

FLAGELLOSCYPHA MINUTISSIMA (BASIDIOMYCETES),
A NEW FOR POLAND MINUTE CYPHELLACEOUS FUNGUS

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ABSTRACT

The first records of *Flagelloscypa minutissima* (Burt) Donk are reported from Poland, being easternmost on the European continent. A brief description and illustration of the species based on Polish specimens are given and its ecology, distribution, and taxonomy are surveyed.

KEY WORDS: Agaricales, Marasmiaceae, cyphellaceous fungi, mycogeography, Poland, Europe.

INTRODUCTION

Cyphellaceous fungi are poorly investigated in Poland similar as in other European and non-European countries. Theirs minute size and overall similarity to discomycetes are the main reasons for that. In Poland altogether no fewer than 18 species of cyphellaceous fungi have been detected. They belong to the following genera (in parentheses the number of species occurring in Poland is given): *Calyptella* Qué. (4), *Chromocyphella* De Toni and Levi (1), *Cyphella* Fr. (1), *Cyphellopsis* Donk (2), *Cyphellostereum* D. A. Reid (1), *Flagelloscypa* Donk (1), *Henningsomyces* Kuntze (1), *Merismodes* Earle (1), *Lachnella* Fr. (2), *Nochascypa* Agerer (1), *Rectipilus* Agerer (1), *Stigmatolemma* Kalchbr. (1), and *Woldmaria* W.B. Cooke (1). The genus *Flagelloscypa* was represented only by *Flagelloscypa kavinae* (Pilát) W.B. Cooke, being known from altimontane elevations of Babia Góra Mt (Bujakiewicz 1993). Recently another representative of this genus, *Flagelloscypa minutissima* (Burt) Donk, has been recorded during studying the corticioid and polyporoid fungi of Tarnów town in southern Poland. A description and illustrations of this species are given below.

RESULTS AND DISCUSSION

Flagelloscypa minutissima (Burt) Donk, Lilloa 22: 312. 1951 (1949) (Figs 1-2)

Basidiomes annual, cupulate, sessile to short-stalked, small, up to 1 mm in diam., white, outer surface shortly haired, when moist the margin exposes the hymenium, and

when dry the margin is draped and covers the hymenium; marginal hairs thick-walled, encrusted by rhombical crystals, upper part non-encrusted, thin-walled, ending with curved flagellum; hyphal system monomitic, hyphae with clamps, branched, up to 4 µm wide; basidia broadly clavate, with 2 sterigmata and basal clamp, 20-30 × 5-6 µm; basidiospores citriform, elliptic to navicular, smooth, hyaline, non amyloid, 7.0-9.0 × 3.5-4.5 µm.

Specimens examined. Poland. Sandomierz Basin: Tarnów, on the River Dunajec near E. Kwiatkowski street, fallen branch of *Fraxinus excelsior*, 8 Aug. 2002, leg. M. Piątek, KRAM F-52540; Tarnów, at the E. Kwiatkowski street, fallen branch of *Robinia pseudoacacia*, 8 Aug. 2002, leg. M. Piątek, KRAM F-52539; Tarnów, Krzyskie Forests, at Ścieżki street, fallen branch of *Fraxinus excelsior*, 16 May 2001, leg. M. Piątek, KRAM F-51524; Tarnów, Piaskówka, at Elektryczna street, fallen branch of deciduous tree, 23 Aug. 2000, leg. M. Piątek, KRAM F-52519.

This taxon has been recorded by Agerer (1975) as non-host-specific species occurring on various trees, herbs and fungus *Phellinus ferruginosus* (Schröd.: Fr.) Bourdot and Galzin. In Poland it was collected in remnants of riverine forest, deciduous and mixed forests strongly changed by human activity, and in roadside covered by ruderal herb community. Basidiomes occurred both on wood and bark of fallen branches of *Fraxinus excelsior*, *Robinia pseudoacacia* and unidentified deciduous tree.

In Europe *Flagelloscypa minutissima* has numerous stations in Austria, Germany, and Czech Republic, and it occurs rarely in France, Italy, Switzerland (Agerer 1975),

