

***OLIGONEMA FLAVIDUM* (MYXOMYCETES): A SPECIES NEW TO POLAND**

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Abstract. This study presents the first collection of *Oligonema flavidum* (Peck) Peck in Poland. Its description, illustrations, substrate and habitat types are provided.

Key words: distribution, slime molds, Trichiaceae, central Poland

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INTRODUCTION

The genus *Oligonema* (Trichiaceae, Trichiales) was first specified and described by Rostafński (1875). At present, seven species belong to the genus (Lado 2005–2013). Only one, *Oligonema schweinitzii* (Berk) G. W. Martin, has been found in Poland to date (Drozdowicz *et al.* 2003).

Oligonema flavidum (Peck) Peck was collected in central Poland in the Las Łagiewnicki Forest Reserve (Fig. 1). The taxon is new to the myxo-

mycete biota of Poland. This paper describes its morphological features together with photographic documentation and notes on its ecology and distribution.

MATERIALS AND METHODS

The study was based on material collected in the Las Łagiewnicki Forest Reserve during research on the myxomycete biota in this area. Morphological features were described from dry material. Permanent slides were made using Hoyer's medium. The material was observed with a Nikon YS100 light microscope and a Nikon SMZ-10A stereomicroscope. Spores were measured at 100× magnification with an oil immersion objective. The capillitium was measured at 40× magnification. Photographic documentation of the species was prepared with a Sony DSC H7 digital camera. The collection is deposited in the Herbarium of the Institute of Botany, Jagiellonian University (KRA), in the MYXO section.

RESULTS

Oligonema flavidum (Peck) Peck Fig. 2

Sporocarps yellow, sessile, tightly crowded in heaps 2.5 cm long, the upper layer consisting of longitudinally elongated (height up to 1.5 mm, width 0.4–0.5 mm) or globose (height 0.5 mm, width 0.3–0.4 mm) sporocarps, the lower layer

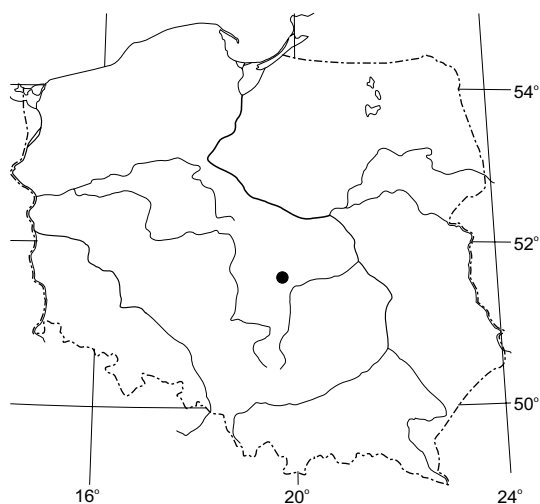


Fig. 1. Distribution map of *Oligonema flavidum* (Peck) Peck in Poland.

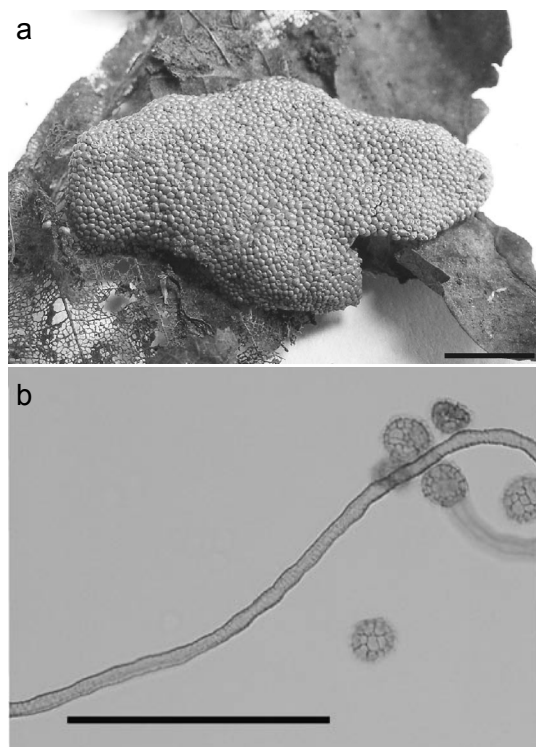


Fig. 2. *Oligonema flavidum* (Peck) Peck collected from the Las Łagiewnicki Forest Reserve. a – sporocarps, b – capillitium and spores. Scale bars: a – 10 mm; b – 100 μ m.

built up of sporocarps irregular in shape. Peridium yellow, thin, covered with small warts. Capillitium of scant elaters, sporadically branched, covered with warts, in some parts narrowed or widened, 3–4 μ m in diameter, 50–120 μ m in length, ending with blunt apex. Spores yellow in mass, 14–15 μ m in diameter, covered with almost complete coarse-meshed reticulum, 1–2 μ m high.

MATERIAL EXAMINED: POLAND. ŁÓDŹ, LAS ŁAGIEWNICKI Reserve (51°49'55"N, 19°28'34"E), from dead litter of oak, hornbeam, birch and alder leaves. Specimen collected from a periodically inundated forest pond. 23 Aug. 2011, leg. A. Salamaga (KRAMYXO-9006).

REMARKS. Macro- and microscopic traits of this specimen are characteristic of the species, and parameters such as the size of sporocarps, spores and capillitium threads are within the ranges reported by other authors (Nannenga-Bremekamp 1991; Ing

1999; De Haan *et al.* 2004). The capillitium, which is scant in the specimen, is covered only with warts along its entire length while in other collections the warts can form thickened bands, in places resembling rings or spirals (Nannenga-Bremekamp 1991; de Haan *et al.* 2004; Ing 1999).

GENERAL DISTRIBUTION. *Oligonema flavidum* has been recorded from a number of European countries including Belgium, Estonia, Ukraine, Germany, Holland, Hungary and Russia (Lavits'ka 1949; Senge 1975; Nannenga-Bremekamp 1991; Adamonyte 2000; Revay & Nagy 2005 Novozhilov *et al.* 2006; Dudka & Krivomaz 2008) and from various parts of the world including the United States, Argentina, Algeria and India (Martin & Alexopoulos 1969; Dhillon 1979; Ndiritu *et al.* 2009; Wrigley de Basanta *et al.* 2010; Ranade *et al.* 2012).

ECOLOGY AND HABITAT. The species does not seem to have specific substrate preferences. It was found on dead litter of oak, hornbeam, birch and alder leaves in the study area. It is recorded most often on dead wood of deciduous trees (Lavits'ka 1949; Senge 1975; Nannenga-Bremekamp 1991; Novozhilov *et al.* 2006; Wrigley de Basanta *et al.* 2010) and has also been found on mossy stumps (Novozhilov *et al.* 2006) and on rotten wood and moist soil (Poulain *et al.* 2011).

All species of the genus *Oligonema* prefer mesic habitats: wood and mosses in dry parts of ponds and streams (Ing 1999; de Haan *et al.* 2004). *Oligonema flavidum* was recorded in such a habitat in the Las Łagiewnicki Reserve.

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