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**CRYPTIC DIVERSITY IN *TRYPETHELIUM ELUTERIAE* IN THAILAND**

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The diversity of tropical crustose lichens is poorly known. In a project to better understand the diversity of Trypetheliaceae in Thailand, we isolated mycobionts of 38 samples from different locations within the country. ITS polymorphism analysis using the ITS-RFLP technique divided the samples into 12 groups. We generated ITS and mtSSU rDNA sequences of 1-3 representative of each group. The concatenated data set was analyzed using maximum likelihood and Bayesian approaches. The phylogenetic estimate suggests that at least nine *Trypethelium* species occur in Thailand. The phylogenetic analysis also revealed the presence of three distinct clades within a morphologically-circumscribed *Trypethelium eluteriae*. This is another indication of the presence of cryptic species within crustose tropical lichenized fungi and shows the importance of including molecular data in circumscribing species to fully understand the diversity of lichen-forming fungi. Additional studies are in progress to identify ITS barcoding gaps among species and to develop a barcoding identification system for Trypetheliaceae in Thailand that can be used throughout south-east Asia. Further, studies on morphology of mycobiont cultures and growth patterns of mycobionts are shown to provide phylogenetically important information.