

BRAZILIAN JOURNAL OF BIOLOGY®

VOLUME 75

March, 2015

NUMBER 1

EDITORIAL NOTE

Global changes, cyanobacterial blooms and threats to aquatic biodiversity

Tundisi, JG. and Tundisi, TM.

One of the most important factors that impacts aquatic biodiversity is global warming which is one of the consequences of global changes. A change in 2°C or 3°C in the surface temperature of lakes, reservoirs or rivers stimulates the growth and dominance of cyanobacteria. Among these, the presence of *Cylindrospermopsis raciborskii* is becoming extremely common.

Accordingly to Paerl and Huisman (2008), this species produces toxins that affect fishes, zooplankton, other components of the aquatic biota, and even humans. The appearance of cyanobacterial blooms connected with global warming has been registered by several authors over the last 10 years.

A sudden invasion of *Cylindrospermopsis raciborskii* at UHE Carlos Botelho reservoir (Lobo/Broa in São Paulo, Brazil, was described by Tundisi et al. (2015) as a consequence of interactions of climatological and hydrological changes connected with the dry period that occurred in the Southeast of Brazil (São Paulo) in 2013-2014.

The problem is even more serious in the tropical regions where uncontrolled eutrophication can enhance the growth and development of fresh water blooms.

Economic and human health impacts should be quantified in this context.

The impact on biodiversity occurs at several levels of the food chain and should also be quantified. The *Brazilian Journal of Biology* is open to qualified papers on this subject.

References

- PAERL, HW. and HUISMAN, J., 2008. Climate. Blooms like it hot. *Science*, vol. 320, no. 5872, p. 57-58. <http://dx.doi.org/10.1126/science.1155398>. PMID:18388279
- TUNDISI, JG., TUNDISI, TM., TUNDISI, JEM., BLANCO, F. and SILVA, VT., 2015. A bloom of cyanobacteria (*Cylindrospermopsis raciborskii*) in UHE Carlos Botelho (Lobo/Broa) reservoir: a consequence of global change. *Brazilian Journal of Biology*. In press.