



TCCE ICMBio / VALE
COMPENSAÇÃO ESPELEOLÓGICA

“Riquezas da Serra da Ferrugem: do minério de ferro às novas espécies de fungos cavernícolas”, apresentado pelo doutor Fábio Alex Custódio.

X Congresso Brasileiro de
Micologia

19 a 23 de fevereiro de 2024
CADI: Centro de Atividades Didáticas 1
Universidade Federal de Minas Gerais - Belo Horizonte - MG

Promoção **sbmic** Realização **UFMG**

Riches of Serra da Ferrugem: From iron mineral to new species of *Hypocreales* cave fungi

Fábio Alex Custódio¹, Ana Flávia Leão², Thiago de Oliveira Condé¹, Olinto Liparini Pereira¹
(1)Departamento de Fitopatologia, Universidade Federal de Viçosa; (2) Departamento de Microbiologia, Universidade Federal de Viçosa; e-mail: fabio.custodio@ufv.br; oliparini@ufv.br;

INTRODUCTION

Hypocreales (Pezizomycotina, Ascomycota) is a large order of fungi belonging to the class Sordariomycetes. The order clusters genera with great economic and biotechnological importance, including saprophytic, pathogenic, endophytic, entomopathogenic, and mycoparasitic species. Hypocreales species are found in different environments such as caves. Recent studies have reported a rich diversity of Hypocreales in caves worldwide, including the discovery and description of new genera and species.

OBJECTIVE

This study aimed to identify Hypocreales fungi from ferruginous caves located in the Monumento Natural da Ferrugem, Conceição do Mato Dentro, Minas Gerais based on molecular characters.

METHODOLOGY

Ferruginous cave

Samples collected: Airborne fungi, Leaf litter, Plant roots, Rocks, Soil

Fungal isolation → DNA extracted → PCR - ITS → Sequencing (macrogen) → Maximum likelihood tree reconstruction

RESULTS

55 isolates

20 isolates (soil), 18 isolates (airborne fungi), 12 isolates (leaf litter), 3 isolates (plant roots), 2 isolates (rocks)

Hypocreaceae

- 36 *Trichoderma*

Bionectriaceae

- 1 *Clonostachys farinosa*
- 2 *Sesquicillium* sp. nov
- 2 *Nectriopsis* sp. nov

Nectriaceae

- 3 *Fusarium* sp.
- 1 *Fusicolla violaceae*
- 2 *Valutella aerea*
- 2 *Calonectria* sp.

Ophiocordyciptaceae

- 1 *Tolyposcladium* sp. nov
- 3 *Purpureocillium* sp. nov

Niessliaceae

- 1 *Cylinndromium* sp. nov

Cordyciptaceae

- 1 *Leptobacillium* sp. nov

Fig 1. Maximum-likelihood tree of Hypocreales based on the ITS region of the rDNA. Isolates found in this study are shown in bold. Only bootstrap values $\geq 80\%$ are shown at branches.

CONCLUSIONS

- The ferruginous caves located in the Monumento Natural da Serra da Ferrugem harbor a rich diversity of fungi belonging to the order Hypocreales, including potentially novel taxa;
- The new fungal taxa will be proposed in the future in accordance with the International Code of Nomenclature for Algae, Fungi, and Plants.

ACKNOWLEDGMENTS

Cultures of Hypocreales fungi from ferruginous caves in Serra da Ferrugem.

Termo de compromisso

Coordenação Executiva

Gestão Operacional