

Dr Joe M. Roberts FHEA FRES

Harper Adams University – Shropshire, United Kingdom
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Education

Harper Adams University

PgC Teaching and Supporting Learning in Higher Education

Thesis: Enhancing statistics education for applied zoology undergraduates: a focus group study.

Shropshire, UK

2021–2023

Harper Adams University

PhD Invertebrate Chemical Ecology

Thesis: The chemical ecology of prey location and recognition by the predatory mite *Phytoseiulus persimilis*.

Shropshire, UK

2013–2017

University of the West of England

MSc Advanced Forensic Analysis, Merit

Thesis: Interactions between covering and burning on insect succession to a human cadaver proxy.

Bristol, UK

2012–2013

University of the West of England

BSc (Hons) Forensic Biology, First Class

Thesis: Does covering impact insect succession to a human cadaver proxy?

Bristol, UK

2009–2012

Professional Appointments

Harper Adams University

Reader in Integrated Pest Management

Shropshire, UK

Dec 2024–Present

- Secure competitive research council funding to research sustainable pest management.
- Publish research in peer-reviewed journals and present at national and international conferences.
- Deliver undergraduate and postgraduate modules related to integrated pest management and insect biology.
- Supervise postgraduate research projects.

Applied Ecology Programme Co-Ordinator

Aug 2021–Oct 2025

- Managed a suite of 3 applied ecology postgraduate degree programmes with approx. 30 students enrolled.
- Lead a team of 6 faculty members and co-ordinate validation activities.
- Develop strategic initiatives to enhance the programme's academic quality and industry relevance.
- Monitor and evaluate programme outcomes, implementing improvements based on student feedback.
- Liaise with Student Services to provide wellbeing support.

Lecturer in Integrated Pest Management

Apr 2020–Nov 2024

- Secure competitive research council funding to research sustainable pest management.
- Publish research in peer-reviewed journals and present at national and international conferences.
- Deliver undergraduate and postgraduate modules related to integrated pest management and insect biology.
- Supervise undergraduate and postgraduate research projects.

Postdoctoral Research Associate

Feb 2018–Mar 2020

- Researched vine weevil biology and ecology that led to 3 peer-reviewed publications.
- Identified breeding materials for aphid-resistant traits in brassica crops.
- Presented at national and international conferences.

Royal Entomological Society*Trustee***London, UK***Aug 2021–Jul 2025*

- Contribute to the development and implementation of the Society's strategic plans and policies.
- Review the Society's financial activities to ensure sustainability and compliance with legal regulations.
- Develop policies that guide the Society's operations and mission fulfilment.

Keele University*Postdoctoral Research Associate***Staffordshire, UK***Jan 2018–Mar 2020*

- Carried out research on insect vectors of human disease that led to 1 highly cited peer-reviewed publication.
- Managed laboratory operations with responsibility for analytical instrumentation.
- Developed and implemented data collection software to increase insect bioassay efficiency.

Teaching

Philosophy

My teaching philosophy centers on fostering critical thinking, practical skills and real-world application in integrated pest management and entomology. Examples of these approaches include:

- Problem-based learning: Utilising real-world pest management scenarios to develop decision-making skills.
- Field-based instruction: Incorporating hands-on experiences through field trips to reinforce theoretical concepts.
- Technology integration: Using data-driven practices to teach modern pest management.
- Interdisciplinary collaboration: Integrating concepts from ecology to provide a holistic understanding.
- Industry partnerships: Engaging with global businesses to provide students with case studies and guest lectures.
- Adaptive teaching: Tailoring content delivery to diverse learning styles, including kinesthetic approaches.

Excellence and Innovation

- Consistently excellent student feedback across all modules (4.9/5.0 average over 5 years; 2020–2025), including postgraduate modules Insect Physiology and Behaviour (4.9) and Data Visualisation and Analytics (4.9).
- Won Student Voice Award for Assessment and Feedback (Sep 2024) and nominated for Innovative Lecturer Award (Sep 2025).
- Developed and successfully launched MSc Biological Recording (2024), the UK's first postgraduate programme focused on standardised methodologies for biodiversity monitoring, with strong industry engagement from the Field Studies Council.
- Contributed specialist Data Visualisation sessions to NERC-funded Entomology Summer Schools (2023–2024), delivered to 20 early career researchers with excellent feedback.
- Secured £20,000 Royal Entomological Society scholarship funding supporting 10 postgraduate entomology students over 2 years (2024–2026).
- Served as Applied Ecology Programme Co-Ordinator (2021–2025), managing a portfolio of 3 MSc programmes with approximately 30 students and leading a team of 6 faculty members through 2 validation events.
- Created interactive, gamified learning resources for IPM training, including choose-your-own-adventure scenarios based on real-world pest management decisions.

