

## INTERVIEW WITH DR. LUCAS MATÍAS LEVEAU

Interviewed by:

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### “Urban ecology in Latin America should be more interdisciplinary”



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*He is interested in the biodiversity of human-modified environments, especially urban areas, and crops, and is currently fellow of CONICET (Consejo Nacional de Investigaciones Científicas y Técnicas). He is interested mainly in factors that mold bird communities and bird behaviour in urban areas based on multiple spatial and temporal scales. Dr. Leveau uses several approach types, such as field observation, international collaborative work, and meta-analysis. Dr. Leveau compounds the Editorial Board of the Journal of Urban Ecology. lucasleveau@yahoo.com.ar*

*Terr@Plural – Urban Ecology has had a great boost, both in the number of scientists and in knowledge produced, since 1990. How do you define this science?*

According to several textbooks and scientific articles, urban ecology is an interdisciplinary field that mainly comprises natural, and social sciences. These fields aim at understanding how human and ecological processes coexist in systems dominated by man. The term ‘ecology’ has been used to define scientific studies about interactions determining the distribution and abundance of organisms (*sensu* Krebs). The term ‘urban’ has been recently addressed in scientific journals, but its clear definition remains a challenge for ecological studies carried out in cities.

From my point-of-view, urban ecology assesses the most extreme impacts humans have on ecosystems. In my study field, although cities can have some green areas, plant communities are mainly composed of ornamental species native to Eurasia. These plant communities have been maintained throughout the years. On the other hand, urban areas are desynchronized from natural paces, since they deal with the change of seasons or with daylight extension due to artificial lighting at night hours.

**Terr@Plural** – *Data shows that, in spite of megacities, most of the urban growth in global terms occurs in small and medium-sized cities, whose planning and management capacity is usually low. Do you agree with this point of view? And how can urban ecology be applied to reduce the impacts at these cities and to increase the quality of life of their citizens?*

I agree. For instance, many small to mid-sized touristic cities on the Atlantic coast of Central Argentina grew notably and it had a negative impact on native dune coastal ecosystems. Based on this example, urban ecology must be adopted to adjust urban expansion in order to minimize its impacts on coastal native ecosystems. Moreover, it is essential to create urban green areas as cities expand because these areas are biodiversity refuges in the city, as well as places where humans can experience nature. In addition, many scientific articles have shown the importance of using native flora in urban green areas designed to attract native fauna.

**Terr@Plural** – *We live in Planet City. The future is urban, but probably the dystopia presented in the classic science fiction film Blade Runner (whose story takes place in 2019!) will not materialize. How do you see the growth of cities throughout the 21st century? Will we achieve the seemingly irreconcilable objectives of urban development, conservation of urban biodiversity and reduction of the ecological footprint of cities?*

In my opinion, there are very good urban ecology contributions to help to create an urban planning code in compliance with the objectives of urban development, urban biodiversity conservation and ecological footprint reduction in our region, as well as in the rest of the world. So, city planning codes must be fulfilled in the future.

**Terr@Plural** – *The knowledge you have produced about Urban Ecology is somehow translated into planning and management? In your country, is there effective cooperation between managers to apply urban ecology to planning?*

As far as I'm concerned, the knowledge I have produced was not translated into planning and management, yet. Therefore, my main challenge is to have more effective cooperation from city managers in the near future.

In Argentina, more specifically in Buenos Aires city, there are some examples of projects that have used urban ecology to restore riparian habitats. For instance, the ACUMAR agency was launched to clean and restore the Matanza-Riachuelo basin. Also, nowadays, the government is encouraging a scientific application to map noise pollution in Buenos Aires.

*Terr@Plural* – *The biological diversity of cities is one of the central research topics of urban ecologists. How can ordinary citizens be engaged in actions to conserve urban biodiversity?*

I think that the best way to have ordinary citizens promoting urban biodiversity is to put their eyes on the natural environment surrounding the city and to try to get close to such an environment in urban areas. For example, planting native vegetation or, if you have a backyard, to at least leave part of it unmanaged by avoiding mowing. It is also important to decrease artificial lighting at night. These actions will bring urban green areas closer to the structure and temporal dynamic of natural environments surrounding the cities.

*Terr@Plural* – *What is the future of urban ecology?*

I wish urban ecology in Latin America was more interdisciplinary. For example, studies relating human well-being to biodiversity require interaction between psychologists and biologists. On the other hand, much of the decisions citizens make about plant types they choose for their gardens or about why they mow their lawn should be more linked to sociological arguments. These two examples have an impact on biological communities. So, we strongly need interaction among several disciplines to get more knowledge about urban ecosystems.