



List of New Arrivals Journals, Books & Reports

- 1. Advances in Agronomy
Vol.168**
- 2. Advances in Agronomy
Vol.169**
- 3. Agriculture in India**
- 4. Biotechnology and Insect Pest
Management**
- 5. Black Spotted Yellow Borer Conogethes
Punctiferalis Guenee & Allied Species**
- 6. Experimental Techniques in Host-Plant
Resistance**
- 7. Green Persuasion**
- 8. Guinness World Records 2022**
- 9. Nanotechnology in Plant Pathology**
- 10. Winton M. Blount Postal History
Symposia Select Papers from the
Seventh Eighth and Ninth Symposia**

ADVANCES IN
AGRONOMY

DONALD L. SPARKS

Y GKVK
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**CONTEMPORARY CHALLENGES
IN THE CONTEXT OF
DOUBLING FARMERS' INCOME**

Mohan Kanda



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Biotechnology and Insect Pest Management



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Akshay Kumar Chakravarthy *Editor*

The Black spotted, Yellow Borer, Conogethes punctiferalis Guenée and Allied Species

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Experimental Techniques in Host-Plant Resistance

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ADVERTISING,
VOLUNTARISM, AND
AMERICA'S PUBLIC
LANDS



GREEN

PERSUASION



JEFFREY K. STINE

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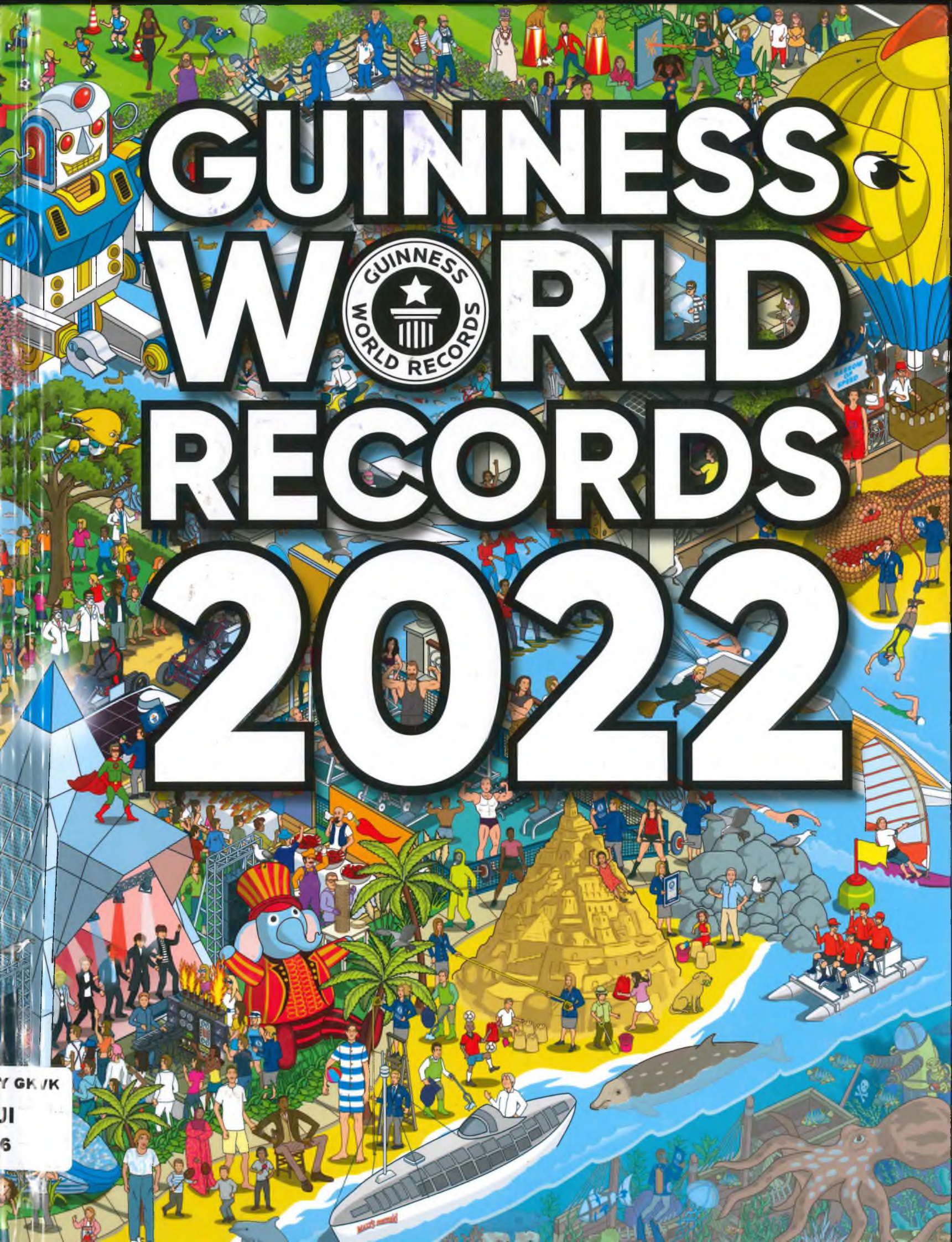
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GUINNESS WORLD RECORDS 2022