Student Mentorship and Supervision

- Supervised 15 PhD students as Director of Studies or Second Supervisor (2020–Present), with 3 successful completions.
- Supervised 1 MPhil student to successful completion (2020–2023).
- Mentored 38 undergraduate and postgraduate research projects.
- Served as CREST Award supervisor for secondary school students (2021 and 2025), introducing Year 12 pupils to entomological research methods.

Undergraduate Modules

I have taught content on the following undergraduate modules during my tenure at Harper Adams University:

Module Name	Level	Role	Description
Key Skills in Zoology	4	Module Tutor	An introduction to academic writing
Fresh Produce	5	Module Tutor	An overview of integrated pest management
Insect Life History Strategies	5	Module Tutor	Fundamentals of insect physiology
Introduction to Entomology	5	Module Tutor	An overview of key invertebrate pest groups
Advanced Agronomy	6	Module Tutor	An overview of integrated pest management
Applied Ecology for Management	6	Module Tutor	An overview of applied entomology
Applied Crop Protection	6	Module Tutor	An introduction to pest identification
Population and Community Ecology	6	Module Tutor	Predator-prey interactions
Invertebrate Pests and Beneficials	6	Module Leader	An overview of pest biology and management
Insect Conservation	6	Module Tutor	An introduction to herbivorous insects

Postgraduate Modules

I have delivered content on the following postgraduate modules during my tenure at Harper Adams University:

Module Name	Level	Role	Description
Experimental Design and Analysis	7	Module Tutor	An introduction to statistics and R
Biology and Taxonomy of Insects	7	Module Tutor	An introduction to basic entomology
Commercial and Practical Biocontrol	7	Module Tutor	An overview of biological control
Ecological Entomology	7	Module Tutor	An overview of plant-insect interactions
Insect Physiology and Behaviour	7	Module Leader	An introduction to basic entomology
Data Visualisation and Analytics	7	Module Leader	An introduction to data visualisation using R
Plant Health and Biosecurity	7	Module Tutor	An introduction to pest biology and management

Research Interests and Achievements

My research focuses on plant-insect interactions from a chemical perspective to develop novel pest management tools that reduce societal reliance on synthetic insecticides in global agricultural production systems. I have a particular emphasis on:

- Chemical ecology of pest insects and their natural enemies.
- Development of novel monitoring tools for agricultural pests.
- Integration of biopesticides and biocontrol agents in crop protection.
- Data-driven integrated pest management.
- Use of metabolomics to identify novel health markers in animal production.

Key Achievements

- Published 26 peer-reviewed articles in the last 5 years.
- h-index = 10 (m-index = 1.43) with 425 total citations (Google Scholar October 2025).
- Co-leading REF impact case studies on pesticide metrics and pest monitoring.
- Developed a novel 'smart' monitoring tool for early detection of vine weevil.

Collaboration

- Lead on BBSRC project with Aston University on photonic noses for in-field pest monitoring.
- International collaborations with Teagasc (Ireland) and the University of Zambia (Zambia) on aphid monitoring and management.
- Cross-disciplinary project with Imperial College London on magnetic induction pest control.
- Ongoing partnership with RNA Agribio Ltd. on RNA-based biopesticides.
- Developing novel acoustic-based pest detection systems with Biofonic.

Research Funding

Between April 2020 and October 2025 I have been the Principal Investigator or Co-Investigator on 30 grant applications totalling more than £6 million. Of these, 15 were selected for funding worth £2.5 million with a £670k value to Harper Adams University.