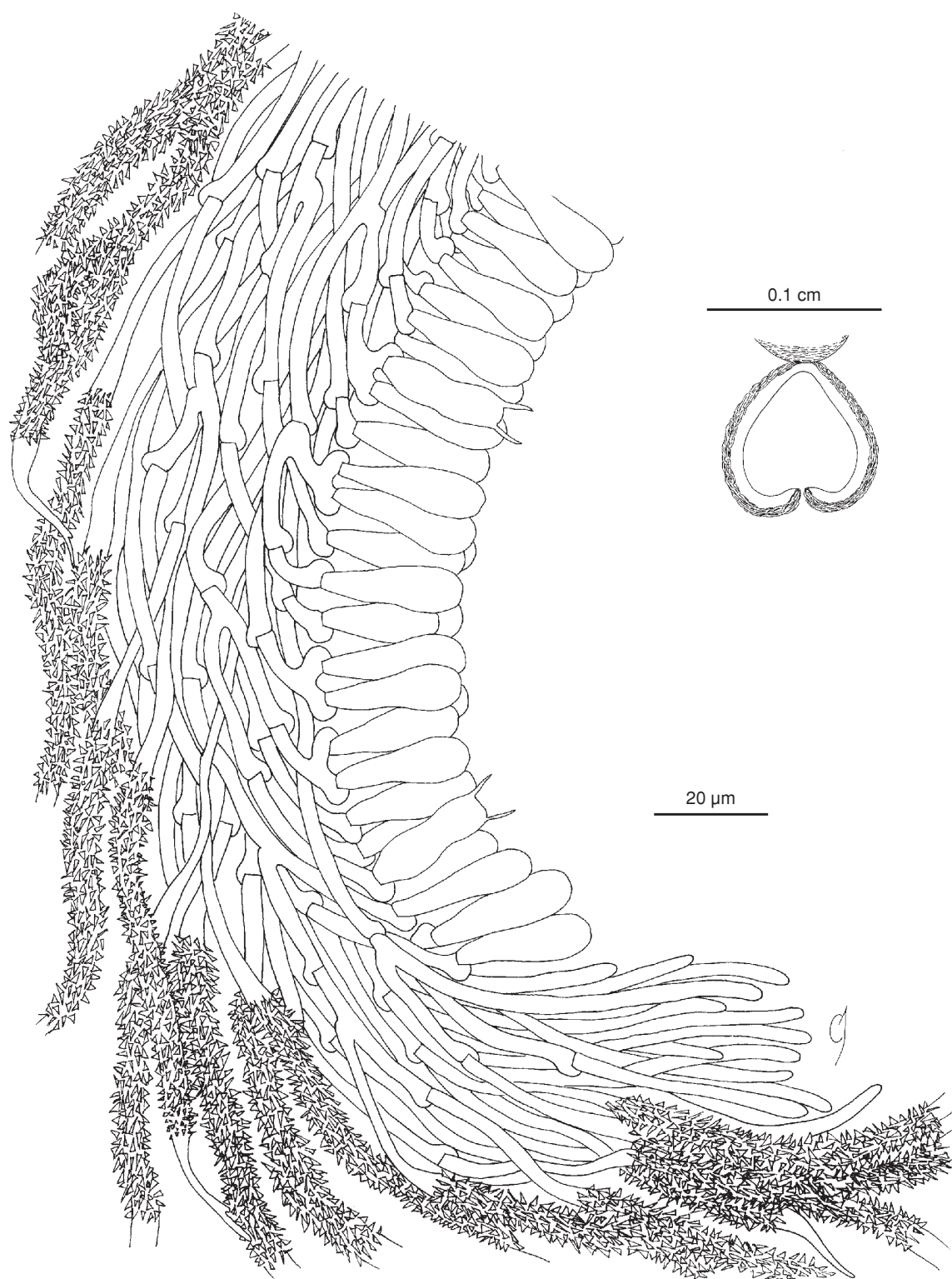


Fig. 1. *Flagelloscypha minutissima* (Burt) Donk: cross section of basidiome with hymenium and outer haired surface.

Denmark (Hansen and Knudsen 1992), and Great Britain (Blackwell 2003). Outside Europe this fungus has been found in Venezuela (Agerer 1975), United States (Agerer 1975; Ginns and Lefebvre 1993), and Canada (Ginns and Lefebvre 1993). The four Polish localities are situated in Tarnów town (Fig. 3) in southern part of the country and represent nice range extension of *Flagelloscypha minutissima*, being easternmost in the European continent. This wo-

uld not seem to be the final number of known localities in Poland and future additions are likely as more collections of cyphellaceous fungi are encountered and examined.

