

**Research Article**

# First Taxonomic Records of Microalgae Inhabiting the Phytotelmata of *Billbergia pyramidalis* (Sims) Lindley

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## ABSTRACT

Phytotelmata are miniature aquatic ecosystems that provide a unique environment conducive to the growth of rare and novel microalgal species. This taxonomic study represents the first taxonomic survey of microalgal species inhabiting the phytotelmata of *Billbergia pyramidalis* (Sims) Lindley. In total, 16 species were taxonomically described and reported for the first time in this unique aquatic habitat, marking new distributional records for the Philippines. The survey also identifies an additional ten species (*Phacus circulatus*, *Cocconeis placentula*, *Nitzschia fruticose*, *Klebsormidium crenulatum*, *Closterium ehrenbergii*, *Desmococcus olivaceum*, *Tetradesmus bernardii*, *Scenedesmus tibiscensis*, *Oscillatoria crassa*, and *Cyanothece aeruginosa*) as new records in the global registry of microalgae discovered in the phytotelmata of bromeliads. Furthermore, the study documents the presence of three rare microalgae— *Phacus circulatus* Pochmann, *Klebsormidium crenulatum* (Kützing) Lokhorst, and *Closterium ehrenbergii* Meneghini ex Ralfs —as taxonomically new records in the Philippines. This floristic survey enriches our understanding of algae diversity in phytotelmata of bromeliads and contributes valuable taxonomic and distributional data on microalgae associated with terrestrial plants in the Philippines.

**Key words:** Bromeliad, cyanobacteria, microalgae, microhabitat, Philippines