Active Grants

Developing a management programme for cabbage stem flea beetle (Co-I) <i>Funder: AHDB</i> Collaborators: ADAS, Rothamsted, NIAB	£81,000 2025–2027
Insecticide Resistance Monitoring (Co-I) <i>Funder: Defra</i> Collaborators: ADAS	£10,000 2025–2026
Strategic Cereal Farm East (Co-I) <i>Funder: AHDB</i> Collaborators: Morley Agricultural Foundation	£12,000 2025–2026
Environmental monitoring in smart-hive apiaries (PI) <i>Funder: Harper Adams University QR</i> Collaborators: N/A	£9,253 2025–2026
Entomology Summer School (Specialist) <i>Funder: NERC (56021)</i> Collaborators: Royal Entomological Society	£25,474 2025–2026
Soil biology and Integrated Pest Management (PI) <i>Funder: Natural England</i> Collaborators: N/A	£35,600 2024–2025
SoilScope – machine learning-enabled acoustic monitoring (Co-I) <i>Funder: Innovate UK (10116097)</i> Collaborators: Biofonic and Scotland's Rural University College (SRUC)	£364,408 2024–2026
Development of safe RNA based biopesticide (Co-I) <i>Funder: Innovate UK (10099044)</i> Collaborators: University of Plymouth and RNA Agribio Ltd	£209,838 2024–2026
The aphid factor – aphid genetic diversity and endosymbionts (Co-I) <i>Funder: Keele University</i> Collaborators: Keele University	£70,810 2023–2026
Aphid monitoring as a decision support tool (PI) <i>Funder: Teagasc Walsh Scholarship (2022015)</i> Collaborators: Teagasc	£122,490 2022–2026

Completed Grants (2020–2024)

Entomology Summer School (Specialist) <i>Funder: NERC (21120186)</i> Collaborators: N/A	£39,298 2023–2024
Smart trap for improved early detection of vine weevil (Co-I) <i>Funder: BBSRC (BB/X011968/1)</i> Collaborators: University of Greenwich, Sentomol and Zest Sustainable ICM	£32,967 2023–2024
Modelling impact of cabbage stem flea beetle (Co-I) <i>Funder: BBSRC (BB/X011976/1)</i> Collaborators: Biomathematics and Statistics Scotland and ADAS	£38,438 2023–2024
Establishing a 'smart-hive' apiary (Co-I) <i>Funder: Harper Adams University QR</i> Collaborators: N/A	£9,298 2023–2024
Feasibility of photonic noses for pest monitoring (PI) <i>Funder: BBSRC (BB/X005658/1)</i>	£147,762 2022–2023

Collaborators: Aston University

Prototype tool for autonomous monitoring of flying insects (PI)

£4,845

Funder: Harper Adams University QR

2022–2023

Collaborators: N/A

Smart monitoring tool for vine weevil adults (PI)

£47,220

Funder: AHDB (2110377)

2021–2022

Collaborators: N/A

Benchmarking on-farm crop protection sustainability (PI)

£3,623

Funder: School of Sustainable Food and Farming

2021–2022

Collaborators: N/A

Improving monitoring and control of vine weevil (Co-I)

£117,336

Funder: Teagasc Walsh Scholarship (2020034)

2020–2024

Collaborators: Teagasc and Keele University

Improved monitoring of aphid BYDV vectors in winter cereals (Co-I)

£70,178

Funder: AHDB (21120186)

2020–2023

Collaborators: Russell IPM

Reducing impact of cabbage stem flea beetle on oilseed rape (Co-I)

£550,520

Funder: AHDB (21120185)

2020–2023

Collaborators: ADAS

Magnetic induction pest controller for cabbage stem flea beetle (Co-I)

£496,582

Funder: Innovate UK (99116)

2020–2022

Collaborators: Imperial College London and Inductive Power Projection Ltd

Student Supervision

Current PhD Students – Director of Studies

Exploiting plant essential oils in integrated pest management

Student: Wiktoria Rusin

2024–2027

Funder: MIBTP

Managing aphids in Irish cereal crops

Student: Jack Perry

2022–2026

Funder: Teagasc Walsh Scholarship

Are physically acting bioinsecticides compatible with UK arable cropping systems?

