



## EDITORIAL NOTE

### **Niche overlap analysis of a lizard assemblage from the Atlantic Rainforest, evaluation of arsenic toxicity in cladocerans, and molecular biology of mycoplasmas**

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Since last year, the Annals of the Brazilian Academy of Sciences (AABC) has started to publish supplementary volumes with two main purposes in mind: to be able to put in print more manuscripts due to the increasing trend of submissions of good papers (estimated to reach over 1000 this year) and to allow the edition of volumes about one specific topic. The first one, entitled *Hot topics in Biomedical Sciences* (Cordeiro and Schuck 2015), was quite well received and more such collective papers are to follow.

Here we present the second supplementary volume of the AABC (88-1 Suppl). Differing from the first, this one presents a selection of contributions in Biological Sciences, dealing with a variety of topics, including ecology, toxicity of substances, antibodies for breast cancer and others, showing the increasing interdisciplinarity of scientific studies.

Among the interesting papers published here is a study regarding ecology of lizards. It should be noted that research on populations of these reptiles from coastal areas of Brazil has attracted lots of attention in the last years (e.g., Menezes and Rocha 2014), particularly concerning reproduction strategies of species living in restinga habitats of the northeastern part of the country (e.g., Dias and Rocha 2014, Zanchi-Silva et al. 2014). In the present volume of the AABC, Gisele Winck and colleagues have presented a study about a lizard community from a sand dune of a coastal area of Brazil situated in the Restinga de Jurubatiba National Park (Winck et al. 2016). This region is located within the Atlantic Rainforest, where ecological studies are comparatively scarce (e.g., Carvalho et al. 2007). As has been pointed out, the way sympatric species use available resources may be influenced by ecological and historical factors (e.g., Vitt and Pianka 2005), which are not always easy to determine.

Pollution is a main concern of modern societies, with metals being the most common pollutants, particularly in aquatic environments (e.g., Schneider et al. 2014). Although most of such substances are introduced to the environment due to anthropogenic activity, including industries and mining (e.g., Campaner et al. 2014), others can be quite common in nature, such as the metalloid arsenic (Wang and Mulligan 2006), whose more toxic form is usually present in groundwater (Sharma and Sohn 2009). The effects of arsenic on different organisms have been published (e.g., Norwood et al. 2007, Zou et al. 2013), but more studies

on sensitive aquatic organisms are desired, particularly using an ecotoxicological approach (Miao et al. 2012). In the study published in this volume of the AABC, Sales et al. (2016) evaluated the potential arsenic toxicity in two species of cladocerans, a group of small crustaceans that are important organisms in ecotoxicological studies. They show that, under certain conditions, different cladocerans display more effective mechanisms to reduce arsenic toxicity (Sales et al. 2016).

Lastly I would like to call your attention to the paper of Cordova et al. (2016). These authors have presented a review of molecular biology of mycoplasmas, which comprise a large group of bacteria that lacks a cell wall (Dybvig and Voelker 1996). Several aspects of these interesting group were focused in this review, including the advances in the study of artificial cells, that passes through the minimum cell concept (Cordova et al. 2016).

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