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The Basidium

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SOME SIMILARITIES OF NUCLEAR ORGANIZATION
IN THE BASIDIUM AND THE ANIMAL
SPERMATOCYTE

J. E. SASS

After the fusion of the dikaryon in the basidium of *Coprinus sterquilinus* the fusion nucleus undergoes considerable enlargement. Associated with the nucleus there is a large "nebenkern." The latter body consists of a hyaline matrix containing a variable number of saucer shaped chromophilic platelets. As the fusion nucleus advances into the meiotic prophase, the nebenkern expands, the platelets scatter in an irregular manner into the cytoplasm, and apparently increase in number. The material of the nebenkern moves down toward the base of the basidium, and does not seem to be intimately associated with the subsequent meiotic processes of the nucleus.

The organization of the nebenkern in this plant bears some resemblance to that of certain animal spermatocytes.

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NOTES ON THE LIFE HISTORY OF *APHANIZOMENON FLOS-AQUAE*

E. T. ROSE

Aphanizomenon flos-aquae for the past few years has been an extremely serious pest in a number of the lakes of northwestern Iowa. Curiously enough, this common blue-green alga has not received much attention other than taxonomic technicalities.

This paper deals chiefly with the life history and economic importance of this, and other algal pests.

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THE BASIDIUM

DONALD P. ROGERS

The current systems of classification of the basidiomycetes tend to attribute greater weight to the structure of the fruiting-body than to basidial morphology. Actually, basidial morphology is the

more fundamental character. When the basidium is considered in the light of Neuhoﬀ's hypo-, epibasidium and Donk's pro-, metabasidium concepts, homologies appear which furnish the basis for a natural arrangement of the class. Such an arrangement follows the general groupings proposed by Patouillard of Hetero- and Autobasidiomycetes and of Hymeniales and Gasteromycetes. The relationships, mutual and within the groups, of Patouillard's divisions receive greater meaning from such a consistent morphological and phylogenetic interpretation.

ON THE SIGNIFICANCE OF THE MINOR VENATION OF FOLIAGE LEAVES

ROBERT B. WYLIE

Experiments with living mesophytic foliage leaves show that the smaller veins are capable of carrying enormously increased overload. There seems to be no structural modification of the minor veins in meeting these increased demands.

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SCOTCH PINE (*PINUS SYLVESTRIS*) AS A MEMBER OF THE IOWA FLORA

GUY WEST WILSON

On a recent visit to the southwestern portion of Des Moines county a most interesting discovery was made. Near the county line, but on the Henry county side was formerly a large grove of the Scotch Pine (*Pinus sylvestris* L.). The trees were planted in the early days and have developed into extra large specimens. In fact a large part of the plantation has already found its way to the saw mill. To the northeast in Danville township of Des Moines county is a considerable tract of timber which is not pastured as heavily as is the rule in Iowa at present. Along the small ravines are seedlings of many trees, among them the Scotch pine. These are present in considerable numbers, sufficient to indicate that their presence is not accidental. Probably thirty to forty were seen without special search. These ranged in size from about eight inches in height on up. The largest of these young pines is about four inches in diameter and tall enough to make a sizable christ-