Student: Aimee Tonks

2022–2025

Funder: MIBTP

Current PhD Students – Second Supervisor

Feeding strategies to enhance the well-being of dairy calves during weaning

Student: Ffion Lewis

2025–2028

Funder: Barham Benevolent Fund

Preventing, predicting, and protecting crops from vectors of BYDV

Student: Miranda Bracy

2025–2029

Funder: CTP-Sustainable Agriculture Innovation

Investigating plant processes activated by novel biostimulant products

Student: Umali Herath

2024–2027

Funder: MIBTP

Leveraging metabolomics to identify copper toxicity within the dairy industry

Student: Amy Marsh

2024–2027

Funder: Harper Adams University

Metabolomics for biomarker discovery in dairy cows*Student: Jess McCullough**Funder: MIBTP*

2023–2027

Developing methods of using chitin to reduce potato cyst nematode populations*Student: Ronald Manjoro**Funder: CTP-Sustainable Agriculture Innovation*

2023–2027

Enhancing biological pest control: learning mechanisms in parasitoid wasps*Student: Nikoletta Foskolou**Funder: Harper Adams University*

2023–2028

Developing a push-pull system for aphid pests in potato crops*Student: John Owen**Funder: CTP-Sustainable Agriculture Innovation*

2023–2027

The aphid factor – aphid genetic diversity and endosymbionts*Student: Tom Foster**Funder: Keele University*

2023–2026

Optimising partial biofumigation for management of potato cyst nematodes*Student: Francis Kawalya**Funder: CTP-Sustainable Agriculture Innovation*

2022–2026

Attacking the clones: understanding resistance of aphid pests to biological control*Student: Laura Martinez-Chavez**Funder: CTP-Fruit Crop Research*

2021–2025

PhD Students – Completed**Improved monitoring and trap cropping for managing aphid BYDV vectors***Student: Maria Elisa Damascena de Almeida Leandro**Funder: AHDB*

2020–2024

Improving monitoring and control of vine weevil in soft-fruit and ornamental crops*Student: Eugenia Fezza**Funder: Teagasc Walsh Scholarship*

2020–2024

Induced mutation and silicon-derived resistance to aphids*Student: Kennedy Zimba**Funder: International Atomic Agency*

2019–2023

MPhil Students – Completed**The ecology of aphid hyperparasitoids***Student: Jenna Shaw**Funder: John Oldacre Foundation*

2020–2023

Administration and Leadership**Department of Agriculture, Environment and Rural Affairs***Science Review Committee – Member***Belfast, NI**

2025–Present

- Review grant applications for the Northern Irish Government.

L'Oréal-UNESCO*Science Review Committee – Member***London, UK**

2025–Present

- Review grant applications for the Women in Science UK and Ireland Young Talent Awards.

Harper Adams University*125th Anniversary Steering Group – Member***Shropshire, UK**

2025–Present

- Participate in strategic planning for 125th Anniversary celebrations in 2026.

Editorial Group – Member

2024–Present

- Participate in strategic planning to optimise outputs across social media platforms.
- Contribute content to social media content and campaigns.

Ethics Committee – Member

2024–Present

- Review research ethics applications from across the University.
- Develop policy in relation to research ethics involving invertebrates.

University of Liverpool

Merseyside, UK

UK BYDV Committee – Member

2024–Present

- Participate in strategic planning sessions to address the impact of BYDV on UK cereal crops.
- Collaborate with cross-disciplinary teams of researchers, policymakers and industry experts.

Royal Entomological Society

London, UK

Education and Training Committee – Member

2025–Present

- Attend quarterly meetings to develop and implement educational programmes to promote entomology.

Aphid/Hemiptera Special Interest Group – Convener

2024–Present

- Organise bi-annual meetings for entomologists researching aphids or Hemiptera.

Education and Training Committee – Chair

2023–Present

- Lead the development and implementation of educational programmes to promote entomology.
- Oversee the creation of educational resources and materials, including publications and online content.
- Manage a team of committee members, delegating tasks and guiding strategic initiatives.
- Implement mentorship programmes for students and early-career professionals.

Membership Committee – Member

2022–Present

- Participate in quarterly committee meetings to discuss and implement membership policies and initiatives.
- Evaluate fellowship applications, ensuring candidates meet the Society's standards.
- Contribute to developing strategies for member recruitment and retention.

Association of Applied Biologists

Warwickshire, UK

Biocontrol and IPM Committee – Member

2021–Present

- Co-organise the Society's national conference on biological control and integrated pest management.

Professional Activities

Professional Body Membership

Higher Education Academy

Fellow

2023–Present

Association of Applied Biologists

Member

2021–Present

International Organisation of Biological Control

Member

2021–Present

Royal Entomological Society

Fellow

2020–Present

Editorial Roles

Crop Protection

Associate Editor

IF: 2.5

2022–Present

Annals of Applied Biology

Associate Editor

IF: 2.2

2022–Present

Conference Organisation

Royal Entomological Society

UK-France Summit on Aphid Research

Oct 2026

Association of Applied Biologists

Biocontrol in Uncertain Climatic and Economic Environments

Nov 2024

Royal Entomological Society

Aphid Special Interest Group

Jul 2024

Association of Applied Biologists

How Do Biopesticides Become Appropriately Regulated?