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Contents

Welcome to the 2022 edition of the world's best-selling annual book, packed with thousands of new records. We celebrate astonishing achievements in nine superlative-packed chapters – each featuring a new and inspirational Hall of Fame inductee – and between each section we whisk you away on a virtual tour of world-class attractions.

The Pop Culture chapter – which takes its design inspiration from comic books and graphic novels – features a selection of the most successful media franchises of all time. We turn the spotlight on billion-dollar brands and superlative superstars, from the movies, TV shows, videogames and comic books that our readers just can't get enough of.



Augmented-reality dinos

We've once again partnered up with award-winning educational technology studio Peapodcity to bring our pages to life using augmented reality (AR). Use the free *AugmentifyIt*® app to see record-breaking dinosaurs roar into life from the pages of the book. See pp.40–41.

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Roxanne Downs

Australian scientist Roxanne Downs is the youngest magazine editor, having taken up the role in 2019. She's 18 years old and is currently studying for her A-levels. She's also a talented writer and has been published in several magazines. She's also a talented writer and has been published in several magazines.



Young Achievers

Whether it's editing their own magazine, mastering freestyle football or breaking records at the X Games, there are remarkable youngsters – aged 16 and under – who have already made a name for themselves in their specialist fields. In Young Achievers, we interview eight such talented teens and find out why age is no barrier to becoming a record breaker.

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Dara McNulty

Dara McNulty is a 16-year-old Irish freestyle footballer who has broken several world records. She's also a talented writer and has been published in several magazines.



Last year alone, GWR received and processed almost 42,000 record applications!

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Virtual Visits

If you can't get out to see the world's most popular museums, attractions, parks and galleries, don't worry: we'll bring them to you! With our Virtual Visits, we lead you through nine cultural sites – such as the Smithsonian, the Louvre, Australia Zoo and Kew Gardens – and point out their superlative features.

National Air and Space Museum



Annotated photos and infographics provide additional detail and help to tell the story behind the records.

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100%

How big? Discover the true scale of some of our biggest and smallest record holders wherever you see the 100% icon.

Marawa The Amazing



Hall of Fame

Meet the latest inductees into the Guinness World Records Hall of Fame. Each candidate has been selected on the strength of their unique and significant contribution to record breaking. This year we include the likes of Sultan Kösen (tallest person), astronaut Peggy Whitson (most spacewalks by a woman) and Sir David Attenborough (longest career as a TV presenter).

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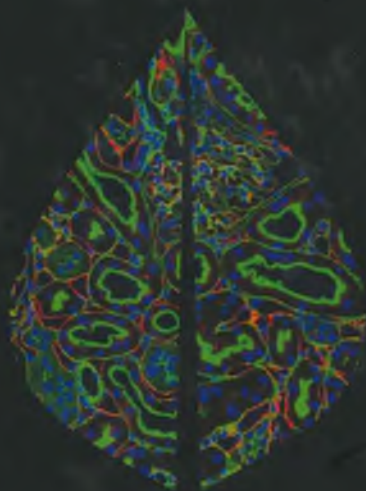
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INTRODUCTION

NANOTECHNOLOGY IN PLANT PATHOLOGY



N . G . R A V I C H A N D R A

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