

**NEW DATA ON DISTRIBUTION OF *LEMMOPSIS PELODES* IN LITHUANIA**
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**Abstract**

 Motiejūnaitė J., 2012: New data on distribution of *Lemmopsis pelodes* in Lithuania [Nauji duomenys apie *Lemmopsis pelodes* paplitimą Lietuvoje]. – Bot. Lith., 18(2): 166–168.

 New localities of a rare terricolous lichen *Lemmopsis pelodes* in Lithuania are presented. Distribution and ecology of the species in Lithuania and Europe are discussed.

**Keywords:** terricolous lichens, man-made habitats, cyanobacterial lichens.

*Lemmopsis pelodes* (Körb. ex Stein) Ellis (*Lichinaceae*) is a crustose, terricolous cyanobacterial lichen, inhabiting calcareous soils. It is a rather inconspicuous and (apparently) ephemeral pioneer species confined to naked soil. When eight years ago this lichen was found in Lithuania for the first time (JØRGENSEN & MOTIEJŪNAITĖ, 2005), it was considered to be a globally very rare species, possibly on the brink of extinction, because its habitats were thought to be transformed by modern agriculture and other modes of land use. Since then, however, an increasing number of records of this lichen have been reported in various European countries (DIEDERICH et al., 2009; KHODOSOVTSSEV et al., 2012; PYKĀLĀ, 2007; BOOM VAN DEN & BRAND, 2008) including two records, which were overlooked previously (BIELCZYK, 2003; SERVÍT, 1931).

Several years ago, during the study of terricolous and saxicolous lichen diversity in anthropogenic habitats (mainly limestone quarries and sand and gravel pits), a second locality of *Lemmopsis pelodes* was recorded in northern Lithuania. Two years later, a third locality was incidentally found in the central part of Vilnius city (Fig. 1).

Lithuania is a lowland country (highest point reaching 293.8 m). Its relief was formed by glacial

sediments, therefore, natural rock outcrops and, herewith, thin soil layers upon them are almost non-existent in the country. Virtually all pioneer terricolous lichen species are confined to man-made or human influenced habitats and, thus, the occurrence of *L. pelodes* only in anthropogenic environments was not surprising. What is unusual about the lichen is the fact that all habitats, from which it was ever reported, were in fact man-made, including the type locality in Poland (STEIN, 1879). *L. pelodes* was found along railroads (STEIN, 1879), in pits and quarries (JØRGENSEN, 1988; KHODOSOVTSSEV et al., 2012; PYKĀLĀ, 2007), on trampled soil on or along trails and dirt roads (VAN DEN BOOM & BRAND, 2008; DIEDERICH et al., 2009; JØRGENSEN & MOTIEJŪNAITĖ, 2005, present data), in crevices of linear clearance cairns (SERVÍT, 1931), on town sidewalks (present data). Naturally occurring disturbed soils that could be suitable to *L. pelodes* may be found in erosion areas of montane and hilly regions and on riverbanks, however, no such records exist so far. This apparently indicates that *L. pelodes* is a species, which may establish only under extremely low competition from plants, mosses and other lichens in natural habitats. Low competitiveness, even in the habitats disturbed by human activities, may account for general rare-



Fig. 1. Habitat of *Lemmopsis pelodes* in Vilnius city

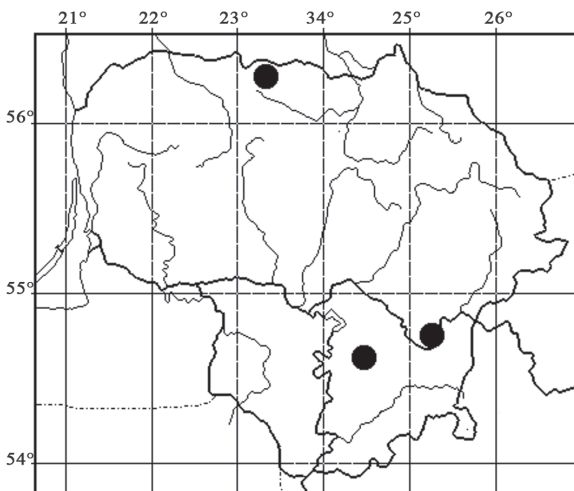


Fig. 2. Known localities of *Lemmopsis pelodes* in Lithuania

ness of this cyanobacterial lichen, as the accompanying pioneer species that were recorded growing together – *Absconditella trivialis*, *Agonimia vouauxii*, *Collema crispum*, *C. limosum*, *Epigloea soleiformis*, *Leptogium biatorinum*, *L. tenuissimum*, *Peltigera didactyla*, *Sarcosagium campestre*, *Steinia geophana*, *Thelocarpon lichenicola*, *Verrucaria bryoctona*, *V. xyloxena* and *Veizdaea leprosa* (VAN DEN BOOM & BRAND, 2008; JØRGENSEN & MOTIEJŪNAITĖ, 2005; KHODOSOVTSSEV et al., 2012; PYKĀLĀ, 2007) are not as rare as *L. pelodes*.

**Localities and collections in Lithuania** (Fig. 2). Prienai distr., at close proximity of the Obelis River and road to Stakliškės-Butrimonys, ca. 4 km S of Stakliškės, on somewhat trampled calcareous

sandy clay of an earth-bank, 17 October 2004 (BILAS 6908) (this specimen was cited in JØRGENSEN & MOTIEJŪNAITĖ, 2005). Joniškis distr., Skaistgiris, on trampled calcareous sandy clay at the edge of a dirt road in a sand pit, operated next to former dolomite quarry, 17 June 2009 (BILAS 9097). Vilnius city, Gediminas avenue, square by the Parliament House, on soil layer between pavement slabs, 27 May 2010 (BILAS 9650).

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