Nov 2022

Peer Review

Journals

I have carried out 104 reviews for 25 publications since April 2020:

Journal	Impact Factor	No. Reviews
Acarologia	0.9	2
Agricultural and Forest Entomology	1.6	1
Agronomy	3.3	2
Annals of Applied Biology	2.2	11
Anthophila	N/A	1
Arthropod-Plant Interactions	1.2	1
Applications in Plant Sciences	2.7	3
Archives of Phytopathology and Plant Protection	1.0	1
Chemoecology	1.6	2
Crop Protection	2.5	3
Ecological Entomology	2.0	8
Entomologia Experimentalis et Applicata	1.4	10
Entomologia Generalis	5.6	2
Insects	2.7	4
Journal of Applied Entomology	1.7	2
Journal of Chemical Ecology	2.2	3
Journal of Economic Entomology	2.2	1
Journal of Pest Science	4.3	5
New Phytologist	8.3	1
Pest Management Science	3.8	3
Physiological Entomology	1.6	21
PLOS ONE	2.9	2
Scientific Reports	3.8	1
The European Zoological Journal	1.6	1

Grants

I have carried out 6 reviews for 3 funding agencies since April 2020:

Funding Body	Research Council	No. Reviews
UK Research and Innovation	BBSRC	4
Agence National de la Recherche	Agroecologie and Numerique	1
Department of Agriculture, Environment and Rural Affairs	N/A	1

Awards

Harper Adams University Student Voice Award <i>Innovative Lecturer (Nominated)</i>	Sep 2025
Harper Adams University Student Voice Award <i>Assessment and Feedback Hero (Won)</i>	Sep 2024
Blavatnik Awards for Young Scientists <i>Outstanding Early Career Researcher (Nomination)</i>	Jul 2024

Impact and Engagement

Policy Contributions

Department for Environment, Food and Rural Affairs <i>Measuring Sustainable Environment-Food Systems Report</i>	Jun 2023
Advisory Panel, DEFRA <i>Reforming UK Biopesticide Regulations</i>	Jul 2022

Selected Invited Presentations

Horticultural Trades Association Grower Day <i>Vine Weevil Control Strategies</i>	Jun 2024
Red Tractor <i>Measuring Pesticide Impact in the United Kingdom</i>	May 2024
University of Liverpool <i>BYDV Research at Harper Adams University</i>	Apr 2024
Certis-Belchim <i>Formulating Biopesticides for Use in Arable Crops</i>	Oct 2023
Harper Adams University <i>Artificial Intelligence in UK Higher Education</i>	Apr 2023
British Bee Keepers Association <i>Crop Protection Post-Neonicotinoids</i>	Apr 2022
Trinity College Dublin <i>Sustainable Crop Protection</i>	Nov 2020

Consultancy

Great Lakes Greenhouses <i>Sustainable Production Advisor</i>	2024–Present
Biobest <i>Education Advisor</i>	2024–Present
Society of People Against the Insect Apocalypse <i>Specialist Agriculture Advisor</i>	2024–Present
Rentokil <i>Insect Chemical Ecology Advisor</i>	2023–Present