The genus *Flagelloscypha* comprises 33 species (Agerer 1975, 1979a-c, 1980, 1983, 2002; Agerer and Schmid-Hempel 1986). In their 'Dictionary of the fungi' Kirk et al. (2001) mentioned 10 species known in this genus, but evidently it is a mistake. *Flagelloscypha* is characterized by

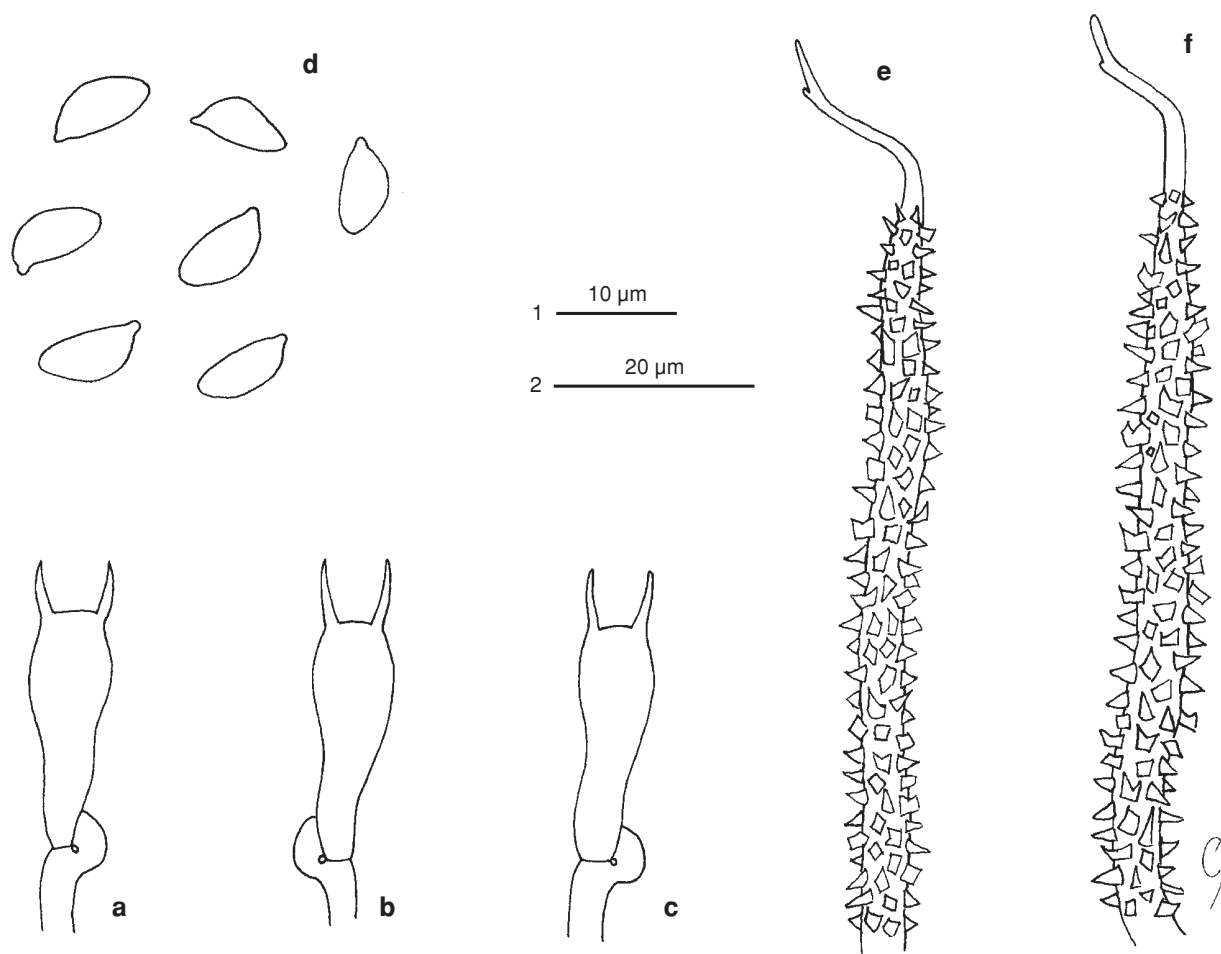


Fig. 2. *Flagelloscypha minutissima* (Burt) Donk: a-c – basidia; d – basidiospores; e-f – marginal hairs; scale bars: 1 – d; 2 – a-c and e-f.

small cupulate basidiomes with hairs encrusted by acicular to rhombical crystals and narrow, non-encrusted apical part, lacks of cystidia or other sterile elements, and basidia mostly shorter than 30 μm , with 2-4 sterigmata. *Flagelloscypha minutissima* is immediately identified by its basidia with 2 sterigmata, and citriform, elliptic to navicular basidiospores, mostly 7.0-10.0 \times 3.5-4.5 μm . The group of 2-sterigmate *Flagelloscypha*, apart from *F. minutissima*, is represented by three other species *F. christinae* Agerer, *F. faginea* (Lib.) W.B. Cooke, and *F. oblongispora* Agerer. Of these, *F. faginea*, a widespread Northern Hemisphere temperate species, is distinct at first glance because its asymmetrically-oval to lacrimoid basidiospores, mostly 9.0-13.0 \times 3.0-4.5 μm (Agerer 1975), while *F. oblongispora*, known from Colombia, is at once distinguished from all other species of this group by its asymmetrically-elliptic basidiospores, mostly 8.5-10.0 \times 4.0-5.5 μm (Agerer 1980). Finally, *F. christinae*, known only from the type locality in Italy, differs in having characteristic suburniform basidia with distinct capitate upper part, slightly larger basidiospores, mostly 9.0-12.0 \times 4.0-5.5 μm , and forming basidiomes in colonies (Agerer 1975).

