Abstract

Aerophytic cyanobacteria are commonly found growing on rocks, tree trunks and soil, but the diversity of these organisms is still poorly known. This complex group is very problematic considering the taxonomic arrangement and species circumscription, especially when taking into account tropical populations. In this work, 20 samples of aerophytic cyanobacteria from 15 distinct sampling sites were collected along a tropical rainforest area at the São Paulo State (Brazil). Samples were dried at room temperature after the collection, and once in the laboratory, they were rehydrated and analyzed. The taxonomic study resulted in the record and description of nine species of true-branched cyanobacteria pertaining to the genera Spelaeopogon (one specie), Hapalosiphon (two species) and Stigonema (six species). The similarity of the flora found when compared to surveys conducted in other geographical regions was relatively low. These differences could be addressed to ecological conditions of the habitats, to the extension of the area surveyed or even to taxonomic misinterpretations. The molecular assessment of 16S rDNA on the basis of field material was successful for two morphospecies, Hapalosiphon sp. and Stigonema ocellatum; however, their relationships with other populations and species revealed to be uncertain. The results of the floristic survey and of the molecular approach evidenced the fragile delimitation of some genera and species in the true branched group of cyanobacteria. Rev. Biol. Trop. 61 (1): 455-466. Epub 2013 March 01.

Keywords

16S rDNA, Brazil, Nostocales, diversity, "Stigonematales", tropical rainforest, taxonomy.