Science Communication

New Scientist Live

Life as an Entomologist

Oct 2024

Harper Adams University

Year 10 Insect Day

Apr 2024

Harper Adams University

Staffordshire Invertebrate Day

Feb 2023

Farmers Guardian

Promoting Beneficial Insects on the Farm

Sep 2022

BBC Countryfile

Crops and Bugs

Apr 2022

CREST Harper Adams University

Student Project Supervisor

Aug 2021

BBC Radio 4

Farming Today

Nov 2020

Publications

Peer-Reviewed Manuscripts

1. Fezza E, **Roberts JM**, Bruce TJA, Walsh LE, Gaffney MT and Pope TW (2025) Question of compatibility: combining botanical garlic extract and entomopathogenic nematode as integrated biological control for vine weevil. *Biocontrol Science and Technology* (In Press).
2. Zhao H, Fu B, Auat Cheein F, Butler M, Harris WE, Pope TW and **Roberts JM** (2025) Novel nocturnal insect pest monitoring for sustainable crop protection using ensemble augmented deep learning classification. *Smart Agricultural Technology* 12:101244.
3. Fezza E, **Roberts JM**, Hall DR, Harte SJ, Bray DP, Bruce TJA, Walsh LE, Gaffney MT and Pope TW (2025) An apple a day does not keep the weevils away: enhancing vine weevil monitoring with fruit-based volatiles. *Journal of Applied Entomology* (In Press).
4. Kettle H, Coston DJ, White S, Pope TW, **Roberts JM** and Ewing D (2025) A process-based life cycle model of the cabbage stem flea beetle on winter oilseed rape: effects of temperature. *Journal of Theoretical Biology* 612:112185.
5. Ottih EC, **Roberts JM**, Bruce TJA and Tripet F (2025) Extended time to maturity in *Anopheles coluzzii*: implications of late egg hatch for vector control and transgene fitness. *Medical and Veterinary Entomology* 39:741-750.
6. Marsh AP, Sinclair LA, **Roberts JM**, Mackenzie AM and McCaughern JH (2025) A Re-evaluation of the optimal liver copper concentrations for health, performance and fertility of replacement Holstein-Friesian heifers. *Biological Trace Element Research* (In Press).
7. Leandro MEDA, **Roberts JM**, Dickin ET and Pope TW (2025) Effects of confinement and wheat variety on the performance of two aphid species. *Insects* 16:477.
8. Tonks AJ, Forbes E, **Roberts JM**, Jenkins T and Pope TW (2025) Using radio frequency identification technology to track the movement of slugs within domestic garden habitats. *Journal of Conchology* 45:559-570.
9. Zimba KJ, Sohathi PH, Munyinda K, **Roberts JM** and Pope TW (2025) Can silicon complement mutation-derived resistance to cowpea aphid on cowpea? *Arthropod-Plant Interactions* 19:2.
10. Martinez-Chavez LM, **Roberts JM**, Karley AJ, Wamonje F and Pope TW (2025) The influence of genetic variation on pre-oviposition processes for host-parasitoid co-evolution. *Ecological Entomology* 50:1-16.
11. Azevedo RA, Pope TW, Wilcox A, **Roberts JM**, Millman CA, Back MA, Aradóttir GI and Parry MAJ (2024) A tribute to Prof. Simon R. Leather. *Annals of Applied Biology* 185:120-123.
12. Ewing DA, Coston DJ, White S, **Roberts JM**, Pope TW and Kettle H (2024) Temperature and time of season are the predominant drivers of cabbage stem flea beetle arrival at oilseed rape crops. *Crop Protection* 185:106904.
13. Fezza E, **Roberts JM**, Bruce TJA, Walsh LE, Gaffney MT and Pope TW (2024) The Garlic Gambit: an alternative strategy for controlling vine weevil. *Journal of Economic Entomology* 117:1968-1976.
14. Martinez-Chavez LM, **Roberts JM**, Karley AJ, Shaw B and Pope TW (2024) The clip cage conundrum: assessing the interplay of confinement method and aphid genotype in fitness studies. *Insect Science* 31:1581-1602.

