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***Leightoniomycetes phillipsii*, a synnemalous soil-dwelling hyphomycete new to North America**

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Abstract: The synnemalous hyphomycete *Leightoniomycetes phillipsii* is reported as new to North America, based on a soil-dwelling specimen from Oregon, U.S.A. The species forms minute stalked spherical capitula resembling calicioid fungi.

Key words: anamorphic fungi, dematiaceous hyphomycetes, *Leightoniomycetes phillipsii*, lichenicolous fungi, lichens, Oregon, Pacific Northwest, synnemata.

Leightonimyces phillipsii (Berk. & Leight.)
D. Hawksw. & B. Sutton
Periconia phillipsii Berk. & Leight.
Doratomyces phillipsii (Berk. & Leight.) F. J.
Morton & G. Sm

Previously known from the Azores and the British Isles (Hawksworth 1977, Dennis et al. 1977, Morton and Smith 1983), *Leightonimyces phillipsii* was recently found in western Oregon in the U.S.A. In the field, the species was visible only with a hand lens on nearly bare patches of soil in a matrix of bryophytes and lichens (including *Cladonia fimbriata*, *C. furcata*, *C. verruculosa*, *Fuscopannaria coralloidea*, *Leptogium palmatum*, *Peltigera membranacea*, *P. praetextata*, and *P. venosa*). The habitat was a damp, north-facing roadcut along a little-used dirt road. The roadcut was partly shaded by a canopy of *Pseudotsuga menziesii*, *Arbutus menziesii*, and *Quercus garryana*.

In at least some cases *Leightonimyces phillipsii* has been found to be lichenicolous (Hawksworth 1977, 1983; on *Steinia geophana* and *Thrombium epigaeum*, both of which have *Leptosira* as the algal partner) and muscicolous (Berkeley and Broome 1875), but in this case we found no clear intimate association with lichens, algae, or bryophytes. We did see, however, when the material was fresh, a thin, amorphous, mucilaginous, and perhaps biological film covering the noncalcareous mineral soil. This film was apparent on the exposed patches of soil that were not colonized by bryophytes or lichens.

Because in at least some cases the species is lichenicolous, we suggest that it be included in future catalogs of lichenicolous fungi for North America.

Recently Muntañola-Cvetković and Gómez-Bolea (1998) reported a novel dematiaceous, synnematosus, lichenicolous species, *Arborillus llimonae* growing on thalli of *Diploschistes diacapsis* on soil in central Spain. This fungus also produces verrucose, one-celled conidia but differs from *L. phillipsii* in having penicillate conidiophores with holoblastic-phialidic conidiogenous cells, whereas conidiogenesis in *L. phillipsii* is holoblastic-annellidic (Hawksworth 1977).

Under the hand lens, *L. phillipsii* forms dark brown-black synnemata with globose heads about 0.10–0.15 mm in diameter, with short slender stalks, the stalk and capitulum together about 0.25 mm tall, resembling a tiny calicioid fungus (Figs. 1 and 2). Under the light microscope the conidia are distinctive: spherical, 12–13 µm in diameter, dark brown, coarsely verrucose, ornamented with raised roundish to polygonal knobs 3 – 5 µm diam and ca. 3 µm thick (Figs. 3 and 4). The conidia are dry, produced singly, adhering in short chains to form a compact, globose mass. Conidiogenous cells are annellidic with 2 – 4 prominent scars, hyaline, rough-walled, crowded at the apices of the synnemata, ovoid-ampulliform when young, becoming lageniform as the apex extends after several rounds of percurrent proliferation, 12 – 15 x 5 – 7.5 µm. All parts of the fungus were K-. No teleomorph connection is known.

Specimen examined.— U.S.A.: Oregon, Douglas Co., Coast Range, 3 km SSE of town of Tenmile, 43.0895°N 123.5443°W, 445 m, 18 April 2009, *McCune 29952* (OSC).

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Figures 1-4. *Leightonimyces phillipsii* (McCune 29952). 1. Synnemata on soil. 2. Synnema in water (compound microscope). 3. Capitulum gently squashed. 4. Conidia.