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EDITORIAL NOTE

Phytogeographic patterns of the Atlantic Forest in the Rio Doce River Basin, the dart versus arrow debate, and *quorum sensing* in bacteria

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The Atlantic forest is a terrestrial biome that extends along the Brazilian coast and has been subject of intense deforestation for decades. There are presently several efforts to try to preserve the flora and fauna of what remains from this region (e.g., Coco et al. 2014, Maciel-Silva et al. 2014, Missagia et al. 2014), but several questions on how the distinct floristic units of this biome are structured is still to be understood. In this issue of the AABC, Saiter et al. (2015) have studied the occurrences of different tree species and related them to distinct geoclimatic data in the Rio Doce River. As known, geographic distribution of plants is highly complex and there are several variables to be taken into account (e.g., Rizzini 1997, Legendre and Legendre 2012). With this study, Saiter et al. (2015) have provided a better definition of several floristic units and aimed to establish better parameters that could help in the development of more effective conservation measurements. However, as everyone knows, a recent incident in the town of Mariana (Minas Gerais State) where a dam of a mining company failed caused serious effects on the biota of this area. Perhaps follow-up studies of the work of Saiter and colleagues might be paramount to revise several conservation actions in this region.

Archaeological studies in Brazil have grown in the last decade, involving a better understanding of the culture and activities of prehistoric populations that once inhabited this country (e.g., Guimarães 2013). Among the most common artifacts found in Brazilian archaeological sites are lithic points that could have been used in a variety of ways (e.g., Knecht 1997). In the present issue of the Annals of the Brazilian Academy of Sciences, Okumura and Araujo (2015) have provided a brief review about the so-called Dart and Arrow Debate. They have also shown new evidences based on stemmed projectile points that have been unearthed in several archaeological sites from southeastern and southern Brazil, mostly from the Rio Grande do Sul State, and discussed ways on how to separate darts and arrows. Among the main interesting conclusions, Okumura and Araujo (2015) pointed out that some of the studied lithic points favor the use of bow and arrow. Furthermore, some of the Brazilian sites where these objects were recovered are older than most dates of other sites in the Americas where this hunting or fighting technique has been documented.

Lastly, I would like to call your attention to an interesting review of quorum sensing in bacteria. Lixa et al. (2015) have provided an interesting review of this particular kind of cell-to-cell communication mechanism which can help in the treatment of several infections.

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