15. **Roberts JM**, Clunie BJ, Leather SR, Harris WE and Pope TW (2023) Scents and sensibility: best practice in insect olfactometer bioassays. *Entomologia Experimentalis et Applicata* 171:808-820.
16. Fezza E, **Roberts JM**, Bruce TJA, Walsh LE, Gaffney MT and Pope TW (2023) Decoding attraction: improving vine weevil monitoring by exploiting key sensory cues. *Pest Management Science* 79:4635-4643.
17. Tonks AJ, **Roberts JM**, Midthassel A and Pope TW (2023) Exploiting volatile organic compounds in crop protection – a systematic review of 1-octen-3-ol and 3-octanone. *Annals of Applied Biology* 182:121-134.
18. Zimba KJ, Sohathi PH, Munyinda K, **Roberts JM** and Pope TW (2023) Gamma irradiation as a tool to produce cowpea genotypes resistant to aphid pests. *Arthropod-Plant Interactions* 16:665-675.
19. Zimba KJ, Sohathi PH, Munyinda K, **Roberts JM** and Pope TW (2023) Induced mutagenesis: an underutilised component in the integrated management of aphid pests in Sub-Saharan Africa. *Crop Protection* 159:106030.
20. Zimba KJ, Sohathi PH, Munyinda K, Kamfwa K, **Roberts JM** and Pope TW (2022) Evaluation of resistance to black bean aphid in selected varieties and mutant genotypes of common bean. *Annals of Applied Biology* 181:298-308.
21. Pope TW and **Roberts JM** (2022) Vine weevil, *Otiorhynchus sulcatus*, management: current state and future perspectives. *Annual Review of Entomology* 67:221-238.
22. Fezza E, **Roberts JM**, Bruce TJA, Walsh LE, Gaffney MT and Pope TW (2022) Optimising vine weevil monitoring tool design. *Insects* 13:1-12.
23. Boutsis S, Campbell H, Fezza E, George R, Godfrey C, Hoarau C, Leandro M, Pope TW, **Roberts JM**, Segar S, Shaw J, Tempest H and Zimba K (2021) Continuing entomological research during the Covid-19 pandemic. *Outlooks on Pest Management* 32:114-119.
24. Ali J, Covaci AD, **Roberts JM**, Sobhy IS, Kirk WDJ and Bruce TJA (2021) Effects of cis-jasmone treatment of brassicas on interactions with *Myzus persicae* aphids and their parasitoid *Diaeretiella rapae*. *Frontiers in Plant Science* 12:711896.
25. Meza FC, **Roberts JM**, Sobhy IS, Okumu FO, Tripet F and Bruce TJA (2020) Behavioural and electrophysiological responses of female *Anopheles gambiae* mosquitoes to volatiles from a mango bait. *Journal of Chemical Ecology* 46:387-396.
26. **Roberts JM**, Bruce TJA, Monaghan JM, Pope TW, Leather SR and Beacham AM (2020) Vertical farming systems bring new considerations for pest and disease management. *Annals of Applied Biology* 176:226-232.
27. **Roberts JM**, Jahir A, Graham J and Pope TW (2020) Catch me if you can: the influence of refuge/trap design, previous feeding experience, and semiochemical lures on vine weevil monitoring success. *Pest Management Science* 76:553-560.
28. **Roberts JM**, Kundun J, Rowley C, Hall DR, Douglas P and Pope TW (2019) Electrophysiological and behavioral responses of adult vine weevil to host plant odors. *Journal of Chemical Ecology* 45:858-868.
29. Smith GH, **Roberts JM** and Pope TW (2018) Terpene based biopesticides as potential alternatives to synthetic insecticides for control of aphid pests on protected ornamentals. *Crop Protection* 110:125-130.

Manuscripts Under Peer-Review

1. Tonga A, Ali J, Adams B and **Roberts JM** (2025) Signal-mediated sexual ritual in parasitoids: perception, mechanism and behaviour. *Physiological Entomology* (Under Review).
2. **Roberts JM**, Corradi M, Clunie BJ, Fezza E, Harris WE and Pope TW (2025) How effective are entomopathogenic nematodes for vine weevil (Coleoptera: Curculionidae) biological control? A meta-analysis. *Pest Management Science* (Under Review).
3. Tonks AJ, Pope TW, Cooper S and **Roberts JM** (2025) Effects of bioinsecticide exposure route on aphids and their natural enemies in oilseed rape. *Pest Management Science* (Under Review).
4. Mhango KJ, **Roberts JM**, Lewis MJ and Harris EW (2025) Hybrid ensemble deep learning with empirical priors for predicting soil available water capacity: achieving accuracy and emergent domain-knowledge compliance. *Biosystems Engineering* (Under Review).

Conference Proceedings

1. Fezza E, **Roberts JM**, Bruce TJA, Walsh LE, Gaffney M and Pope TW (2023) Factors influencing vine weevil monitoring tool efficacy. *IOBC-WPRS Bulletin* 167:44-45.
2. Martinez-Chavez L, Karley A, **Roberts JM**, Fountain M and Pope TW (2023) Clonal differences in the potato aphid determine responses to an aphid parasitoid. *IOBC-WPRS Bulletin* 167:120-121.
3. Corradi M, Fezza E, Hawthorne B, Salisbury A, Harris WE, **Roberts JM** and Pope TW (2023) Efficacy of entomopathogenic nematodes in peat alternative growing media. *IOBC-WPRS Bulletin* 167:33-34.

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