

OPD15) The Bloom Potential of an Epiphytic *Pseudoanabaena* on *Microcystis* colonies in the Nakdong River

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1. Introduction

This study was carried out to determine the distribution of cyanobacterium *Pseudoanabaena* population in 13 weir pools in the Nakdong River during the summer of 2018 and 2019.

2. Results and Discussions

The cyanobacterium *Microcystis* aggregates into colonies with a mucilaginous sheath that constitutes a special microhabitat for many microorganisms that associate to it. Here, we examine the notorious, yet scarcely studied case of epiphytic association by the cyanobacterium *Pseudoanabaena* sp. to colonial *Microcystis*. In decades, *Pseudoanabaena* species have been frequently reported as cyanobacterial bloom components. However, these species are always overlooked because they cannot be observed easily owing to their small sizes. The observed species composition was *P. limnetica* and *P. mucicola*. The observation of *Pseudoanabaena* started from the upstream and the amount increased exponentially toward the downstream. Maximum density was 4.5×10^6 cells/mL. The dynamics pattern of *Pseudoanabaena* was similar to that of *Microcystis*. In terms of their density, it could be attributed to sufficient potential sources of toxin and off-flavour (especially 2-MIB) due to harmful cyanobacterial bloom in the Nakdong River.