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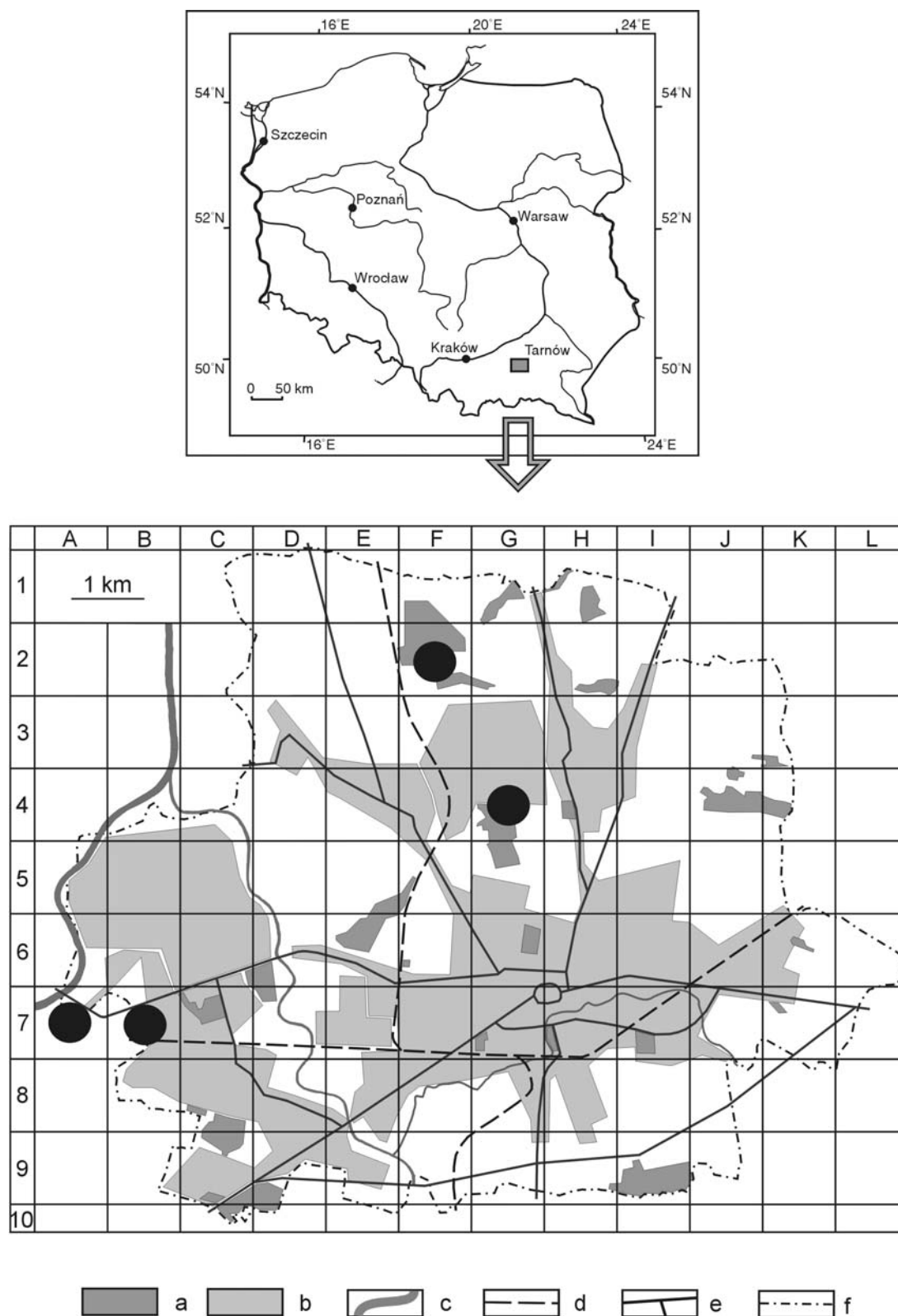


Fig. 3. Location in Poland and distribution of *Flagelloscypa minutissima* (Burt) Donk in Tarnów town; a – forests and parks; b – built-up area; c – rivers; d – railway; e – roads; f – city border.

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