

This novel book is the first to properly address the controversial issue of plant intelligence, arguing convincingly that cells and whole plants growing in competitive wild conditions exhibit aspects of plant behaviour that can be accurately described as 'intelligent'. The author expands on three main insights drawn by the Nobel Prize winning botanist Barbara McClintock: firstly that plant cells may have knowledge of themselves; secondly that they receive challenges which lead to behavioural changes; finally, that they do so in a manner which implies assessment and intelligent behaviour. By equating the concept of intelligent behaviour with that of adaptively variable behaviour, the book provides a novel integration of signalling, behaviour, and behavioural ecology, all set within the context of plant studies.

Plant Behaviour and Intelligence begins with chapters on the origins and multicellular nature of plant life, before going on to discuss novel behaviours such as branch initiation and growth, unusual behaviour of leaves, and how roots reconstruct their sensing systems and are capable of self-recognition. An entire chapter is devoted to the nature of intelligence and another to the vexed question of 'consciousness', as applied to plant life. This advanced textbook will be suitable for senior undergraduate and graduate level students taking related courses in plant ecology and evolution. It will also be of relevance and use to a broader audience of professional plant ecologists seeking an authoritative reference text to help them navigate the complexity and controversy of plant behaviour.

Professor Anthony Trewavas FRS FRSE is Emeritus Professor

9780199539543 生物科学B0UP

分类码:Q94



9 780199 539543

1 库

C0604

Cover image: © Shutterstock.com/Dr. Morley Read

OXFORD

UNIVERSITY PRESS

www.oup.com

ISBN 978-0-19-953954-3



9 780199 539543