



## On climate change and the role of euribiont species in evolution and adaptation

Claudia Balint

Department of Environmental Engineering and Protection, Faculty of Agriculture, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Cluj-Napoca, Romania. Corresponding author: C. Balint, claudia.balint@usamvcluj.ro

Even though global warming is controversial, climate change is a proven fact (Odagiu et al 2021; Petrescu-Mag et al 2022). Climate change is a disturbance of the climate and seasons of the normal cycle of the recent past. These can lead to natural disasters in geographical areas where they were uncommon (Coronese et al 2019), cold climates in warm areas ([www.world-today-news.com](http://www.world-today-news.com)), snow loss or reduced persistence of snow in temperate winters (Harvey et al 2020), snow and hail in the desert ([www.world-today-news.com](http://www.world-today-news.com)), melting glaciers at the poles (Hågvar et al 2020), etc. Most cases of change seem to turn to global warming (Petrescu-Mag et al 2016). All these climate changes lead to either climate instability or a new type of climate (Hågvar et al 2020).

Most species of ecosystems that are subject to climate change can often survive these changes through rapid coevolution with the biocenosis and the ever-changing climate (Hamann et al 2021). These species are those in the category of euribiont species. Other species, more specialized for certain stable parameters, do not cope with the rapid changes of environmental factors (stenobiont species): they need about the same temperature (stenotherms), the same pressure (stenobars), the same humidity, the same food source (monophagous) etc. Stenobiont species, on one hand, are doomed sooner or later, but prolonging their survival allows other closed phylogenetic lines (narrowly specialized organisms at the end of evolution), which evolve slowly, to occupy their niche. Professor Iosif Viehmann said that troglobiont species (which are stenobiont species) are narrowly specialized, tired species that retreat into caves (where environmental parameters are constant) before the caves become their graves (Viehmann 2000).

Euribiont species, on the other hand, are those that ensure perpetuation, filiation and diversification by adaptive radiation (Păsărin & Petrescu-Mag 2011). These species will evolve rapidly and occupy an empty niche, released by extinct species. This is the full part of the glass. Now, let's notice the empty part of the glass. The bad news is that if the extinct species are many and diverse, the euribiont species that come to occupy the empty niche are often few and invasive, which will result in biological invasions and impoverishment of diversity amid increasing abundance of dominant or opportunistic species (Mag et al 2009).

So let's protect the climate, the flora and fauna, which are essential to a healthy, beautiful, diverse, sustainable and colorful life.

**Conflict of interests.** Authors declare that there is no conflict of interest.

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Received: 05 December 2021. Accepted: 17 December 2021. Published online: 24 December 2021.

Author:

Claudia Balint, Department of Environmental Engineering and Protection, Faculty of Agriculture, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Calea Mănăştur 3-5, 400372 Cluj-Napoca, Romania, e-mail: [claudia.balint@usamvcluj.ro](mailto:claudia.balint@usamvcluj.ro)

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How to cite this article:

Balint C., 2021 On climate change and the role of euribiont species in evolution and adaptation. *ELBA Bioflux* 13(1):20-21