABSTRACT*)

Psilocybe coprophila, Fr. has been investigated. It is found to be a heterothallic species producing two strains of primary mycelium, the union of which is necessary to the production of a secondary mycelium with clamp connections, or of basidiocarps.

The capacity for the formation of certain abnormalities of the pileus is inherent in some strains and transmitted from generation to generation.

Conidia are produced on both secondary and primary mycelia. Those produced by primary mycelium germinate to form a haploid mycelium exactly similar in behavior to that which produced them. Those produced by secondary mycelium of polysporous origin give rise to a diploid mycelium with clamp connections. Those produced by a secondary mycelium of known origin, arising from the crossing of two monosporous primary mycelia, germinate to produce haploid mycelia representative of both strains; indicating that the nuclei of the diploid mycelium have undergone segregation during the formation of oidia.

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