TCCE ICMBio / VALE
COMPENSAÇÃO ESPELEOLÓGICA

"Discovering a new *Chaetomiaceae* treasure in ferruginous caves from Southern Espinhaço Mountain Range" , apresentado pela estudante de doutorado Ana Flávia Leão.

DISCOVERING A NEW *Chaetomiaceae* TREASURE IN FERRUGINOUS CAVES FROM THE SOUTHERN ESPINHAÇO MOUNTAIN RANGE

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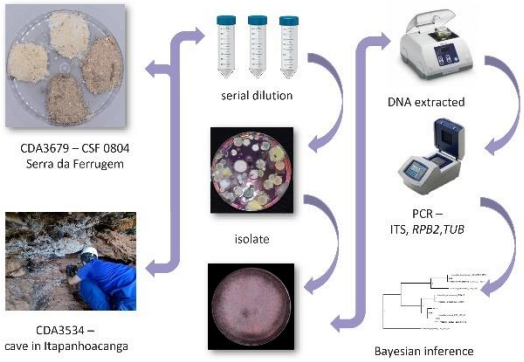
INTRODUCTION

Caves formed from iron rocks have proven to be a true source of discoveries not only for iron miners, but also for the diversity of new cultivable filamentous fungi.

OBJECTIVE

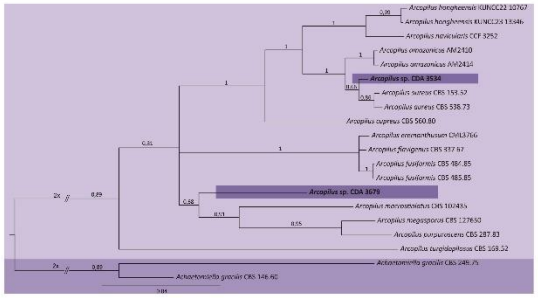
The objective of this study was to identify and describe two isolates of the genus *Arcopilus* found in two ferruginous cavities in the Southern Espinhaço Mountain Range, Minas Gerais.

METHODS

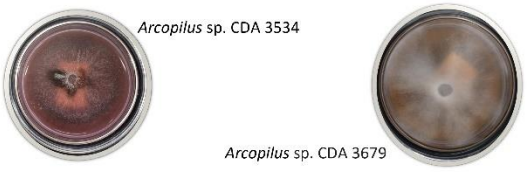


RESULTS

The generated trees revealed that the isolate CDA3679 did not group with any previously described species, forming a sister clade with *A. macrostiolatus*, and is a probably new species of this genus. The isolate CDA3534 formed a clade between *A. amazonicus* and *A. aureus* but with low phylogenetic support.



Bayesian inference tree of *Arcopilus* species based on concatenated ITS, *RPB2*, and *TUB* sequences. The tree is rooted with *Achaetomiella gracilis* CBS 249.75 and *Achaetomiella gracilis* CBS 146.60



Arcopilus sp. CDA 3534

Arcopilus sp. CDA 3679

Arcopilus is a fungal genus belonging to the *Chaetomiaceae* family, with many reports of bioactive compounds production, ranging from plant diseases control to pharmaceutical applications.

CONCLUSION

New species in the *Chaetomiaceae*, such as *Chaetomium meridionalense*, *Pseudohumicola alba*, and *P. lutea*, have already been described from caves in the Southern Espinhaço Mountain Range, but to date, there is no knowledge of species in the genus *Arcopilus* found in these caves. The isolates CDA3679 and CDA3534 may represent new cavernicolous fungal species of the genus *Arcopilus* and their biotechnological potential is yet to be explored.

Acknowledgments

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