

THELOCARPON OLIVACEUM (LICHENIZED ASCOMYCOTA), A LICHEN SPECIES NEW FOR POLAND

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Worldwide, ca 20 species of the genus *Thelocarpon* Nyl. (Thelocarpaceae) have been described, and the literature includes monographs by Magnusson (1935), Salisbury (1953, 1966, 1974) and Kocourková-Horáková (1998). Ten species of this genus have been noted in Poland (Fałtynowicz 2003; Kiszka 2006), many of which are extremely rare with only single localities, such as *T. cinereum* Eitner (Eitner 1911; Migula 1929; Magnusson 1935), *T. imperceptum* (Nyl.) Mig. (Kiszka 2006), *T. magnussonii* G. Salisb. (Bielczyk 2003), *T. saxicola* (Zahlbr.) H. Magn. (Kozik 1973) and *T. superellum* Nyl. (Nowak 1975; Kozik 1977). Because of their very small size, inconspicuous appearance and short life cycle, members of this genus are easily overlooked in the field; probably they are under-recorded rather than rare (Kocourková-Horáková 1998).

During a lichenological study in the Karkonosze Mts, part of the Sudety Mts, we found a locality of *Thelocarpon olivaceum* B. de Lesd. (Fig. 1). This is the first record of the species in Poland. In Europe, *T. olivaceum* has been found in Austria (Hafellner & Türk 2001), the Czech Republic (Horáková 1998; Kocourková-Horáková 1998; Vězda & Liška 1999), Denmark (Alstrup & Søchting 1989), France (Feuerer 2011), Holland (Aptroot *et al.* 1999), Germany (Wirth 1994; Alstrup 2004), Great Britain (Coppins 2002) and Switzerland (Kocourková-Horáková 1998). Nowak and Tobolewski (1975) suggested that the species very likely occurs in Poland, and our record extends the species range to this country.

Thelocarpon olivaceum is a lichenized fungus with coccoid green algae which are limited to the algae layer in the outer region of the perithecial warts (Wirth 1995). Its thallus forms hemispherical verrucae (warts) which are yellow and pruinose or grey to discolored brown and pruinose only at the apex. The verrucae are 0.15–0.27 mm in diam. and 0.12–0.17 mm high (Orange *et al.* 2009). The perithecia are globose, 0.10–0.15 mm in diam., surrounded by an algal sheath and immersed within the thalline verruca. The perithecium wall is 6–12 μm thick and colorless. The periphyses are branched, 20–25 μm long; paraphyses are absent and the hymenial gel reacts I+ red. The asci are

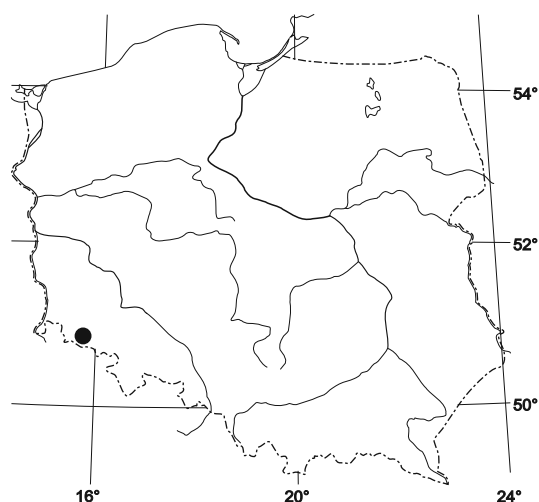


Fig. 1. Locality of *Thelocarpon olivaceum* B. de Lesd. in Poland.

flask-shaped, 70–120 µm long and react I+ pale blue. The ascospores are small, simple, oblong-ellipsoid, sometimes nearly spherical, 2.5–3.5 × 1.5–2.0 µm.

Thelocarpon olivaceum usually grows on siliceous rocks, especially on stones recently exposed but covered by a thin layer of soil, and on old leather and bricks as well. It prefers shaded and wet habitats (Orange *et al.* 2009).

Thelocarpon olivaceum may be confused with some other species of the genus, especially with *T. laureri* (Flot.) Nyl., *T. intermediellum* Nyl. and *T. magnussonii* G. Salisb. *T. laureri* differs from *T. olivaceum* by having branched and anastomosing paraphyses, *T. magnussonii* can be distinguished by not having yellow pruina on the warts, and *T. intermediellum* is not a lichenized species, without an algal sheath.

The specimen collected in Poland has very abundant, yellow-pruinose, mature fruit bodies. It was collected on Chojnik Mt. in the Karkonosze Mts from a granite stone fixed in a root plate of uprooted spruce (*Picea abies*). This kind of habitat is unstable and impermanent but is suitable for species of the genus *Thelocarpon*, which are regarded as short-lived pioneer lichens (Poelt & Vězda 1990).

SPECIMENS EXAMINED. POLAND. SUDETY MTS, Karkonosze Mts, Chojnik Mt., *Luzulo luzuloidis-Fagetum* plant community, on siliceous stone, alt. 561 m, 50°50'20"N, 15°38'59"E, 31 Aug. 2004, leg. M. Staniaszek, det. K. Szczepańska (Hb. K. Szczepańska 895).

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