

**Molecular taxonomy of undescribed *Orientophila* (Teloschistaceae, Teloschistales) collected in Japan**○橋本陽<sup>1)</sup>・出川洋介<sup>2)</sup>・大熊盛也<sup>1)</sup> ( <sup>1)</sup> 理研 BRC JCM ; <sup>2)</sup> 筑波大・菅平)Molecular taxonomy of undescribed *Orientophila* (Teloschistaceae, Teloschistales) collected in Japan by A. Hashimoto<sup>1)</sup>, Y. Degawa<sup>2)</sup>, O. Moriya<sup>1)</sup> ( <sup>1)</sup> Riken BRC JCM; <sup>2)</sup> Tsukuba Univ. Sugadaira)

*Orientophila* is characterized by crustose thallus with or without lobes, paraplectenchymatous cortex, zeorine ascomata, polardiblastic ascospore, and occurred on seashore rock. Since its establishment, nine species have been described from Asia. Only two species, *O. loekoesii* and *O. subscopularis*, have been reported in Japan. The main objective of the present study is to clarify species diversity of *Orientophila* in Japan. The authors conducted field research at nine sites in the Tohoku and Kanto area over two years. A total of 14 specimens are collected. To identified these samples, specimens were used for Thin-Layer Chromatography (TLC), phylogenetic analyses based on ITS, partial LSU, and partial mtSSU regions, and morphological observations. Sequences of 130 taxa of Teloschistales species obtained from GenBank were used in phylogenetic analysis together with our data. As a result, TLC analyses of our samples corresponds to chemosyndrome A of Søchting (1997). Phylogenetic analyses showed that our samples grouped with *Orientophila* species with strongly supported clade as generic level, and among that clade our sample formed six distinct lineages. These six lineages were morphologically different from known species of this genus, and that could be separated on the basis of the number of apical cell of paraphysis, and size and septum thickness of ascospore. Thallus form, which has been regarded as an important feature for genus/species concept in previously studies, may vary depending on the condition of the substrates (rock or wood plants) within the same species. The ITS and mtSSU sequences data will be helpful to identify these species within genera. Finally, we provisionally recognized six undescribed species in this study.