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EDITORIAL NOTE

Understanding the Cerrado biome, medicinal properties of a Piperaceae, and consequences of seasonal variation in Amazonian upland lakes

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The Cerrado is a very important biome that occupies vast areas of Brazil, having a significant diversity of both fauna and flora (e.g., Furley 1999). The increasing deforestation of this area has generated a well known (albeit perhaps still not well understood) negative impact on its biodiversity and there is an awareness of the necessity of studies regarding native plants including those with medicinal properties (e.g., Tozin et al. 2015) and economic potentials (e.g., Dresch et al. 2015). The distribution of the distinct Cerrado physiognomies is still an open question despite the fact that different approaches, such as climatic conditions and soil composition, have been invoked (e.g., Silva and Bates 2002). In the present issue of the Annals of the Brazilian Academy of Sciences, Mattos et al. (2016) have tried a new perspective to address the dynamics and the organization of the Cerrado biome: the complexity paradigm. The authors have discussed some of the theoretical aspects and models associated with the complexity paradigm and how they might be applied. Some results opposed previous studies (Mattos et al. 2016) and their approach will surely foster discussion about this important topic.

Talking about plants, despite the heavily dependence of populations from developing countries on plant-based traditional medicine (WHO 2002), there is a general lack of scientific knowledge of their medicinal properties (e.g., Kinghorn and Balandrin 1993), although several have a high potential to mitigate diseases in dozens of countries (e.g., Antinarelli et al. 2015). Among the more commonly used plants in tropical and subtropical areas are the Piperaceae (e.g., Cunico et al. 2015). In the present issue of the AABC, López et al. (2016) explore the anesthetic activity of *Ottonia anisum*, a Piperaceae that is commonly found in the Atlantic forest, confirming its efficiency.

Lastly, I would like to highlight the publication of Sahoo et al. (2016) on hydro-biogeochemical properties of two lakes situated in Amazonia, more specifically in the Serra dos Carajás. This whole region includes some of the most important iron ore deposits of Brazil that influences the local vegetation (Porto and Silva 1989, Nunes et al 2015). Sahoo et al. (2016) concentrate their work on two upland lakes, called Amendoim and Violão, respectively, and monitored them between 2013 and 2014 in order to establish seasonal variations of the water quality in a closed catchment-lake systems with restricted human influence. The

effect of natural processes in lakes in upland tropical areas are rather scarce, making this contribution very stimulating, whose results might be applicable to other upland lakes.

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