

KRÁTKÁ SDĚLENÍ

**The Development of Ascospores in *Rhytidhysterium rufulum*
(SPEG.) PETRAK**Vývin askospor u *Rhytidhysterium rufulum* (SPEG.) PETRAK

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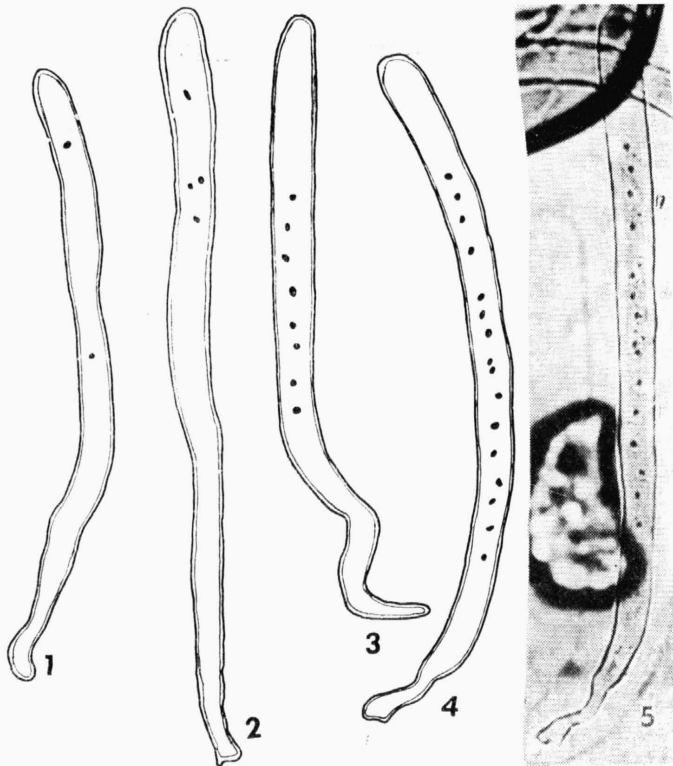
Abstract — The ascospore development was investigated in *Rhytidhysterium rufulum*. The nucleus in the ascus mother cell divides to form 16 nuclei. At this stage the ascus cytoplasm cleaves into eight units, each with two nuclei. Each of these divide again so that ultimately eight 4-celled ascospores are formed in each ascus. Each cell of the ascus having only one nucleus.

The development of ascospores and asci has not been studied in many members of the family *Patellariaceae*. This communication gives preliminary findings on the development of ascospores in *Rhytidhysterium rufulum* (SPEG.) PETRAK.

The young pseudothecia were prefixed in 8-hydroxyquinoline, washed thoroughly with water, and fixed overnight in a mixture of absolute alcohol and acetic acid (ratio 3 : 1). These were then hydrolysed by 1 N HCl at 60° C for 15 minutes, washed again with water and stained with Feulgen. They were next squashed in 0.5% acetocarmine and the coverslip sealed with paraffin wax.

Crozier formation was not observed during ascus development. The nucleus of the ascus mother cell first divides meiotically (?), giving rise to 2 and 4 nuclei (Figs. 1, 2), followed by two mitotic divisions so that 8 and 16 nuclei are formed (Figs. 3, 4). At this stage the ascus cytoplasm cleaves into eight units each enclosing two nuclei (Fig. 5). With the organisation of the wall each ascospore contains two nuclei. Subsequently, a septum develops across each ascospore dividing it into two uninucleate cells. Each divides again resulting in 4-celled ascospores. Each cell of the ascospore having one nucleus. The mature ascus is bitunicate, clavate with a claw-like base, and contains eight 4-celled ascospores arranged in a row.

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Figs. 1–5. Showing development of ascus in *Rhytidhysterium rufulum* (SPEG.) PETRAK. 1. Two nucleate ascus. 2. Four nucleate ascus. 3. Eight nucleate ascus. 4. Sixteen nucleate ascus. 5. Young ascus showing 16 nuclei and cleaved cytoplasm. All $\times 646$.

Souhrn

Autoři studovali vývin askospor u houby *Rhytidhysterium rufulum* (SPEG.) PETRAK. Jádro mateřské buňky vřecka se dělí a vzniká 16 jader. V tomto stadiu se cytoplazma vřecka dělí na osm částí, které mají po dvou jádrech. Každá z těchto částí se opět dělí, takže se posléze vytvoří osm čtyřbuněčných askospor. Všechny buňky vřecka jsou jednojaderné.