

Plants Importance - Communication Beyond Immobile Beings

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We all know how important plants are. Whether if they are trees, shrubs, vines, palms or ferns. They all have a role in this complex biosphere.

A scientific view of our atmosphere might be a good way to begin this article. Undoubtedly, all the essential gases are available in the troposphere. That said, how do we use these gases and why?



WA / Source: T.Miranda 2019

Hark back for a moment the simple concept about photosynthesis. Plants produce oxygen as a by-product from CO₂ (carbon dioxide), light and H₂O (water), which is directly related to our survival needs. Thereby we depend on those living beings. More important is to understand how plants got here in the first place.

For this reason, we have to come back to the dawn of the planet. The result of eukaryotes appearance to eventually transmute into a unicellular being capable of multiplying according to environmental

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changes resulting later in a multicellular organism. Uff... it is complex, isn't it?

Even more complex reasons drawn together over millions of years until approximately 360 million years ago during the Carboniferous period. During this period, the first spore correlates to ferns. They were the first plant organism, apart from ancient bacterium, living of photosynthesis and capable of astonishing survival skills. This all happened during Triassic and Jurassic period when dinosaurs were the main players of the world.

It is of my insight and reading assurance that based upon a book called "*The Brilliant green: The surprising history and science of plant intelligence*" written by **Stefano Mancuso** and **Alessandra Viola** that my self-willing plant appreciation improved considerably. I noticed how intelligent and respectful these self-sufficient living beings are. In some cases, the word "*intelligence*" can be considered a fault in the plant world argued that plants do not have a brain. Though by definition, "*intelligence is the ability to solve problems*", which we all know for sure they are the best examples in this case. In saying so, why a correlation between animals and plants are so important then?

Jagadish Chandra Bose (1858-1937), one of the first modern Indian scientists, wrote: "*... these trees have a life like ours... They eat and grow... face poverty, sorrows and suffering. This poverty may induce them to steal and rob, (but) they also help each other, develop friendships, sacrifice their lives for their children*". As quoted, simplicity upon plants by human attitude may bring respect and dignity that probably could be our first step to emphasize their importance.

Another crucial factor to mention is the fungi, as the mycelium the main agent. It is undeniable to recognize how important can be this full-filling carpet of important functions to make our world operate as an ecosystem.

According to **Peter Wohlleben**, forests are the best example of a communal environment. It is noticeable also a viral competition between plants of different genetics or even those occupying the same area where light is scarce and space is limited. Peter mentioned about the whole web-like network underground that provides all the information needed to make the forest to thrive as a unique living organism. **Paul Stamets**, a well-known mycologist at this modern era,

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offer great examples and reasons why, by the whole concept of ecosystems, mycelium plays an important role. It makes roots intelligently use mycorrhizal functions to connect to this beautiful exacerbated fork-like white structure that could occupy areas larger than several football fields. If you would like to know moreover, I recommend the book "*Mycelium Running*" wrote by him, exploring the possibilities and discoveries for more than 30 years of experience in the area.



Source: T.Miranda 2020

Now, realise that all these are integration between roots, fungi and bacteria. They coincidentally determine human lives' progress. That's why plants are so important, likewise the other components. Rejecting all these factors would incur in drastic occasions, such as lack of life on Earth and oxygen deficiency.

After all, *what is the message here? Does it mean we misunderstand our natural world?* Yes and no, but concludes simply that our scurry against time and entangling nature attitude can improve our actual knowledge to unravel a better understanding about the world we live in. What's more, understanding plants could open unrevealed doors about human psychology, anatomy and cell biology that so far, we are still scratching the surface.