



# 2015 Aquatic Sciences Meeting

Aquatic Sciences: Global And Regional Perspectives — North Meets South

22-27 February 2015 — Granada, Spain

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## ABSTRACT

### CYANOBACTERIA – THE CONSTRUCTORS OF TRAVERTINES?

Cyanobacteria are participating in carbonate build-up and travertine formation in the Belgian river Hoyoux and its tributaries. In this study, we sampled calcareous material from travertines and oncoliths from four sampling sites on the Hoyoux river and Triffoy brook. In addition, the water chemistry was determined. The microstructure of the material was analyzed by Scanning Electron Microscopy. The dominant cyanobacterial species was isolated and identified on the basis of microscopic observation and amplification of the 16S-ITS fragment as *Phormidium* sp. (*Phormidium* cf. *incrustatum*), likely functioning as the ‘architect’ of the travertine system. In order to describe the full diversity of the travertine system and to discriminate between the active fraction and inactive or dead organic matter, DNA as well as RNA was extracted from the travertine material, amplified using cyanobacteria specific primers and sequenced by 454 pyrosequencing. To detect seasonal changes in the biological activity, summer and winter time points were compared. This study reveals the ecology of an overlooked environment in Belgian river systems and tries to explain the build-up of (fossil) travertines.

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#### DETAILS

Oral presentation

Session #:086

Date: 2/26/2015

Time: 15:00

Location: Andalucia 2 (Floor 1)

Presentation is given by student: No



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