

Lysurus cruciatus (*Phallales*) – first record in Bulgaria and southeastern Europe

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Abstract. This brief note provides information about the first finding in Bulgaria and the southeastern Europe of *Lysurus cruciatus*, an alien species in this continent. Description is provided upon the Bulgarian sample.

Key words: alien fungi, *Clathraceae*, gasteromycetes, *Lysurus*, *Phallales*

Introduction

Lysurus cruciatus (Lepr. & Mont.) Lloyd is known to be an alien species, first recorded as introduced in Europe (Britain and Germany) in 1902 (Jahn 1965; Pegler *et al.* 1995; Kreisel 2001). Since then new localities have been reported in Western, Northern, and Central Europe and the Western Mediterranean. During field studies in 2006 *Lysurus cruciatus* was recorded for the first time from Bulgaria and southeastern Europe.

An air dried specimen of the fungus is preserved in the Mycological Collection of the Institute of Botany, Bulgarian Academy of Sciences (SOMF). The sample is documented with a color photograph and a concise description for any consult or revision. Basidiospores are observed and measured in water. Measurement values are presented below in the following manner: (min–) mean \pm 1 σ (–max).

Description of the species

Lysurus cruciatus (Lepr. & Mont.) Lloyd, Mycol. Writ. 3: 40, 1909.

Young basidiomata subhypogeous, globose or ovoid, up to 3 cm in diam, attached by a whitish mycelial cord. **Peridium** white, membranous, retaining as a persistent volva. **Gleba** copious, yellowish brown, deliquescent, foetid, covering the

inner surface of receptacle arms. **Receptacle** with a cylindrical sterile spongy stipe up to 6 \times 1 cm, white, then whitish and usually somewhat pale orange in the upper part, at the top with 5–6 conical tapering arms, up to 1.5 \times 1 cm, at first apically fused, then free; outer surface furrowed, orange red to reddish brown; inner surface transversely wrinkled. **Basidiospores** ellipso-cylindrical, (3–) 3.9 \pm 0.3 (–4.5) \times (1.5–) 1.8 \pm 0.2 (–2) μ m ($n = 50$), ratio (1.8–) 2.2 \pm 0.3 (–2.7).

Habitat: on rich manured meadows, ca 100 m.

Specimen examined: Bulgaria: distr. Petrich, in manured meadow on the western bank of Strouma River, close to the railway station of Roupite, 13 Sep 2006, V. Gashtarov (SOMF 26 001).

Distribution. In Europe introduced, and it has been recorded in Bulgaria, Czech Republic, Germany, France, Italy, Netherland, Norway, Portugal, Russia, Spain, Sweden, United Kingdom. As an alien species outside Europe also known in Tenerife Island, Israel, and North America. Naturally occurring in South Africa, Central America, Australia, and New Zealand. For more details on the distribution and the chronology of its invasion, see Jahn (1965), Pegler *et al.* (1995), and Kreisel (2001).

In the above locality *Lysurus cruciatus* was noted in two places lying less than 1 km away from each other. In both localities the species inhabits disturbed ground, which is its typical habitat in Europe. In one of the investigated areas only a single basidioma occurred, in the second place, however, more than 20 fruitbodies at different stages were counted. It is worth mentioning that in the second locality of collection the fungus occurred together with one other member of *Phallales*

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– *Phallus hadriani* Vent. : Pers., an uncommon species in Bulgaria. Such a distribution pattern probably has to be explained with the fact that both species rely on insects as vectors for dispersal of the spores.

Lysurus cruciatus is considered to be “unstable in temperate and Mediterranean climates” (Kreisel 2001), being thus a typical “ephemeromycete”, which disappears in couple of years. Therefore, long term observations are desirable in order to check the stability of its population in Bulgaria.

References

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