

THE OCCURRENCE OF *RHIZOCHRYSIDIS LIMNETICA* G. M. SMITH IN THE PLANKTON OF LAKE BALATON

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The systematic examination of water samples and net-filtrates from Lake Balaton have often revealed, in the previous years, too, the presence of algae which occurred in small numbers only or could not be sufficiently observed for the purpose of taxonomical identification. In cases like that the identification of a species often requires collections of data ranging over several years. Present study may be ranged with the previous works of similar nature (TAMÁS, 1962; 1966).

Rhizochrysis limnetica G. M. SMITH (1920, 77)

This species belongs to family Rhizochrysidaceae, order Rhizochrysidales of class Chrysophyceae of phylum Chrysophyta. The genus was described by PASCHER and LEMMERMANN (1913, 90). In the list presented by MATVIENKO (1965, 48), who devoted much interest to chrysophytes, the name of this genus occurs as a synonym for genus Chrysamoeba.

SMITH (1920, 77) was the first to publish the detailed description of the species and its occurrence. In a later work (1933) he published further complementary data. HUBER-PESTALOZZI (1941, 244) designated it as a planktonic organism, and in the comprehensive study on the North-American Great Lakes of PRESCOTT (1962, 382) the original description of the species is given. Also the specimens registered and described from Lake Balaton are single cells, spherical, with numerous acicular appendages projecting in every direction. The appendages are definite, acicular structures on the cell surface. Inside the spherical cell one chromatophore is visible. It is golden-yellowish-brownish and is surrounded by numerous contractile vacuoles. The Balaton specimens were about 25—30 μ in diameter on the basis of 150 measurements. These values are lower than those of 35—40 μ ascertained by SMITH. The lengths of the needles is double the diameter of the cell (*Fig. 1*).

In November, 1967 only some specimens of this species were found in the net-filtrates collected in the open water of the north-east part of our lake. The presence of 80 specimens in all was found in the net-filtrates collected similarly along the transversal sections A and E of the north-east basin on October 16, 1968. The species was identified on the basis of its measurements and microscopic representation. It was frequent in the net-filtrate collected

near the mouth of River Zala in the south-east part of the Bay of Keszthely on August 10, 1971 (40 specimens on a slide were not seldom).

This species has possibly been transported into the lake by its influent waters (Berek Canal, River Zala, or got there from the moorlands of fishponds) and it is quite probable that it will increase in numbers.

It is also probable that research workers studying temporary waters, moorlands and fishponds as well as their microphytes have failed to notice

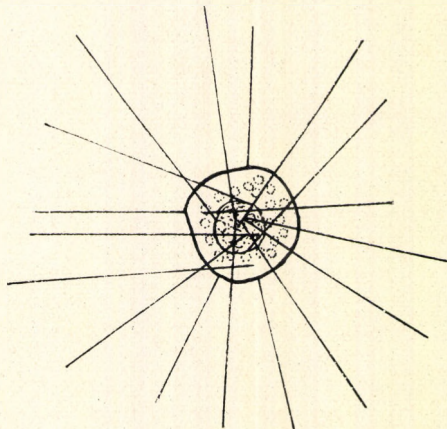


Fig. 1. *Rhizochrysis limnetica* G. M. SMITH (Chrysophyta) the serial collections from Lake Balaton

so far the presence of this species, or perhaps were not able to identify the collected specimens because of their low numbers in the samples. The data furnished by the serial collections from Lake Balaton are new for the algal flora of Lake Balaton, Hungary and Europe as well.

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RHIZOCHRYISIS LIMNETICA G. M. Smith ELÓFORDULÁSA
A BALATON PLANKTONJÁBAN

Tamás Gizella