

# Fresh insights into the secret life of plants

**Simon Caterson**

**The Language of Plants:  
Science, Philosophy, Literature**

Edited by Monica Gagliano, John C. Ryan and  
Patricia Vieira

University of Minnesota Press, 313pp, \$44.99

We are living in an exciting decade in terms of the flowering, so to speak, of plant science and appreciation, reminiscent of how the 1970s led to greater awareness of animal welfare. Back then the publication of seminal books such as Peter Singer's *Animal Liberation* spearheaded a movement — in science, the arts and the wider society — towards a better understanding of the lives of animals and how humans cruelly or negligently harm and exploit them.

*The Language of Plants* takes its place among the growing number of popular science books, memoirs and literary works illuminating the previously obscure or ignored richness and complexity of the plant world. While we can see for ourselves how animals think, feel and suffer — if, that is, we care to pay proper attention to them — it requires greater intellectual effort to relate to life forms that are silent and do not have a central nervous system.

Although plants may seem alien to us and therefore unknowable, the scientific evidence that they are complex and lead highly social lives has become all but irrefutable. That new knowledge raises questions about the nature of our relationship with life forms that we, or the creatures we eat, depend on for food yet tend to treat as inanimate objects just there for the harvesting.

The essays collected in this book cover everything from specific results involving the hard science of plant biology through to post-modern theoretical speculations as to language as it may (or may not) apply to plants.

Two of the three editors are academic researchers based in Western Australia, and the contributors are drawn from universities in Europe and North America as well as Australia. While the content is fascinating, some of the prose is distorted by the heavy reverberation of the academic echo chamber and not always easy for a non-specialist to follow.

Academics are often at their most useful to an outsider when they put forward an argument with which we can disagree. One essay, for instance, looks like John Wyndham's classic 1951 science fiction novel *The Day of the Triffids*, in which there is a war between humans and a species of intelligent plant. Triffids have the ability

to move and the capability to kill people, along with infinite patience and no conscience.

While it may be contended that the Triffids somehow provide imaginative insight into how plants really behave, it seems to me they rather provide a strikingly prophetic vegetal allegory for killer robots and the potential dangers of uncontrolled AI. Even the most mobile plants, such as tumbleweeds, are not capable of locomotion in quite the same way as animals.

Triffids notwithstanding, it is a recurring theme in the history of science that understandings are intuited through simple observation long before the technical capacity to prove a hypothesis conclusively has been developed. In the 19th century, Erasmus Darwin and his son Charles did pioneering work on plants that later researchers equipped with much more sophisticated means have been able to confirm.

As the editors describe in the introduction, Erasmus Darwin believed "that plants are animate, living beings and attributed to them sensation, movement, and a certain degree of mental activity, emphasising the continuity between humankind and plant existence". Although it was his work on natural selection among animals that made him famous, Charles Darwin spent a vast amount of time developing his father's theories on plants.

Modern science has confirmed that plants do react to their environment in many delicate yet decisive ways. They send and receive signals that can produce the flowers that we see and smell, but also communicate in much more subtle ways. Below the surface of an ancient forest floor exists an electrochemical network of nodes and sensors linked via mycorrhizal fungi that has been dubbed the Wood Wide Web.

While some plants produce fruit that clearly is meant to be eaten, others will react as if in pain when they are attacked, expressing themselves once again in ways that may seem inarticulate to us but are unmistakable in their intent once understood on their own terms.

One take-home from this book is that in seeking to learn more about the language of plants we may have to rethink the notion of language as even partly verbal.

As John C. Ryan points out in his essay on the ways plants have been portrayed by poets, including Dante, it is not enough to ventriloquise: "Nature speaks in the conventions of time, space, spirit, and materiality, but not as literary conventions, communications models, and human paradigms of vocalisation would have it."

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