

# The Unlimited Possibility of Plants and Humans to Adapt Is Related to Their Nonlinear Electromagnetic Fields (NEMFs)

Maria Kuman\*

Holistic Research Institute, 1414 Barcelona Dr, Knoxville, TN 37923

Received: December 4, 2019; Accepted: December 27, 2019; Published: January 3, 2020

\*Corresponding author: Maria Kuman, Holistic Research Institute, 1414 Barcelona Dr, Knoxville, TN 37923, USA. Email: [holisticare1@gmail.com](mailto:holisticare1@gmail.com)

## Abstract

The global warming, we experienced now, forced research on the ability of plants to adapt to extreme drought. As the drought increases, the vegetation undergoes different patterns of formation. Mathematical modeling was done to explain the observed patterns of decreased vegetation and increased space between the vegetation patches with the drought increase. Feedback mechanism was found to be involved in the activated vegetation growth in denser patches and the inhibited growth in adjacent sparser patches. Since feedback loop means self-organized system and the dynamics of self-organized systems is described by nonlinear physics, the author think that the NEMF of the plants is involved in the process. Everything material is material body and NEMF. The waves of this weak informational NEMF scan the environment and send signals to the material body (the plant) to make changes to adapt to the new environment. Since Goethe spoke first about the plants having Spirit, which by adapting to different environmental conditions created the whole diversity of plants, the author thinks that the plants' NEMF is the Spirit Goethe was talking about.

**Key words:** Goethe's concept of plant's spirit; the plants and their NEMF; NEMF guarantees unlimited possibility to adapt; NEMF and adaptation to drought; nonlinear approach to drought adaptation.

## Introduction

Goethe was a famous German writer, but the fact that he wrote a book: "On the Metamorphosis of Plants", published in 1790, remains unknown. This was 70 years before Darwin. While in the Darwin's evolution theory, proclaimed in 1859, external influences modify the organism, for Goethe the external influences modify the archetypal form called plants' Spirit, which send signals to the plant for changes. The advantages of Goethe's vision were that the Spirit, being a field form, would allow almost unlimited possibility to adapt to different environmental conditions. According to Goethe, when adapting to different environmental conditions, the plants' Spirit was taking many different forms, which created all the diversity of plants' forms.

The same is true for people. We are body and Spirit. The author of this article spent 40 years of her life measuring (with her patented equipment) the weak human nonlinear electromagnetic

field (NEMF), called Spirit [1]. Based on these measurements, she is convinced that our almost unlimited possibility to adapt to external changes, and to react fast to external changes, come from the fast waves of this weak NEMF, which scan the environment and send waves' signal back to the material body for fast response or changes to adapt the changed environment. And this is specific feature not only for humans, animals and plants; everything material is a material body and weak informational NEMF, called Spirit.

The author proved that the fact that everything material is a body and NEMF (Spirit) comes from the way the material world was created. The whole material world was created from anti-matter (Black Hole) and the NEMF was the field separating the anti-matter from the matter, which got imprinted on all material creations [2]. Proof of this is the fact that when crystals are to crystalize, their NEMF scan the environment and if the temperature and pressures are different, it would crystalize in a different crystal form that matches the environment. The human NEMF (Spirit) is a weak informational field – it is 1,000 times weaker than the biocurrents of the body. It influences the material body not with its strength, but with the information it carries.

## Recent Studies of the Adaptability of Plants to Drought

The global warming we experience requires studies of adaptability of plants to droughts. Ehud Meron did such study. The results of these studies are an astonishing proof of the tremendous abilities of the plants to adapt. As the drought increases, vegetation undergoes different patterns of formation with decreasing the vegetation and increasing the space between the patches with vegetation [3]. Feedback mechanisms activate the vegetation growth in denser patches and inhibit growth in adjacent sparser patches, thus promoting vegetation pattern formation. However, feedback loop means self-organized system and the dynamics of self-organized systems is described by nonlinear physics.

Plants cannot move from environmental stresses, but their inability to move is compensated with enormous plasticity like ability to change its viable biomass by an order of magnitude, which allows considering the biomass as a continuous variable in mathematical modeling. The author, Ehud Meron, used two types of mathematical modeling to study the plants' population dynamics at droughts: 1/ discrete agent-based models, which are stochastic, and 2/ continuum partial differential equations, in which the plant population is described as continuous biomass area density. The mathematical modeling must be nonlinear because the bifurcation diagram he received for the biomass as a function of the precipitation rate indicates exactly this.

The author Ehud Meron, even used characteristic wave-number  $k$  of the growing mode, which depended on the ecosystem root-to-shoot ratio and the infiltration contrast [3]. All this means that the author Ehud Meron intuitively got to where he should be, without being aware that the plants are material body and NEMF. This NEMF being nonlinear would require nonlinear mathematical description, which will lead to bifurcation diagrams and would require the use of characteristic wave number  $k$ . Thus, the concept of Goethe is right that the plants are a material body and a plant Spirit, which is NEMF scanning the environment and sending signals to the plant's body to change to adapt to the extreme environmental conditions; in our case - extreme drought.

## Conclusion

The article showed that the used mathematical model to explain the patterns of vegetation formation during increasing drought involves bifurcation diagrams and require the use of characteristic wave number  $k$ . Since they are both characteristics of nonlinear electromagnetic field (NEMF), the author is convinced that the NEMFs of the plants are involved in the process of adaptation to the drought. The waves of the plant's weak informational NEMF scan the environment and send signals to the plant to change to adapt to the changes in the environment

## References

1. M. Kuman. The Origin of the Plant Diversity and the Origin of Human Races. *American Journal of Biomedical Science and Research*. 2019;4(3):133-135.
2. M. Kuman How was the material world created? Origin of its Nonlinear Electromagnetic Field (NEMF). *Journal of Mathematical and Theoretical Physics*. 2019;2(2):34-38.
3. E. Meron, Vegetation pattern formation: The mechanisms behind the forms. *Physics today*.2019;72 (11):30.