**Hidden diversity of sterile Graphidaceae in Bolivia**

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Graphidaceae is one of the hyper-diverse families of lichenized ascomycetous fungi with the greatest diversity in the tropics. Most of the so far described taxa within this family are fertile, and only few are known in exclusively sterile state. Analyses of the newly generated nrLSU and nrITS rDNA sequences obtained from specimens collected in Bolivia yielded numerous lineages of sterile Graphidaceae, of which only three lineages could be assigned into previously known species. Others represent undescribed taxa or probably sorediate states of typically fertile species. The analyses also showed that the morphology-based determination of sterile Graphidaceae can be misleading as the chemically and morphologically uniform material may belong to different lineages. The research was carried out as part of a project financed by the National Science Center (No. 2015/17/B/NZ8/02441).